



RODRIGO F. P. MARTINS

CURRICULUM VITAE



1 DE JANEIRO DE 2021

FCT|NOVA

Campus da Caparica, 2829-516 Caparica - PORTUGAL

Table of Contents

Identification	5
Education and degrees.....	5
Professional Experience and engagement commitments.....	5
Awards and Honours received, singularly and collectively.....	8
Consulting.....	9
Editorial Board Memberships	10
Landmarks related to scientific activities	10
Funding ID and supervising of master, PhD and post-doc workers (* it refers to co-supervising)	12
Track scientific starting in 2000.....	16
TALKS Presentations from 2006 to 2021	16
Talks presented in 2021	16
Plenary/ Keynote speaker/ Summer Schools/invited Interview	16
Invited Talks	16
Talks presented in 2020	17
Plenary/ Keynote speaker/ Summer Schools/invited Interview	17
Invited Talks	17
Poster Presentations.....	17
Talks presented in 2019	18
Plenary/ Keynote speaker/ Summer Schools/invited Interview	18
Invited Talks	18
Oral Presentations	19
Poster Presentations.....	21
Talks presented in 2018	23
Plenary/ Keynote speaker/ Summer Schools/invited Interview	23
Invited Talks	23
Oral Presentations	24
Poster Presentations.....	25
Talks presented in 2017	26
Plenary/ Keynote speaker/ Summer Schools/invited Interview	26
Invited Talks	26
Oral Presentations	27
Poster Presentations.....	28
Talks presented in 2016	29
Plenary/ Keynote speaker/ Summer Schools/invited Interview	29
Invited Talks	30
Oral Presentations	31
Poster Presentations.....	31
Talks presented in 2015	32
Plenary/ Keynote speaker/ Summer Schools/invited Interview	32
Invited Talks	33

Oral Presentations	34
Poster Presentations.....	35
Talks presented in 2014	35
Plenary/ Key note speaker/ Summer Schools/invited Interview	35
Invited Talks	36
Oral Presentations	37
Poster Presentations.....	37
Talks presented in 2013	38
Plenary/ Keynote speaker/ Summer Schools/invited Interview	38
Invited Talks	38
Oral Presentations	39
Talks presented in 2012	40
Plenary/ Keynote speaker/ Summer Schools/invited Interview	40
Invited Talks	40
Talks presented in 2011	41
Plenary/ Keynote speaker/ Summer Schools/invited Interview	41
Invited Talks	42
Talks presented in 2010	43
Plenary/ Keynote speaker/ Summer Schools/invited Interview	43
Invited Talks	43
Talks presented in 2009	44
Plenary/ Keynote speaker/ Summer Schools/invited Interview	44
Invited Talks	44
Talks presented in 2008	45
Plenary/ Keynote speaker/ Summer Schools/invited Interview	45
Invited Talks	45
Talks presented in 2007	46
Plenary/ Keynote speaker/ Summer Schools/invited Interview	46
Invited Talks	47
Talks presented in 2006	47
Plenary/ Keynote speaker/ Summer Schools/invited Interview	47
Invited Talks	47

PAPERS Published from 1979 to 2021 48

Year 2021	48
Year 2020	48
Year 2019	50
Year 2018	53
Year 2017	54
Year 2016	57
Year 2015	59
Year 2014	61
Year 2013	63
Year 2012	65
Year 2011	66
Year 2010	67

Year 2009	68
Year 2008	70
Year 2007	72
Year 2006	73
Year 2005	75
Year 2004	76
Year 2003	78
Year 2002	79
Year 2001	81
Year 2000	83
Year 1999	84
Year 1998	84
Year 1997	85
Year 1996	85
Year 1995	86
Year 1994	86
Year 1993	87
Year 1991	87
Year 1990	87
Year 1989	87
Year 1987	88
Year 1985	88
Year 1983	88
Year 1982	88
Year 1981	88
Year 1979	88
Books, Editor and Chapters published.....	88
Books.....	88
Editor.....	89
Book Chapters and contributions to special issue series.....	89
Granted/filled trade marks and patents	92
Patents Conceived	92
Patents Pending	95
Expert Opinion	96
Organisation of International and World Conferences	97
Organisation of International Symposia, Schools, Workshops and Brainstorm with Policy Makers	98
Membership in the steering and/or organising committee	99
Activity as referee/evaluator	102
<i>Referee of Scientific Journals.....</i>	102
Demonstrators, prototypes and test vehicles developed.....	102

Projects of the MEON/CENIMAT group and others (EMRS).	121
PROJECTS OF MEON/CENIMAT AND CEMOP, CONNECTED TO DCM/ FCT-UNL	121
NATIONAL PROJECTS.....	121
FINANCED BY MCIES/MCTES AND CALOUST GULBENKIAN FOUNDATION	121
FINANCED AND COORDINATED BY FCT/MCTES AND I3N	121
PROJECTS FINANCED AND COORDINATED BY AdI/ANI; QREN and PORTUGAL 2020.....	125
INTERNATIONAL PROGRAMS	127
FINANCED AND COORDINATE BY EUROPEAN UNION PROGRAMS.....	127
FINANCED AND COORDINATED BY OTHER INTERNATIONAL INSTITUTIONS	135
INTERNATIONAL INTERCHANGE PROJECTS	135
FINANCED AND COORDINATED BY GRICES/FCT/MCTES.....	135
PROJECTS DIRECTLY FINANCED BY THE INDUSTRY (National and International)	136
LARGE INFRA STRUCTURE PROJECTS	137
PROFESSIONAL FORMATION PROJECTS.....	137
RUNNING SCIENTIFIC RESEARCH ACTIVITES AT CENIMAT	138

Curriculum Vitae

Identification

Rodrigo Ferrão de Paiva Martins

Born 15th September 1951, Nova Lisboa, Angola

Full Professor with “habilitation” at Materials Science Department (DCM) of Faculty of Sciences and Technology of New University of Lisbon (FCT-UNL)

Work address: Campus de Caparica, 2829-516 Caparica, Portugal


Phone: +351 212 948 525; e-mail: rm@uninova.pt

Google Scholar: <https://scholar.google.com/citations?user=5FLD1tUAAAAJ&hl=en>

Impact factor: 75; number of citations: 25579

Scopus[®] : [ID 7202166114](https://scopus.com/record/display?id=7202166114)

WEB OF SCIENCE™ : [C-4337-2013](https://www.webofscience.com/wos/doi/C-4337-2013)

 ORCID : [0000-0002-1997-7669](https://orcid.org/0000-0002-1997-7669)



Education and degrees

- 1988 Habilitation in Semiconductor Materials and Microelectronics, New University of Lisbon, Portugal. Lesson title: “Density of states in disordered semiconductors”;
- 1982 Ph.D. in Energy conversion and Semiconductors, New University of Lisbon, Portugal. Thesis title: “a-Si:H solar cells processing and characterization”;
- 1977 MSc in Semiconductor Materials, Dundee University, Scotland. Thesis title: “Photoconductivity in P Doped and Undoped Amorphous Germanium.” Supervisor W. Spear, 1977 Euro physicist award.
- 1974 Honours degree in Electronics Engineering, Telecommunications and applied Electronics, U. Luanda, Angola/ PT.



Professional Experience and engagement commitments

- 2021 [Member of the Scientific Council of the European Research Council](#); [President of the International Union of Materials Research Societies](#); President of the European Academy of Sciences; Member of the Programme Committee of Quantum Sensing and Nano Electronics and Photonics XVIII, [SPIE Photonics West](#); Chair of the 1st Asia Advanced Materials Summit, Marriot Shanghai Parkview Hotel, 8-10 March, sponsored by the Chinese Association for Science and Technology.
Chair of the Programme Committee of 22nd International Union of Materials Research Societies – International Conference in Asia ([IUMRS-ICA 2021](#));
- 2020 Editor in chief of the [Discover Materials Journal](#); Member of the editorial board of the Journal [Nanomaterials](#) related to the section of Nanocomposite Materials; Chair of the Scientific technical Council of the associative laboratory AlmaScience; Coordinator of the Evaluation Committee of Final Scientific Reports of IC&DT projects 2019-2022 in the area of Materials for the Portuguese Science Foundation (FCT).
[Chair of the Nanoanalysis Symposium](#) (Dresden 9th European Nanoanalysis Symposium) , organized by the European Materials Research Society, fall meeting, on-line edition (due to COVID19), 9th

October 2020.

- 2019 Member of the Advisory Board of the IndTech 2020 conference, organized by the Germany Presidency of the European Union, Mainz, 26-28 October 2020. He will be also the “Kuemmerer”/”Guardian Angels” for thematic sessions concerning: Sustainable Materials and Green Deal; Young Scientist Session.
- Nominated the Chair of the Technical-Scientific Council of the collaborative laboratory, Almascience; Member of the innoLAE 2020 Programme Committee (UK); Elected member for the Nomination Committee of the KIC Raw Materials;
- Elected member of the Admission and Qualification Board of Materials Engineering of Ordem dos Engenheiros, Portugal;
- Member of the organizing committee of the Science and Innovation Congress Switzerland – Portugal 2019, 2-3 May, Lisbon (<https://swissportugalscience.net/>), where it will act also as chair-session; Invited by Faculty of Engineering of University of Porto (FEUP), to be session chair of the Doctoral engineering (Congress Congresso Doutoral em Engenharia), and to be open plenary speaker 27th-28th July 2019, Porto;
- 2018 [President of the European Academy of Science \(2018-2020\)](#); Member of the Editorial Board of the Journal Nanomaterials [Chair of the E-MRS Spring Conference/Strasbourg-2018](#).
- Member of the expert group of DG GROWTH to define the strategic agenda for Important Projects of Common European Interest;
- Elected [1st Vice President of the International Union of Materials Research Societies-IUMRS](#) (2019-2021); Elected member of the steering committee of the [KIC Raw Materials](#), representing the Central Colocation Centre (2019-2020);
- Chair of the advisory Committee of the [BMC Materials Journal](#), part of Springer nature group.
- 2017 Member of the Presidium of the [European Academy of Science](#) and elected Vice-President;
- Member of the International Advisory Panel of Journal of Physics D: Applied Physics (JPhysD);
- Member and co-chair of the technical group of the Portuguese Science and Technology Foundation, responsible to define the strategy plan for materials for the period from 2020 to 2030;
- Elected vice-president of the International Union of Materials Research Society (IUMRS);
- Elected member of the nomination committee of the EIT, KIC Raw Materials.
- 2016 Member of the Administration board of the Nature/FCT-UNL partnership journal named npj 2D materials and applications;
- Member of the strategic committee of the Knowledge and Innovation Community (KIC) for Raw Materials, Central Colocation centre, Metz, France;
- KIC CLC steering Committee Member;
- Chair of the Scientific Committee of 7th Conference on Materials science UGALMAT 2016, 19-21 May, Galati, Romania;
- Member of the Expert Advisory Board of the European program HORIZON 2020, DG Research and Innovation, Advanced Materials, Nanotechnologies, Biotechnologies and Manufacturing (2016/2018);
- Editorial Board Member of the Journal Progress in Natural Science: Materials International (Elsevier Journal);
- Co-chair of the Energy Materials industry Research Initiative, EMIRI for the period 2015 to 2016, a European structure with a PPP like initiative status; Advisory for the DG Research and Innovation for Smart Intelligent Materials.
- 2015 Member of the Editorial Board of Heliyon - Elsevier's new open access journal;

- Member of the International Advisory Group of EuroNanoForum2015 conference, 10-12 June 2015, Riga, organised by the Latvian presidency of the European Union and chair of the nanomaterials and modelling session.
- 2014 President of the Senate of the European Materials Research Society, E-MRS;
Chair of the European affairs Committee of the E-MRS;
Chair of the 'Advanced Materials at the cutting edge of innovation' of the LETS conference (Leading Enabling Technologies for Societal challenges), Bologna, Italy, 29 September, 1 October 2014, organised by Italy presidency of EU;
Chair of the Committee of Global Leadership and Service Award of the International Union of Materials Research Societies, IUMRS;
Member of the International Advisory Board of the Advanced Electronics Materials Journal, from Wiley;
Member of the Nomination Committee of MRS-USA; Immediate past President of E-MRS.
- 2013 Member of technical support group (GTA) in the area of materials and nanotechnology of the Portuguese National Science and Technology Foundation (FCT).
Member of the External International Board of the PhD Program in Materials in UDJG University (University of Galati), Romania.
Member of the Steering Committee of project "The impact of the integration of key enabling technologies on industrial production and societal goal – acronym: EU KNIGHTS", coordinated by LITEN/CEA, within FP7-NMP.2013.4.0-8.
Member of the International Advisory board of Strategic Initiative Materials, a Flanders industry initiative, (4 years mandate).
Member of the Expert Advisory Board of the European program HORIZON 2020, for the topic of Advanced Materials, Nanotechnologies, Biotechnologies and Manufacturing (2014/2015);
Member of the Steering Committee of the European Technology Platform for Advanced Engineering Materials and Technologies, EuMat.
Coordinator of the Portuguese PhD program in Advanced Materials and Processing (AdvaMTech), involving 7 Portuguese public Universities and 12 Research Centres, promoted by FCT.
Member of the Steering Committee of the Joint Innovation Centre for Advanced Material, Sino-Portuguese, established in March 2013.
Member of the External Quality Assurance Board of the International Master program in Functional Advanced Materials & Engineering (FAME), funded by EU ERAMUS MUNDUS program, involving 7 Universities: Grenoble-INP and U. Bordeaux in France; U. Augsburg and TU Darmstadt, Germany; U.C. Louvain and U. Liege, Belgium; U. Aveiro, Portugal.
- 2012 Doctor Honoris causa by University of Galati, Romania;
Member of the Administration board of Alliance for Materials;
Member of the Steering Committee of Energy Materials Industry Research Initiative, EMIRI, a European Platform for a Public Private Partnership structure;
Member of the Portuguese Academy of Engineering;
Re-elected EMRS President.
- 2011 Elected President of the European Materials Research Society (E-MRS).
- 2008 Nominated President of the Council Board of DCM.
Elected member of the Scientific Board Council of FCT-UNL.

- 2006-... Delegate of the Administration Council Board of Institute of New Technologies (Uninova).
- 2006-10 Elected President of the General Board of the Foundation of the FCT-UNL.
- 2004-12 Member delegate of the Initiative for Science in Europe (ISE) representing the European Materials Research Society (EMRS), organization involved in launching the European Research Council (ERC).
- 2004-... Member of the Executive Committee of the European Materials Forum (EMF).
- 2004-08 Coordinator named by UNL for the Minister of Higher Education programme to promote Materials Science and Engineering.
- 2003-... Member of the Executive Committee of the European Materials Research Society (EMRS).
- 2002-... Full Professor in Microelectronics and Optoelectronics of New University of Lisbon.
- 1993-01 Member of the Scientific Executive Board of the Master in Management and Quality Control of Materials of FCT-UNL.
- 1992-96 National coordinator of the Portuguese Masters Course in Materials' Engineering, involving 6 public Universities, 3rd and 4th editions.
- 1991-97 Member of the Advisory Board of Uninova.
- 1991-95 Founder and 1st Director of Materials Research Centre (CENIMAT) – FCT-UNL.
- 1991-... Head of the Nanotechnologies, Optoelectronics and Electronics Materials group of CENIMAT.
- 1989-... Founder and Director of Centre of Excellence in Microelectronics and Optoelectronics Processes of Uninova.
- 1989-08 Member of the Scientific Board Council of FCT-UNL.
7 times elected director of the Materials Science Department of FCT-UNL.
- 1988-01 Associate Professor, Materials Science Department of FCT-UNL.
- 1984-96 Responsible of the Semiconductor Materials group of the Materials Science Department of FCT-UNL.
- 1983-85 Member of the executive Board of the Centre of Physics Molecular of National Inst. of the Scientific Research INIC.
- 1983-86 R&D responsible for the activity concerning development and production of a-Si; poli-Si, μ -Si for PV and microelectronics, Centre of Molecular Physics, INIC.
- 1979-86 Assistant Professor, Department of Materials science, of FCT-UNL,
- 1975-77 Assistant Professor, Department of Electronics of the Faculty of Engineering of the University of Porto, Portugal.
- 1974-75 Assistant Professor, Department of Electronics of University of U. Luanda/Angola.

Awards and Honours received, singularly and collectively

- 2020 Named Fellow of the [International Association of Advanced Materials](#) (FIAAM, Sweden)
- 2019 Scientific Prize of Cidade de Almada, 3rd edition (honorable distinction, 2nd position award).
- 2017 IC3TC2017 (2nd International Caparica Christmas Congress on Translational Chemistry 4th -7th December 2017) Award to a Career in Pioneering Science, award established by ProteoMass Society, December 2017, given to Elvira Fortunato and Rodrigo Martins;
Best Publicly Funded Project Demonstrator award given by OE-A (Organic and Printed Electronics – Association: OE- Competition 2017 for Multifunctional Demonstrators based on organic and printed electronics) during the LOPEC - Large-area, Organic & Printed Electronics Convention 2017, held in

Munich, March 2017 to the EC project iFlexys, Integrated X-ray Sensor Systems; elected as vice-president of the European Academy of Science.

INCM Innovation Prize 2017 ([Prémio Imprensa Nacional Casa da Moeda](#)), given to the work Secret paper project, (team: R. Martins, E. Fortunato, L. Pereira, P. Barquinha);

2016 Awarded with the Gold Medal of merit and distinction by the Almada Municipality; Named as one of 3 finalist of the European patent Office Research Award 2016 with the work on paper transistor; Elected member of the European Academy of Science; Tetra Solar, Innovation prize given by Exame Informatica; Honourable Mention in the R&D category of the 8th edition of Green Project Awards, with the work Tetra Solar: energy for all, António T. Vicente, Hugo Águas, Elvira Fortunato, Rodrigo Martins.

2015 Demonstrator award given by OE-A (Organic and Printed Electronics – Association) during the LOPEC - Large-area, Organic & Printed Electronics Convention 2015, held in Munich, February 2015 to the EC project Autonomous Printed Paper Products for Labels & Electronics, A3Ple project.

2014 The Best Research award given by Faculty of Science and Technology of New University of Lisbon to 3 top researchers of all Faculty for the period between 2010 to 2012.

The Best Leadership and Service award given by Faculty of Science and Technology of New University of Lisbon to 3 top researchers of all Faculty for the period between 2010 to 2012.

2012 Scientific Prize of Cidade de Almada, 1st edition with work Nanotechnologies and Nanomaterials @FCT-UNL, a window of opportunities opened to the world.

Prize Innovation with the work solar tiles, Energy Live Expo, Lisbon, March 2012.

Doctor Honoris Causa by University of Galati, Romania (1 April 2012).

Green awards, 2012

2011 Best of PSS 2011, top 12 by Wiley with the paper: Where science fiction meets reality? With oxide semiconductors!

Green awards, honour Research and Innovation award with the work on paper battery.

2010 Portuguese Science and Technology award 2010/2011, district 1960 of the International Rotary Foundation.

The best scientific work given by Korean Industry of Display Society (KIDS), Sept. 2010: work “Paper Memory TFT”, published in Journal of Information Display, 10 (4), 80-89 (2009)

2009 Printed Electronics USA 2009 Academic R&D award, Dec 1-4 2009, S. Jose, California (IdTechEx): paper TFT.

Green awards, 1st prize Research and Innovation award with the work on the paper transistor.

Honours member of the Rotary Club of Almada.

2008 Scientific Professional of the Year 2008, Rotary Club of Almada, Portugal

Paul Harris gold medal, for scientific outstanding, International Rotary Foundation

2004 Prize for Scientific Excellence given by the Portuguese Science Foundation.

Consulting

Solvay (IT); Merck (UK), LusoSpace (PT); Samsung (K.), LG (K.), ETRI (K.), HP (USA), S^t Gobain Research (Fr); CEA (Fr); KEMET (Pt), Kaneka (Jp); Essilor (PT); Inovnano (Pt); Solar Plus (Pt), CSP (Pt); CTP (Fr), Felix and Scholler (D); CRF (It); INCM, (PT); Clara saúde (PT); Navigator (PT); Hovione (PT); Visteon (PT); Revigrês (PT); CS Coelho da Silva (PT); Logoplaste (PT).

Editorial Board Memberships

Editor in Chief of Materials Discover, since 2020; Member of the Editorial Board of Heliyon - Elsevier's new open access journal; Editorial Board Member of the journal Progress in Natural Science: Materials International (Elsevier Journal); [Member of the Advisory Board of Journal of Physics D](#); Applied Physics; Member of the international editorial board of: Advanced Electronic Materials (Wiley), Journal of Materials, <http://www.hindawi.com>; Journal of non-oxide glasses (<http://www.infim.ro/~jnog/>), since 2009; Annals of Dunarea de JOS, Romania, since 2007; Materials Science Forum, since 1995.

Guest Editor in: [Special Issue of Nanomaterials, "Characterization of Nanomaterials: Selected Papers from 6th Dresden Nanoanalysis Symposium"](#), 2018; Philosophical Magazine (2009); Thin Solid Films (2010, 2011-Elsevier); Physica Status Solidi a (2009-Wiley); Journal of Non-Crystalline Solids (2006-Elsevier); Thin Solid Films (2007, 2008-Elsevier); Mat. Science Forum (2004, 1995); Surface Science (2001-Elsevier), editor of Journal of Materials (2012, Hindawi).

Landmarks related to scientific activities

As the most recent landmark, we have the following key relevant achievements:

- a) Approval by EC programmes of the first infrastructure connected to flexible electronics in Portugal and with impact in Europe, away from silicon, called EMERGE- Emerging Printed Electronics Research Infrastructure (2021).
- b) Elected member of the Scientific Council of the European Research Council, starting 1st January 2021.
- c) Proposing as co-author of a new design for solar cells, together with Christian Schuster and others (Optica article **Light Trapping in Solar Cells: Simple Design Rules to Maximize Absorption**), promoted by **Good News Network**: <https://www.goodnewsnetwork.org/3d-solar-panel-design-increases-light-absorption-by-125pt/> that deserves the impressive attention of more than *1 million viewers*.
- d) Founder and mentor of the collaborative laboratory [AlmaScience](#) devoted to exploit smart platforms and interfaces on paper and tackling the green electronics (2019).
- e) The first Portuguese Professor/Researcher to have 6 ERC grants associated to research talents supervised or co-supervised by him and integrating the Scientific team at CENIMAT/CEMOP launched by him and considered an example of international excellency in fields of Nanotechnologies, Advanced Functional Materials and Microelectronics.
- f) Launching the concept of Stem materials together with Pier F. Moretti, Bartosz A. Grzybowski, Vasileios Basios, Elvira Fortunato, Maria Suarez Diez, Olga Speck, as a new area for promoting the design of functional materials able to realize complex functions and be able to adapt themselves to the environmental conditions (May 2019).
- g) The work on paper electronics is the editorial of Nature Electronics, from 13 August 2018 (<https://www.nature.com/articles/s41928-018-0128-7>);
- h) Publishing the first scientific paper aiming to exploit, as proof of concept, paper transistor for multipurpose applications: R. Martins et al, in Papertronics: Multigate paper transistor for multifunction applications, Applied Materials Today 12 (2018) 402–414:
- i) August 2018, Administrator of the first start-up to exploit the paper electronics called NTPE – Research, Development and Commercialization of Transistors, Electronic Biosensors, Paper based Lda; Investigação, Desenvolvimento e Comercialização de Transístores e Biosensores Electrónicos de Papel, Lda”.
- j) In August 2018 the official launch of the Collaborative laboratory, Almascience, involving the pioneer labs of paper electronics with the paper industry and product end users, mainly connected to security and exploiting smart diagnostics platform commodities.
- k) In July 2018, the full recognition by the Academia that elected for the [International Physics Olympics, IPhO-2018](#) hold in Lisbon, July 2018, the paper transistor as the device to be tested in the experiments by more than 450 students worldwide. This was also the editorial of Nature journal of 13 August 2018.
- l) In June 2018, during the Innofest 2018 Innovation context idea competition to boost printing intelligence, organized by PrintoCent from VTT, a team of my young researchers from Uninova/ FCT-UNL won the first prize with the concept idea of Droplet Runners (<http://ouluhealth.fi/oulu-in-the-centre-of-boosting-printed-intelligence-business-at-innofest-2018/>).

- m) The Spanish newspaper El Pais in the May 2018 edition highlight our activity in the area of paper electronics via, as a key area of future development.
- n) In April 2018, to be elected as President of the European Academy of Science
- o) To be nominated by the European Patent Officer as one of the Inventors of the year 2016 with the paper transistor work (<http://www.epo.org/learning-events/european-inventor/finalists/2016/fortunato.ht>).
- p) To establish the first Portuguese partnership with the Nature group, from which it results in the launch of the npj 2D Materials applications journal in 2016.
- q) Responsible by the activity that end up with the acceptance of FCT-UNL as a core partner of the Knowledge and Innovation Community (KIC) for Raw Materials of the European Institute of Technology, belonging to the Central Colocation Centre, Metz, France, since 2016.

Apart from that, it should be also highlight that as representative of the European Materials Research Society in the Initiative for Science in Europe (ISE), I participated in the launch of the European Research Council, under the Chair of José Mariano Gago (Creating a European Research Council. Letter to the editor, Science, August 2004. <http://www.initiative-science-europe.org/pdf/04-Science-Letter-Creating-ERC.pdf>). Moreover, I also organised the meeting in January 11th, 2007 where Federico Mayor took over from José Mariano Gago as the next ISE Chair, year where Commissioner Janez Potočnik signed and turn effective the creation of the European Research Council.

Prior researching oxides and paper electronics, I was involved in the R&D of a-Si; H and a-Ge:H and using PVD techniques, for PV and microelectronics, as position sensitive detectors (psd), thin film transistors (TFT), colour detectors and gas sensors (1975-). I started researching oxides as transparent conductive oxides (TCO) for sensors and solar cells, with strong success. Prior I did set up of the first clean room for R&D and teaching purposes that took more than one decade, since we start from “ashes”! With this we broad our field of R&D to which strong contribute highly motivated young scientists working under my leadership, allowing us to diverse and to implement research. Going deeply in the understanding of the properties of very thin film oxides (<1 μm) and with the advent of nanotechnologies, we discover that oxides in the range of nm thick exhibit performances by far better than the ones in the bulky, allowing them to be used as real semiconductors. Moreover, they could be deposited at RT. This enabled us to produce the first TFT completely done with oxides (gate, channel, drain, source and dielectric), which catapulted us to the forefront in science and technology. We select ZnO to be a green material and the internal knowledge technology: rf magnetron sputtering. As we could achieve by far the best-reported electronic performances in such TFT processed at RT (contrary to other group did, Wager/USA and Hosono/Japan), opening all the possibilities to use low cost flexible substrates for a wide range of applications. Out of this I must highlight a joint patent done with SAMSUNG. My current interests are in the design of multifunctional materials, fabrication, transport mechanisms and characterization of amorphous multicomponent oxide TFTs (n- and p-type, the heart of CMOS circuits), exhibiting high electrical mobility's for paper electronics. Furthermore, recent progress in nanotechnology provides a new approach to develop active functions in oxides and paper: (i) use of natural nanostructures embedded oxides and (ii) fabrication of artificial nanostructures assisted by nanolithography techniques and new femtosecond laser processing. As European I want to be in the leading edge of this research frontier to which I would like to bring the features of paper electronic as something born and matured in Europe from which Europeans will profit in a medium long term range, since intense research is required, going from the understanding of the physics and chemistry behind the nano-materials components to devices and systems that we intend to develop to turn viable the industry use of the project results in a five-years horizon. To this dream my past proves that we can do it! The word “impossible” do not exist in our dictionary.

Group Characterization

My group, designated by MEON- **M**aterials for **E**nergy, **O**ptoelectronics and **N**anotechnologies- is constituted by about 64 members (14 permanent staff, 28 PhD students, 12 post docs, 10 technologists and several MSc students) and it is involved in activity concerning development, designing and production of functional materials and their integration on devices and systems, their test and validation in the areas of Micro and Nano electronics, bioelectronics, nanotechnologies. As baseline for realization the scientific activity, the group accounts with the support of the Portuguese Science and Technology Foundation (<http://alfa.fct.mctes.pt/>) through pluriannual via the associated laboratory Institute of Nanostructures, Nanomodeling and Nanomanufacturing, I3N that integrates it via the Caparica hub (CENIMAT: <https://www.cenimat.fct.unl.pt/>), since 2006, depending directly from the Portuguese Minister of Science, Technology and Higher Education, in the area of Nanotechnology.

In 2014 I3N was considered one of the 11 exceptional Research Laboratories out of more than 330 evaluated by FCT in all areas and the only one working in the field of Advanced Materials and Nanotechnologies with such ranking. Recently, in the last evaluation performed (2014), CENIMAT was ranked in the top of excellent labs evaluated and considered *one of Europe's strongest research laboratories in the field of nanotechnology*.

Moreover, the group applied research is performed in strong cooperation with the Centre of Excellence in Microelectronics and Optoelectronics of the Instituto de Novas Tecnologias, CEMOP/Uninova that I am the founder and the head of the research centre. CEMOP full integrates as a partner CENIMAT and I3N, as far evaluation process by FCT is concerned.

Apart from that, I regularly participate in or coordinate proposals submitted to National, European or International calls for projects or have direct contract with industry. In the last 38 years my group won 174 projects, under my coordination or as a partner, generating **51,059,524.24 €**, from which **29,015,415.0 €** were earned by International contracts (56.83%) and **7,330,093.92 €** related to projects with the industry (14,4%). We apply in the same period for *76 patents, from which 45 were already conceived*, revealing so the degree of our creativity and originality.

Exceptional Career Positions and commitments of Former PhD and Master Students

My main achievement as far conducting research and high level formation is concerned relies on having formed and having work with me 7 ERC awards: Elvira Fortunato, my PhD student and my co-worker, got an Advanced ERC Grant in Materials Science and Engineering (Advanced Amorphous Multicomponent Oxides for Transparent Electronics, Invisible, 2.25 M€) in the first edition (2008) as well as in 2018, with the project DIGISMA, granted with the amount of 3.5 M€; I. Ferreira my PhD student and my co-worker, got in 2015 a consolidator ERC grant in Materials Science and Engineering ("Integration of capacitor, thermoelectric and photovoltaic thin films for efficient energy conversion and storage"- CapTherPV, 2 M€, also got in 2018 a proof of concept grant from ERC (150k€)); and a new poof of concept in 2021 (150k€; Luis Pereira a start ERC grant in Materials Science and Engineering "New era of printed paper electronics based on advanced functional cellulose - NewFun", 1.5 M€); Pedro Barquinha a start ERC grant in Materials Science and Engineering "TREND - Transparent and flexible electronics with embedded energy harvesting based on oxide nanowire devices", 1.5 M€).

As far as students are concerned, I would highlight the supervision of the master thesis of the following students:

- Miguel Sanches (Advanced Materials applications, 1994), CEO of Volkswagen group in Portugal, since 2016.
- Gonçalo Andrade (Microelectronics, 1996), the CEO of IBM in Portugal, since 2015.
- Bruno Bras, senior Researcher, responsible for the sensor division at ESA, since 2017.

- Diogo Vaz, Researcher at Thales Research and Technology, France, 2016-2019, with outstanding publications at Nature Materials and Advance Materials.
- José Silva, Researcher in SRON, Netherlands Institute for Space Research, Netherlands, 2017.
- Guiomar Evans, Professor at ISEL Portugal, 1995
- Paula Louro, Professor at University of Lisbon, 1995

Up to now I supervised 40 master's students and 30 PhD students.

List of PhD Students (Concluded)

1. Rogério Miranda Morais, "Development of hybrid transistor for printing electronics" in São Paulo State University – UNESP/FCT. (Co-Supervisor) (double degree) *, 2020. Now working at Unesp Câmpus de Presidente Prudente, Brazil.
2. A. Araújo, Plasmonic Silver Nanoparticles by De-wetting Process: Applications in SERS and Thin Film Solar Cells, 2018. Today researcher leader at Imprensa Nacional Casa da Moeda;
3. L. Santos*, Synthesis, characterization and processing of nanostructured inorganic materials for ECDs (2018). Working now at Hovione, Portugal.
4. A. Vicente; Silicon thin film solar cells on paper-based substrates with applications in optoelectronic biodevices; 2017. Working at AlmaScience.
5. J. Deuermeier*; CuOx for electronics (co-supervisor: Un. Darmstadt, Germany); 2016. Senior researcher at CENIMAT/I3N;
6. Kasra Kardarian* (2015) full oxide solar cells. Back to Iran
7. Javier Contreras*, amorphous silicon 3-D and 2-D position sensitive sensors, 2014. Entrepreneur at Valência, Spain
8. R. Barros*; p-type SnOx for TFT and CMOS, 2014. Senior researcher at Hovione.
9. I. Bernaka; Ink jet printing biosensors, 2014. Researcher at Linköping University, Sweden.
10. P. Wojcik*, Ink JET printing EC devices & TFT, 2014. Entrepreneur with its own SME, Director at redox.me, Norrköping, Sweden.
11. Christina Belstega*, nanowires and transparent field-effect transistors based on AlN-gate dielectric and IGZO-channel semiconductor, 2014 (co-supervising, Univ. Bucharest, Romania).
12. V. Figueiredo*, p-type CuOxMy TFT, 2012. Expert Engineer Ingolstadt, Germany.
13. I. Bogan, "Multifunctional semiconductor thin films for optoelectronic and photovoltaic devices" (co-supervisor: Galati Un. Romania, 2011). Research leader at Metallurgy Romania, SRL.
14. L. Silva*: DNA colorimetric biosensors, 2010. General manager and lead engineer. GESTREDES, Portugal.
15. P. Barquinha*, Transparent electronics, 2010. Associate Professor at New University of Lisbon.
16. M. Fernandes, Image sensors, 2009. Professor at ISEL, Portugal.
17. L. Pereira, Poli-Si TFT, 2008. Associate Professor at New University of Lisbon.
18. L. Raniero, Polymorphous Si solar cells, 2006. Full Professor at University S. José dos Campos, Brazil.
19. H. Águas*, MIS psd, 2005. Associate Professor at New University of Lisbon.

20. Christi Caracaleanu* (Restructuring of developing countries energy sector - Sahelian Countries Case), 2005. Entrepreneur connected to renewable Energies (Portugal and Romania).
21. I. Ferreira, Si grown by Hot Wire plasma assisted for optoelectronics and gas sensor, 2002. Associate Professor at New University of Lisbon.
22. Sen Mei* grown of vitroc ceramic substrates for microelectronics, 2001. Entrepreneur, China, Shanghai and now at Technical University Freiberg, Fac Mat Sci & Technology, Germany.
23. A. Fantoni, modelling of a-Si solar cells, 2000. Professor at ISEL, Portugal.
24. E. Fortunato, Position sensitive sensors, 1995. Full Professor and Vice rector at New University of Lisbon.
25. Ana Branquinho*, (Evaluation of deep defects in a-Si:H structures by CV measurements, 1992. Professor at IST, Portugal.
26. António Joyce*, Materials for Energy, 1992. Head of the Renewable Energy group of LNEG, Portugal.

Running PhD thesis:

1. Tiago Carvalho*, PhD in Nanotechnology and Nanoscience, Sustainable functionalized fiber-based structures for application in electronic and electrochemical systems, Start in 2018*.
2. Sirazul Haque, Light management in Perovskite solar cells, with dielectric photonic structure and, luminescent down-shifting layers. Start 2018
3. Sofia Ferreira, Multifunctional metal oxide semiconductors presenting simultaneously transparency, conductivity and luminescent properties - Luminescent-TCOs. Start 2017
4. Beatriz Jorge Coelho, PhD in Nanotechnology and Nanoscience, A Digital Microfluidics Platform or Loop-Mediated Isothermal Amplification of DNA. Start 2017
5. Inês Isabel Fortuna Neves Fernandes da Cunha*, PhD in Nanotechnology and Nanoscience, Nanobiosensing "Printed and drawn flexible electronics based on cellulose nanocomposites", (co-supervising Prof. Rodrigo Martins)*. Start 2016
6. Neusmar Junior Artico Cordeiro, "Production, characterization and stability study of transistors and inverters based on MoS₂ films processed on flexible substrates), Universidade Estadual de Londrina - Departamento de Física, together with Prof. Dr. Sidney Alves Lourenço (Brazil).

Postdoc Workers

So far, I supervised or co-supervised 41 postdocs as listed:

1. João Coelho* (2020-25), working in the field of nanoelectronics/supercapacitors and nanogenerators.
2. Ingo Ramiro* Post doc (Marie Curie, 2020-23), working in the field of solar cells.
3. A. Pimentel* (nanowires for sensing applications processed by thermal combustion) (2018). Researcher at CENIMAT, hired by a long-term contract (10 years) by the Portuguese National Foundation and allocated at CENIMAT/I3N.
4. J Deuermeier*, (2018) working on surface materials characterization on copper oxides for electronics- Now hired as researcher at CENIMAT/I3N
5. Santanu Juna* (2018-23), "Exploiting p-type oxides for electronics and solar cell applications.
6. O Sanchez-Sobrado (2017), working on solar cells design and modelling. Now working at U. Galicia, Spain
7. M. Mendes, (2017), working on plasmonics and solar cells (design, architecture and simulation). He is now hired as a Professor at FCT-Nova.

8. Shrabani Panigrahi*, (2017-25) working on synthesis and processing of nanoxides for energy and optoelectronics. Now researcher at CENIMAT/I3N under contract.
9. A Kiazadeh*, (2016) working on oxides for memories and TFT applications. Working now as senior researcher at CENIMAT/I3N.
10. D. Nunes, (2016-2024), working on Materials functionalization and characterization (SEM responsible). She is now Invited Assistant Professor at FCT-Nova
11. Sumita Goswami* (2015), working on functional organic materials. Now working at AlmaScience, Portugal (Collaborative laboratory on paper electronics)
12. Suman Nandy* (2013-2023), working on novel nanoxides for optoelectronics applications). Working now as senior researcher at FCT-NOVA.
13. Volodymyr Khranovskyy*, (2015) Linköping Universitet, Mari Sklodowska Curie International Career Grant 2015-18 "Development of novel two-dimensional functional oxide materials and their integration into future "green" electronics". Now back to Linköping University, Dept Phys Chem & Biol IFM, Sweden.
14. S. Paul, (2015), development of nanowires for electronics applications. He went back to India
15. A. Rufflet, working on Nanotechnologies (2014). He went back to India
16. G. Gonçalves*, (2012) working on sputtering oxide semiconductors for electronics. He is working in AIXTRON (<https://www.aixtron.com/en>).
17. S. Parthiban (2012), working on oxide semiconductors, namely p-type oxide for TFT processed by chemical solutions. He is now working back at PSG Inst Adv Studies, India.
18. K. Pradipta Nayak (2011), working on solution-based oxide devices for electronics. He is now working at King Abdullah University of Science & Technology, South Arabia.
19. J. Chandra* (2011), working on Label-free biosensor based on amorphous multicomponent semiconductors ISFETs.
20. Sanjay K Ram (2010); nanomaterials and nanotechnologies for solar cell applications. He is now working at Aarhus University, Denmark.
21. P. Barquinha*, (2010), working on transparent electronics. Now Associate Professor at FCT-NOVA.
22. S. Filonovich (2009) (Si Based solar cells). He is now working in France in Solar cells fabrication, at Total SA.
23. T. Busani, (2009), working on atomic force microscopy and material synthesis. Now at University of New Mexico, USA.
24. J. Saji* (2009), working on Fabrication of SnOx based p-type transparent TFTs using RF magnetron sputtering. Now working at Cochin University Science & Technology, India.
25. Z. Hu, (2009). Fabrication of amorphous silicon solar cells. Now working at Beijing University. China.
26. L. Pereira (2008), working on amorphous silicon for optoelectronic devices. Now working at FCT-NOVA.
27. Z.L. Pei, (2008), dielectrics. Now working at University of Cincinnati, USA.
28. J. Vaz Pinto* (2008). Development of new oxide thin film transistors for biomolecular recognition and/or interaction. Now invited professor at FCT-NOVA.
29. V. Vaithianathan (2008), working on Advanced oxides for transparent electronics. Back to India, working on College of Engineering, Tamil Nadu, India.
30. R. Senadeera*, (2008), working on Hybrid optoelectronic devices for transparent electronics. Now working at University of Peradeniya, Dept Physics, Sri Lanka.
31. S. Zang, (2007) working on amorphous silicon solar cells. Now working at University of Science & Technology Beijing, China.
32. R. Prabakaran, (2007), working in the field of porous silicon for electronic and sensor applications. Now at Vellore Institute of Technology, India
33. Gabriel Bernardo, (2006), working on OLEDs and LEDs devices and Systems. Now working at Instituto de Telecomunicações, Portugal
34. E. Elangovan*, (2004), working in TCO and oxide TFT processed by spray pyrolysis. He is now working at Khalifa University of Science & Technology.

35. Jinzhong Wang*, (2005); working on p-type oxides. Back t Chin and workingat Univ Juba and Tensar Geosynthet Ltd, China.
36. N Nedev, (2002), Materials plasma processing. Now at Universidad Autonoma de Baja California, Mexico.
37. S Georgiev (2002) expert in plasma processing by PECVD. Now at University of Ruse, Bulgaria
38. L. Grigore (1999), working on chemical materials solution processes. Now at University of Illinois System, USA.
39. F Giuliani, (1997) working on optical spectroscopy characterization. Now working at Polytechnic University of Catalonia, Spain.
40. A. Malik (1996), solution-based materials for sensing applications. Now working at University of México.
41. Li-jiang Meng (1994), TCO processed by oxides. Now professor at U. of Evora, Portugal.

*co-supervising

Track scientific starting in 2000

Published as author or co-author more than 1250 papers, from which 770 are from the Web of Science.

TALKS Presentations from 2006 to 2021

Talks presented in 2021

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Rodrigo Martins, Summan Nandy, Diana Gaspar, S. Goswami, Manuel Mendes, Ana Carolina Marques, Ana Pimentel, Daniela Nunes, Luís Pereira, Emanuel Carlos and Elvira Fortunato, Functional Materials for a Sustainable Green Deal and World Prosperity, [Materials Chemistry 2021](#), 18-19 February 2021. Rodrigo Martins, Materials for a Sustainable Green Deal and World Prosperity, ICRC 2021 - [International Conference on Resource Chemistry](#), Digital Conference, 8-9 March 2021
2. Rodrigo Martins and Elvira Fortunato, The Challenges for a Sustainable Long Term Green Deal Approach, [Advanced Materials 2021, 2nd Virtual Congress on Materials Science and Engineering](#), March 29th-31st, 2021.
3. Rodrigo Martins, Materials for a Sustainable World, 1st Asia Advanced Materials Summit, Marriot Shangai Parkview Hotel, 8-10 March, sponsored by the Chinese Association for Science and Technology.
4. Rodrigo Martins, Summan Nandy, Diana Gaspar, S. Goswami, Inês Cunha, Manuel Mendes, Ana Carolina Marques, Ana Pimentel, Daniela Nunes, Luís Pereira, E. Carlos, P. Barquinha, and Elvira Fortunato, Paper for Multifunctional Applications, in [Advanced Materials Lecture Series 2020](#), organized by [International Association of Advanced Materials](#) (IAAM), 6 June 2020.
5. R. Martins, S. Nandy, E. Fortunato, Materials the activator of our prosperity, International Union of Materials Research Societies – International Conference in Asia 2021 ([IUMRS-ICA 2021](#)), October 3 to 8, 2021, ICC Jeju, Jeju Island, Korea

Invited Talks

1. R. Martins, E. Fortunato, Multifunctional Paper based Platforms, [SPIE Photonics West](#), Digital Forum, 6 - 11 March 2021

Talks presented in 2020

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Rodrigo Martins, Pedro Barquinha, Luís Pereira, Elvira Fortunato, Oxide Materials as the Gateway for the Challenges of the Future, [Future Materials](#), Sana Malhoa Hotel, Lisbon, Portugal 26-28 February 2020.
2. Rodrigo Martins, Summan Nandy, Diana Gaspar, S. Goswami, Inês Cunha, Manuel Mendes, Ana Carolina Marques, Ana Pimentel, Daniela Nunes, Luís Pereira, E. Carlos, P. Barquinha, and Elvira Fortunato, Paper for Multifunctional Applications, in [Advanced Materials Lecture Series 2020](#), organized by [International Association of Advanced Materials](#) (IAAM), 6 June 2020.
3. Rodrigo Martins, Pedro Barquinha, Luís Pereira and Elvira Fortunato, Advanced Functional Oxides and the Electronics Challenges, Materials Info2020, Virtual Congress on Materials Science & Engineering, 9-10 November 2020
4. Rodrigo Martins, Elvira Fortunato, The Transition Challenges for a Sustainable Green Deal Approach, online IX Forum Ambiente, Faculdade de Engenharia da Universidade do Porto, 12 de Novembro 2020.
5. Rodrigo Martins e Elvira Fortunato, Eletrónica verde: tecnologia para um futuro sustentável, Congresso Internacional de Tecnologia Gráfica e Seminário Crimes e Segurança da Informação Impressa e Digital, Brasil, online, 26 Novembro 2020.

Invited Talks

2. Pedro Barquinha, A. Rovisco, R. Branquinho, R. Martins, E. Fortunato, Autonomous flexible electronics with zinc-tin oxide thin films and nanostructures, Innovations in Large-Area Electronics Conference, [InnoLAE 2020](#), Genome Campus, Cambridge, UK, , 20-22 January 2020.

Oral Presentations

1. A. Rovisco, A. Santos, T. Cramer, J. Martins, R. Branquinho, H. Águas, B. Fraboni, E. Fortunato, R. Martins, R. Igreja, P. Barquinha, Autonomous flexible electronics with zinc-tin oxide thin films and nanostructures, Innovations in Large-Area Electronics Conference, [InnoLAE 2020](#), Genome Campus, Cambridge, UK, 20-22 January 2020.
2. Ana Rovisco, Rita Branquinho, Rodrigo Martins, Elvira Fortunato, Pedro Barquinha, Microwave-assisted hydrothermal synthesis of Zn₂SnO₄ nanostructures for photocatalytic dye degradation, 2nd International Online-Conference on Nanomaterials, IOCN2020 Organizing, Nanotechnology for Energy, Environment, Catalyst and Sensing.

Poster Presentations

1. Jorge Martins, Gonçalo Narciso, Jonas Deuermeier, Ana Santa, Maria Pereira, Cátia Figueiredo, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, TCAD and XPS studies on the effect of device structure, electrode material and semiconductor composition on the performance of low-temperature IGZO TFTs, Innovations in Large-Area Electronics Conference, [InnoLAE 2020](#), Genome Campus, Cambridge, UK, 20-22 January 2020.

Talks presented in 2019

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Rodrigo Martins, Elvira Fortunato, The Challenges for a Better Europe with Responsibility, Farewell to M. Popall, Fraunhofer ISC, 20th September 2019, Würzburg, Germany.
2. Rodrigo Martins and E. Fortunato, Challenges of Science and Technology to Shape the Future with Responsibility, 3rd Doctoral congress in Engineering FEUP, Porto, 27th June 2019.
3. Rodrigo Martins and Elvira Fortunato, Materials and the Challenges of a New Frontier for an Intelligent Sustainable World, 25-26 June 2019, Solvay Room – ULB – Brussels, Belgium, Organized in the framework of the Science and Technology Foresight Project of the National Research Council of Italy (<http://www.foresight.cnr.it/materials>).
4. Rodrigo Martins and Elvira Fortunato, The Challenges for a Better Europe, Euronanoforum Bucharest, Romania, 11-13th June 2019.
5. P. Barquinha, L. Pereira, E. Fortunato, R. Martins, Oxide (nano)electronics: the gateway for an eco-sustainable future, The 5th edition of Nanotech France 2019 International Conference and Exhibition, NANOTECH FRANCE 2019, Paris, 26 Jun - 28 Jun 2019.
6. Pedro Barquinha, Luis Pereira, Elvira Fortunato, Rodrigo Martins, Oxide (nano)electronics: the gateway for an eco-sustainable future, World Intellectual Property Organization Roving Seminar, INL, Braga, May 21, 2019.
7. R. Martins, Shaping the Future of Science and Technology with Materials, Materiais 2019, Lisbon, 15-17 April 2019.
8. E. Fortunato and R. Martins, Metal Oxides: A Family of Materials that it is fully of Potentialities, Materiais 2019, Lisbon, 15-17 April 2019.
9. R. Martins, L. Pereira and E. Fortunato, Designing the Future with Paper, 80 anos Ambar - Conferência "Ideias no Papel", Barcelos, 3 April 2019, Portugal.
10. R. Martins, E. Fortunato, Challenges of Science and Technology to Shape the Future with Responsibility, BRIEFE 2019 (Bordeaux Reunion of International doctoral school in functional materials, European joint doctorate functional materials, Functional advanced materials and engineering, European Multifunctional Materials Institute), 21-22 March 2019, Bordeaux University, Pôle Juridique, 35 place Pey Berland, France.
11. R. Martins, E. Fortunato, Materials for a Better Future, Goldberg price Ceremony, University of Dresden, IAPP, Germany, 12th March 2019.

Invited Talks

1. Diana Gaspar, Marco Moreira, Jonas Deuermeier, Elvira Fortunato, Rodrigo Martins and Luis Pereira, "Hydrogenated indium based and indium free TCOs" Materials Research Meeting 2019, 10-14 December 2019, Yokohama, Japan.
2. R. Martins, L. Pereira, D. Gaspar, M. Mendes and E. Fortunato Dual Gate Paper Transistors for Logic and Analogic Applications, ICAE 2019, The 5th International Conference on Advanced Materials, 5-8 November 2019, Ramada Plaza Jeju Hotel, Jeju, South Korea.
3. E. Fortunato, E. Carlos, R. Branquinho, P. Barquinha and R. Martins, Metal oxides: A Family of Materials that is Full of Potentialities: the solution-printing process, ICAE 2019, The 5th International Conference on Advanced Materials, 5-8 November 2019, Ramada Plaza Jeju Hotel, Jeju, South Korea.
4. Hugo Águas, Manuel J. Mendes, Olalla S. Sobrado, Sirazul Haque, Miguel Alexandre, Manuel Chapa, Tiago Mateus, Elvira Fortunato and Rodrigo Martins, "Front contact light trapping structures with improved angular response to maximise the efficiency of thin film solar cells", The 5th International Conference on Advanced Electromaterials(ICAIE 2019), 5-8 November 2019, Ramada Plaza Jeju Hotel, Jeju, South Korea.
5. P. Grey, D. Gaspar, J. T. Carvalho, R. Barras, C. Gaspar, J. Figueira, E. Fortunato, R. Martins, L. Pereira "Cellulose based functional materials in flexible electronic devices" SIPS2019, 23-27 October 2019, Paphos, Cyprus.
6. Rodrigo Martins and Elvira Fortunato, The Materials Challenges for a Better World, 7th IUMRS-World Materials summit and Celebration of IUMRS 30 years, October 24-26, 2019, Jinxi Hotel, Hangzhou, China.
7. Elvira Fortunato, Pedro Barquinha, Daniela Nunes, Ana Pimentel, Lídia Santos, Ana Rovisco, Rita Branquinho, Suman Nandy, Rodrigo Martins, Oxides to boost the challenges of the future, IUMRS-ICA, 22-26 September 2019, Perth exhibition and convention centre, Perth Australia.

8. Rodrigo Martins, Luís Pereira, Diana Gaspar, Elvira Fortunato, Advances in Electronics Applications on Paper, IUMRS-ICA, 22-26 September 2019, Perth exhibition and convention centre, Perth Australia.
9. M. J. Mendes, O. S. Sobrado, S. Haque, M. F. Alexandre, M. M. Chapa, P. Centeno, J. Boane, T. Mateus, U. D. Menda, H. Águas, E. Fortunato, R. Martins, "Photonic front structures for Efficiency and Stability improvement of Silicon and Perovskite Photovoltaics", 22nd Sede Boqer Symposium on Solar Electricity Productionm 24-25 September 2019, Ben-Gurion National Solar Energy Center, Israel.
10. J. T. Carvalho, R. Barras, J. Figueira, E. Fortunato, R. Martins, L. Pereira "Printed, flexible and fiber based electronic and electrochemical devices: possibilities in wearables", UT Austin Portugal Program Conference, September 20th, Braga, Portugal.
11. Hugo Águas, Manuel J. Mendes, Olalla S. Sobrado, Sirazul Haque, Miguel Alexandre, Manuel Chapa, Tiago Mateus, Elvira Fortunato and Rodrigo Martins, "Light trapping structures with improved angular response for thin film solar cells fabricated by colloidal lithography", 2nd Smart NanoMaterials International Conference (SNAIA 2019), 10-13 September 2019, École Nationale Supérieure de Chimie de Paris, Paris, France.
12. Rodrigo Martins, Luís Pereira, Diana Gaspar, Elvira Fortunato, Advances in electronic applications on paper, 29th PTS COATING SYMPOSIUM 2019, 3th - 4th September 2019, Leonardo Royal Hotel, Munich, Germany.
13. Rodrigo Martins, Diana Gaspar, Luís Pereira Elvira Fortunato, Designing the Future with Sustainable Multifunctional Paper Platforms, International Conference on Display Technology, ICDT 2019, March 26th -29th 2019, Kunshan, Suzhou, China.
14. R. Martins, Luís Pereira, Diana Gaspar and E. Fortunato, Designing the Future with Multi-Functional Smart Paper Platforms, Afelim (Association française de l'électronique imprimée), JOURNÉE TECHNIQUE, 7 Mars - 8 Place Aurélie Nemours - Bât. Sophie Germain 75013 PARIS - March 7th 2019.
15. Suman Nandy, Sumita Goswami, Rodrigo Martins, Elvira Fortunato, "Smart Power Emerging Energy Device (SPEED)", National Science Summit (Ciência-2019), 8-10th July 2019, Lisbon Congress Center, Lisbon, Portugal.
16. P. Grey, S. N. Fernandes, D. Gaspar, R. Martins, E. Fortunato, M. H. Godinho and Luís Pereira, "Circularly Polarized Light Detection using Cellulose Nanocrystals Photonic Dielectrics, "Condensed Matter Physics, National Conference", 8-10 May 2019, Porto, Portugal
17. L. Pereira, L. Santos, P. Grey, A. C. Marques, A. Gonçalves, R. Correia, R. Martins, E. Fortunato, "Transition metal oxides nanoparticles engineering for energy harvesting", EMRS Spring Meeting, 27-31 May 2019, Nice, France.

Oral Presentations

1. Suman Nandy, Sumita Goswami, Andreia dos Santos, Rodrigo Martins, Elvira Fortunato, "Smart Power Emerging Energy Device (SPEED)", Innovations in Large-Area Electronics Conference (innoLAE-2019), 22-23rd January 2019, Genome Campus Conference Centre, Cambridge, United Kingdom.
2. J. Martins, N. Casa Branca, J. Deuermeier, J. Goes, E. Fortunato, R. Martins, A. Kiazadeh, and P. Barquinha "Resistive Switching in Zinc-Tin Oxide Diodes", SOPORVAC Vácuo 2019 Workshop, Caparica, Portugal, 26 February.
3. Suman Nandy, Sumita Goswami, Ana Rovisco, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, "Electro-typing" Data Storage Device by Probe Induced Charge Injection Method", MATERIAIS 2019, XIX Congresso da Sociedade Portuguesa de Materiais and X International Symposium on Materials, 14-17th April 2019, Lisbon, Portugal.
4. S. Nandy, S. Goswami, R. Martins, E. Fortunato, "Smart Power Emerging Energy Device (SPEED)", National Science Summit (Ciência-2019), 8-10th July 2019, Lisbon Congress Center, Lisbon, Portugal.
5. Diana Gaspar, Paul Grey, Elvira Fortunato, Rodrigo Martins, and Luís Pereira "Cellulose-Based Solid-State Electrolytes as Gate Dielectric in Oxide Thin Film Transistors" Materiais 2019, 14-17 April 2019, Lisbon, Portugal.
6. D. Gaspar, M. Moreira, J. Deuermeier, E. Fortunato, R. Martins, and L. Pereira "Hydrogenated indium oxide-based TCOs with improved electro-optical properties" Materiais 2019, Lisboa, Portugal, 14-17 April 2019.
7. P. Grey, S. N. Fernandes, D. Gaspar, I. Cunha, R. Martins, E. Fortunato, M. H. Godinho and L. Pereira, "Cellulose Nanocrystals as Photonic and Solid-State Electrolyte for Circular Polarized Light Sensing", Materiais 2019, 14-17 April 2019, Lisbon, Portugal.

8. Ana Rovisco, Rita Branquinho, Jorge Martins, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, ZnSnO₃ nanowires by hydrothermal synthesis, *Materiais 2019*, Lisbon, Portugal, 14-17 April 2019.
9. Joana Pinto, Inês Martins, Ana Rovisco, Jorge Martins, Asal Kiazadeh. Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Parylene-C based electronics flexible oxide electronics: device modeling and circuit integration, *Materiais 2019*, Lisbon, Portugal, 14-17 April 2019.
10. S. Goswami, A. Santos, S. Nandy, R. Igreja, P. Barquinha, R. Martins, E. Fortunato, 'Wearable, Integrated for Sustainable Energy: e-Cloth', *Materiais 2019*, 14th April – 17th April 2019, Lisbon – Portugal.
11. J. Deuermeier, N. Casa Branca, J. Martins, R. Martins, E. Fortunato, and A. Kiazadeh, *Materiais 2019*, Lisboa, Portugal, 14-17 April 2019, "Zinc-tin oxide diodes with distinct resistive switching modes: from RRAM to neuromorphic applications", *Materiais 2019*, Lisboa, Portugal, 14-17 April 2019.
12. Joana V. Pinto, InvTMs Martins, Ana Rovisco, Jorge Martins, Asal Kiazadeh, Pedro Barquinha, Rodrigo Martins and Elvira Fortunato, "Parylene-C based electronics", *Materiais 2019*, 14-17 April 2019, Lisbon Portugal.
13. J. Martins, A. Kiazadeh, J. Deuermeier, A. Rovisco, J.V. Pinto, E. Fortunato, R. Martins, and P. Barquinha, "Tantalum/silicon multicomponent oxides for application in thin-film transistors and neuromorphic devices" *Materiais 2019*, Lisboa, Portugal, 14-17 April 2019.
14. Emanuel Carlos, Rita Branquinho, Asal Kiazadeh, Pedro Barquinha, Nikolaous Kalfagiannis, Demosthenes Koutsogeorgis, Asko Sneck, Leppaniemi, Jaakko, Ari Alastalo, Rodrigo Martins and Elvira Fortunato "How to go further in printable oxide electronic materials", *Materiais 2019*, 14-17 April 2019, Lisbon, Portugal.
15. M. J. Mendes, O. S. Sobrado, S. Haque, M. Alexandre, M. Chapa, T. Mateus, H. Águas, E. Fortunato and R. Martins, "Photonic-structured front contacts on thin-film solar cells: Novel paths for efficiency and flexibility improvement", *Materiais 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials*, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
16. S. Haque, M. J. Mendes, O. S. Sobrado, M. Alexandre, M. Chapa, H. Águas, E. Fortunato and R. Martins, "Design of photonic microstructures for optimum wave-optical light trapping in Perovskite solar cells", *Materiais 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials*, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
17. M. Alexandre, M. Chapa, S. Haque, M. J. Mendes, H. Águas, E. Fortunato, R. Martins, "Optimal Design of Luminescent Down-Shifting for High Efficiency and Stable Perovskite Solar Cells", *Materiais 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials*, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
18. M. Chapa, M. Alexandre, S. Haque, M. J. Mendes, H. Águas, E. Fortunato, R. Martins, "Thin Flexible Perovskite/c-Silicon Four-Terminal Tandems: Interlayer and Intermediate Contacts Optimization", *Materiais 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials*, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
19. M. J. Oliveira, P. Quaresma, M. P. de Almeida, A. Araújo, E. Pereira, E. Fortunato, R. Martins, R. Franco, and H. Águas, "Plasmonic office paper as an alternative cost-effective platform for trace analyte detection by Surface Enhanced Raman Spectroscopy", *Materiais 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials*, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
20. A. S. Saraiva, E. Figueiredo, R. J. C. Silva, Hugo Águas, "From archaeological bells to the characterization of high-tin bronze corrosion structures", *Materiais 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials*, 14-17 April 2019, Univ. Nova de Lisboa, Portugal
21. M. J. Mendes, S. Haque, M. Alexandre, M. Chapa, O. S.-Sobrado, H. Águas, E. Fortunato and R. Martins, "Photonic-enhanced Perovskite solar cells: New avenues for Efficiency and Stability improvement", *E-MRS Spring Meeting, Symposium: B - Emerging photovoltaics: strategies for more stable devices*, 27-31 May 2019, Nice, France.
22. Emanuel Carlos, Rita Branquinho, Asal Kiazadeh, Pedro Barquinha, Nikolaous Kalfagiannis, Demosthenes Koutsogeorgis, Asko Sneck, Jaakko Leppv§niemi, Ari Alastalo, Rodrigo Martins and Elvira Fortunato "How to go further in printable oxide electronic materials", *EMRS Spring*, 27-31 May 2019, Nice, France.
23. S. Goswami, A. Santos, S. Nandy, R. Igreja, P. Barquinha, R. Martins, E. Fortunato, "A human-motion interactive wearable energy harvester", *6th Nano Today Conference*, 16th June – 20th June 2019, Lisbon – Portugal.
24. Jorge Martins, Nuno Casa Branca, Jonas Deuermeier, João Goes, Elvira Fortunato, Rodrigo Martins, Asal Kiazadeh, Pedro Barquinha, Zinc-tin oxide diodes with distinct resistive switching modes: from RRAM to neuromorphic applications, *Nanotech France 2019*, Paris, France, 26-28 June 2019.

25. Ana Rovisco, Jorge Martins, Andreia dos Santos, Joana Neto, Rita Branquinho, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, Multifunctional Zinc Tin Oxide Nanostructures: From Photocatalysis to Electronic Applications, Nanotech France 2019, Paris, France, 26-28 June 2019.
26. D. Gaspar, P. Grey, I. Cunha, E. Fortunato and R. Martins, L. Pereira, "Cellulose based functional materials in electrical and electrochemical flexible devices" 2019 International Conference on Nanotechnology for Renewable Materials, 3-7 June 2019, Chiba, Tokyo, Japan.
27. P. Grey, S. N. Fernandes, D. Gaspar, I. Cunha, R. Martins, E. Fortunato, M. H. Godinho and L. Pereira, "Photonic Cellulose Nanocrystal Films for Optoelectronic Devices" 2019 International Conference on Nanotechnology for Renewable Materials, 3-7 June 2019, Chiba, Tokyo, Japan.
28. J. Rosa, P. J. Soininen, J. Deuermeier, M. Bosund, Z. Zhu, E. Fortunato, R. Martins, M. Sugiyama, and S. Merdes, "Structural and spectroscopic properties of Eu-doped Y2O2S thin films prepared by atomic layer deposition", EUROMAT 2019, Stockholm, Sweden, 1-5 September 2019.
29. Suman Nandy, Sumita Goswami, Arghya Narayan Banerjee, Rodrigo Martins, Elvira Fortunato, "Biowaste-derived carbon black with polyaniline: Recycling to sustainable multifunctional applications", EMRS-2019 Fall Meeting, 16-19 September 2019, Warsaw University of Technology, Poland.
30. Suman Nandy, Guilherme Ferreira, Sumita Goswami, Luis Pereira, Rodrigo Martins, Elvira Fortunato, "Zero e-waste energy from polyaniline functionalized paper", EMRS-2019 FALL MEETING, 16-19 September 2019, Warsaw University of Technology, Poland.
31. Jorge Martins, Inês Martins, Jonas Deuermeier, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, Investigating the influence of device structure in low-temperature IGZO TFTs by TCAD simulation and XPS, E-MRS 2019 Fall Meeting, Warsaw, Poland, 16-19 September 2019.
32. P. Grey, S. N. Fernandes, D. Gaspar, J. Deuermeier, R. Martins, E. Fortunato, M. H. Godinho and L. Pereira "Circular Polarized Light Sensors Using Cellulose Nanocrystals Self-Assembled Membranes" MRS fall Meeting, 1-6 December 2019, Boston, USA.

Poster Presentations

1. Inês Martins, Cátia Figueiredo, Joana Pinto, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Conformable electronics based on Parylene-C polymer, innoLAE 2019, Cambridge, UK, 22-23 January 2019.
2. Joana Pinto, Cristina Fernandes, Inês Martins, Ana Rovisco, Jorge Martins, Asal Kiazadeh, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Low power electronics based on Parylene-C hybrid devices: top gate vs bottom gate TFTs, innoLAE 2019 Cambridge, UK, 22-23 January 2019.
3. Guilherme Ferreira, Sumita Goswami, Suman Nandy, Luís Pereira, Rodrigo Martins, Elvira Fortunato, "Self-powered Paper based on Mechano-responsive Charge Transfer Mechanism at Metal/Polymer Interface", MATERIAIS 2019, XIX Congresso da Sociedade Portuguesa de Materiais and X International Symposium on Materials, 14-17 April 2019, Lisbon, Portugal.
4. Diana Gaspar, Marco Moreira, Luís Pereira, Elvira Fortunato, and Rodrigo Martins, "Hydrogenated indium oxide-based TCOs with improved electro-optical properties" Materiais 2019, 14-17 April 2019, Lisbon -Portugal.
5. Joana V. Pinto, Miguel Farto, Rui Igreja, Rodrigo Martins and Elvira Fortunato, "Simultaneous structural and electrical characterization of VO2 metal-to-insulator transition using a multipurpose XRD holder" Materiais 2019, 14-17 April 2019, Lisbon, Portugal.
6. Marco A. Moreira, D. Gaspar, E. Fortunato, R. Martins and Luís Pereira, "Enhancement of the optical and electrical properties of spray-deposited TCOs by post-annealing H2 atmosphere" Materiais 2019, 14-17 April 2019, Lisbon -Portugal
7. R. Barras, A. dos Santos, E. Fortunato, R. Martins, R. Igreja, P. Barquinha, L. Pereira, "Piezo-enhanced triboelectric generator on carbon fiber yarn", Materiais 2019, 14-17 April 2019, Lisbon, Portugal
8. José Tiago Carvalho, Elvira Fortunato, Rodrigo Martins, Luís Pereira, "Functionalized carbon fiber-based structures for application in electronic and electrochemical systems" Materiais 2019, 14-17 April 2019, Lisbon, Portugal.
9. Inês Cunha, Jorge Martins, João Rodrigues, Sabrina Rubin, José Tiago Carvalho, Pydi Ganga Bahubalindrani, Elvira Fortunato, Rodrigo Martins, Luís Pereira, "Handwritten digital electronics with printed paper transistors" Materiais 2019, 14-17 April 2019, Lisbon, Portugal - Melhor Poster.

10. Joana Figueira, Cristina Gaspar, Tiago Carvalho, Joana Loureiro, Elvira Fortunato, Rodrigo Martins and Luís Pereira, "Cork - A Novel Green Substrate Suitable for All-Printed Wearable Technology", *Materials* 2019, 14-17 April 2019, Lisbon, Portugal.
11. M. J. Mendes, O. S. Sobrado, S. Haque, M. Alexandre, M. Chapa, P. Centeno, J. Boane, T. Mateus, H. Águas, E. Fortunato, R. Martins, "Thinner and Higher Efficient Silicon and Perovskite Solar Cells with Photonic structuring", *Materials* 2019 – XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials, 14-17 April 2019, Univ. Nova de Lisboa, Portugal
12. P. Centeno, T. Mateus, M. J. Mendes, H. Águas, E. Fortunato, R. Martins, "Self-cleaned Solar Cells with Super-Hydrophobic Photonic Nano-structures", XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials, 14-17 April 2019, Univ. Nova de Lisboa, Portugal
13. F. Neves, J. B. Correia, A. Joyce, A. Stark, N. Schell, M. J. Mendes, H. Águas, E. Fortunato, R. Martins, "Large-scale substitution of Sn by Sb in CZTS powders: effect on the crystal structure", XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
14. Cátia Figueiredo, Inês Martins, Joana Pinto, Rodrigo Santos, Elvira Fortunato, Rodrigo Martins, Rui Igreja, Pedro Barquinha, Fabrication of hybrid field-effect transistors on fibres, *Materials* 2019, Lisbon, Portugal, 14-17 April 2019.
15. M. J. Oliveira, M. Bento, M. P. Almeida, E. Pereira, E. Fortunato, R. Martins, H. Águas, R. Franco, "SERS-based bionanoplatform for immuno-detection of food toxins", XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
16. G. Ferreira, S. Goswami, S. Nandy, L. Pereira, R. Martins, E. Fortunato, "Self-powered Paper based on Mechano-responsive Charge Transfer Mechanism at Metal/Polymer Interface", *MATERIAIS* 2019, XIX Congresso da Sociedade Portuguesa de Materiais and X International Symposium on Materials, 14-17th April 2019, Lisbon, Portugal.
17. A. Lyubchik, H. Águas, E. Fortunato, R. Martins, "Effect of chemo-electronic energy conversion of water adsorption on surface of ZrO₂ based nanopowder system", XIXth Congress of Sociedade Portuguesa de Materiais & Xth International Symposium on Materials, 14-17 April 2019, Univ. Nova de Lisboa, Portugal.
18. Ana Rovisco, Rita Branquinho, Jonas Deuermeier, Elvira Fortunato, Rodrigo Martins and Pedro Barquinha, ZnSnO₃ phase identification by XRD, EDS and XPS analyses, *EXSA Quantitative Methods in X-Ray Spectrometry*, Lisbon, Portugal, 12-17 May 2019.
19. Ana Rovisco, Rita Branquinho, Jorge Martins, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, Seed-layer free ZnSnO₃ nanowires by hydrothermal synthesis: effect of physical parameters, 6th Nano Today conference, Lisbon, Portugal, 16-20 June 2019.
20. M. Chapa, M. Alexandre, S. Haque, M. J. Mendes, H. Águas, E. Fortunato, R. Martins, "Ultra-Thin Perovskite/c-Silicon Four-Terminal Tandems: Interlayer and Intermediate Contacts Optimization", 28th International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS), 4-9 August, Ecole Polytechnique, Palaiseau, France.
21. M. Alexandre, M. Chapa, S. Haque, M. J. Mendes, H. Águas, E. Fortunato, R. Martins, "Optimal Design of Luminescent Down-Shifting for High Efficiency and Stable Perovskite Solar Cells", 28th International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS), 4-9 August, Ecole Polytechnique, Palaiseau, France.
22. H. Águas, M. J. Mendes, O. S. Sobrado, S. Haque, M. Alexandre, M. Chapa, T. Mateus, E. Fortunato, R. Martins, "Front Contact Light Trapping Structures by Design for Maximum Efficiency Enhancement of Thin Film Solar Cells", 28th International Conference on Amorphous and Nano-crystalline Semiconductors (ICANS), 4-9 August, Ecole Polytechnique, Palaiseau, France.
23. Inês Cunha, Jorge Martins, João Rodrigues, Sabrina Rubin, José Tiago Carvalho, Pydi Ganga Bahubalindrani, Elvira Fortunato, Rodrigo Martins, Luís Pereira, "Do-it-yourself electronics on paper" *EUROMAT 2019*, 1-5 September Stockholm, Sweden.
24. Emanuel Carlos, Spilios Dellis, Nikolaos Kalfagiannis, Demosthenes C. Koutsogeorgis, Rita Branquinho, Rodrigo Martins and Elvira Fortunato "Ultrafast photonic curing of solution-based aluminium oxide for thin film transistors", *innoLAE*, 22-23 January 2019, Cambridge, UK.
25. D. Gaspar, Jorge Martins, Pydi Bahubalindrani, P. Grey, R. Martins, E. Fortunato and L. Pereira, Logic Operations with Oxide Field Effect Transistors on Cellulose Substrates, *International Conference on Nanotechnology for Renewable Materials*, 3-7 June 2019, Chiba, Tokyo, Japan.

26. Inês Cunha, Jorge Martins, João Rodrigues, Sabrina Rubin, José Tiago Carvalho, Pydi Ganga Bahubalindrani, Elvira Fortunato, Rodrigo Martins, Luís Pereira, "Do-it-yourself electronics on paper" EUROMAT 2019 ,1-5 September 2019, Stockolm, Sweden.
27. Ana Rovisco, Andreia dos Santos, Rui Igreja, Rita Branquinho, Elvira Fortunato, Rodrigo Martins and Pedro Barquinha, Micro-structured composite of PDMS and ZnSnO₃ nanowires for energy harvesting, E-MRS 2019 Fall Meeting, Warsaw, Poland, 16-19 September 2019.

Talks presented in 2018

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Rodrigo Martins, Science and Technology: Challenges and Responsibilities, in symposia [Ethics, Science and Society: challenges for BioPolitics](#), Lisbon, 10-11 December 2018.
2. R. Martins and E. Fortunato, Designing the Future with Functional Materials, 19th International Union of Materials Research Societies, Bali, Indonesia, 31 October-2 November 2018.
3. R. Martins, L. Pereira and E. Fortunato, Paper Electronics and The Sustainable Cities of the Future, [eID conference](#), September 27th - 28th, 2018, Lisbon, Champalimaud Foundation.
4. E. Fortunato and R. Martins, PAPERTRONICS, [11th Ibero-American Congress on Sensors](#), September 17th - 20th, 2018 Barcelona, Spain.
5. Rodrigo Martins and Elvira Fortunato, Driving Flexible Electronics by Hybrid Materials, Advanced Materials 2018, Zurich, Switzerland, 3-6 September 2018.
6. R. Martins, L. Pereira, E. Fortunato, Multifunctional paper electronics, 6th Dresden Nanoanalysis Symposium, Dresden, August 31, 2018.
7. R. Martins, M. Mendes, E. Fortunato, Designing the Future with Materials, 10th FAME/EMMI Master Research Workshop 2018, Darmstadt, Germany, 22-24 July 2018.
8. Rodrigo Martins, The Role of Associations and Academies in the Future Science and Technology Challenges: EMRS and EURASC Contributions. EMRS Spring meeting in Europe in Motion workshop, Strasbourg Covention Centre, France 18-22 June 2018.
9. Rodrigo Martins, M. Mendes and E. Fortunato, Materials: The Crosscutting Component for the Missions of the Future, Advanced Materials Forum, Hangzhou, China, 25-26 May 2018.
10. António T. Vicente, Manuel J. Mendes, Marta P. Ferreira, Andreia Araújo, Olalla Sanchez-Sobrado, Daniela Nunes, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Multifunctional Paper as Photovoltaic Platform, Advanced Materials Congress, Stokholm, 25-28 March 2018, Swedeen.
11. R. Martins, DE ENGENHEIRO A CEO, Núcleo de estudantes de Materiais, NEUMAT do IST, Lisbon, 20th of March 2018.
12. E. Fortunato and R. Martins, FCT NOVA - Electronics & Sensors with Cellulose, FRONTIER IP GROUP PLC, Market Capital Day, 29th January 2018-, UK Embassy, Lisbon.

Invited Talks

1. R. Martins, E. Fortunato, G. Kiriakidis and Hanns-Ulrich Habermeier, Materials and the Research and Innovation Challenges of the Future, Europe in Motion - EUMAT joint session on E-MRS Fall meeting, Warsaw, Poland, 19 September 2018.
2. R. Martins and E. Fortunato, Materials Challenges of the Future, Symposium G (Structural, optical and electronic properties of the metal-oxide nanostructures), XVII Brazil MRS Meeting, Natal, Brasil, 16-20 September 2018.
3. Elvira Fortunato, Rodrigo Martins, Metal Oxide Materials as a sustainable and visible alternative to low cost electronics, Innovations in Large Area Electronics Conference, innoLA6-2018, 23-24 January 2018, Genome Campus Conference Centre, Hinxton, UK.
4. Rodrigo Martins, From Engineering to a CEO, Nucleo de estudantes de Materiais, IST, Lisbon, 20th of March 2018
5. D. Nunes, A. Pimentel, A. Araujo, T. R. Calmeiro, S. Panigrahi, J. V. Pinto, P. Barquinha, M. Gama, E. Fortunato, R. Martins, Enhanced UV Flexible Photodetectors and Photocatalysts Based on TiO₂ Nanoplatfoms, 2nd International Conference on Catalysis and Chemical Engineering, 19-21 February 2018, Paris, France.

6. Manuel J. Mendes, Sirazul Haque, Olalla S. Sobrado, Andreia Araújo, António Vicente, Tiago Mateus, Hugo Águas, Elvira Fortunato, Rodrigo Martins, "Making Silicon and Perovskite Solar Cells Thinner and High Efficient with Photonic-structured Materials", Advanced Energy Materials Congress, 25-28 March 2018, Stockholm, Sweden.
7. R. Martins, D. Gaspar, L. Pereira, P. Barquinha, F. Shan, A. Liu, and E. Fortunato, Papertronics: Turn Imagination Reality, International Thin Film Transistor Conference, ITC 2018, Guangzhou, China, 28 February 2nd March 2018.
8. R. Martins, D. Gaspar, P. Gray, L. Pereira, P. Barquinha, F. Shan A. Liu, and E. Fortunato, R. Martins, D. Gaspar, P. Gray, L. Pereira, P. Barquinha, F. Shan A. Liu, and E. Fortunato, Sustainable Hybrid Materials Applied to Flexible Electronics, Symposium W, Hybrid Materials. State of Art and New Frontiers, EMRS Spring meeting, Strasbourg Convention Centre, France 18-22 June 2018.
9. Emanuel Carlos, Rita Branquinho, Pedro Trigo, Asal Kiazadeh, Jorge Martins, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato" Boosting electrical performance of solution-based high- κ dielectrics to apply in electronic devices using low cost processes" - Solution processing and properties of functional oxide thin films and nanostructures - III (Symposium P), E-MRS Spring Meeting – 18-22 June 2018, Strasbourg - France.
10. M. J. Mendes, O. S. Sobrado, S. Haque, A. Araújo, A. Vicente, T. Mateus, H. Águas, E. Fortunato, R. Martins, Making Solar Electricity a User-convenient Reality with Light Management in Photovoltaics Encontro Ciência 2018, Centro de Congressos de Lisboa, 2-4 July 2018.
11. D. Nunes, A. Pimentel, T. Calmeiro, A. Araujo, S. Nandy, J.V. Pinto, P. Barquinha, E. Fortunato, and R. Martins, Enhanced UV flexible photodetectors and photocatalysts based on TiO₂ nanoplatforms, 2nd International Conference on Catalysis and Chemical Engineering, 19-21 February 2018, Paris, France.

Oral Presentations

1. Rodrigo Martins, D. Gaspar, L. Pereira, P. Barquinha, A. Liu, F. Shan, E. Fortunato, Sustainable Hybrid Materials applied to Flexible Electronics, Innovations in Large Area Electronics Conference, innoLA6-2018, 23-24 January 2018, Genome Campus Conference Centre, Hinxton, UK.
2. Rita Branquinho, Emanuel Carlos, Ana Santa, Daniela Salgueiro, Spiliotis Dellis, Nikolaos Kalfagiannis, Asal Kiazadeh, Pedro Barquinha, Demosthenes C. Koutsogeorgis, Rodrigo Martins, Elvira Fortunato, Solution processed dielectrics for metal oxide based thin film transistors, EMRS 2018 Spring Meeting, Strasbourg, France, 18-22 June 2018.
3. Andreia dos Santos, Nuno Pinela, Pedro Alves, Rodrigo Santos, Elvira Fortunato, Rodrigo Martins, Hugo Águas and Rui Igreja E-Skin Pressure Sensors Made by Laser Engraved PDMS Molds; Eurosensors 2018, Graz (Áustria), 9–12 September 2018
4. B. J. Coelho, B. Veigas, H. Águas, E. Fortunato, R. Martins, P.V. Baptista, and R. Igreja, "A Digital Microfluidics Platform for Loop, mediated Isothermal Amplification of DNA." FEMS Junior EuroMAT, Budapest (Hungary), 2018.
5. I. Cunha, P. Grey, D. Gaspar, E. Fortunato, R. Martins, L. Pereira; "Dual-cation cellulose electrolytes for flexible iontronics on paper". Symposium W: Hybrid materials: state of the art and new frontiers. E-MRS 2018 Spring Meeting, June 18th -22th, 2018, Strasbourg, France.
6. S. Goswami, S. Nandy, E. Fortunato and R. Martins, Biowaste-derived carbon functionalized with polyaniline: Recycling to multifunctional applications, The 4th edition of Nanotech France 2018 International Conference and Exhibition, 27-29 June 2018, Paris, France
7. A. Rovisco, R. Branquinho, J. Martins, M. Oliveira, D. Nunes, E. Fortunato, R. Martins and P. Barquinha, Seed-layer free zinc tin oxide tailored nanostructures: effect of chemical parameters, 15th International Conference on Nanosciences & Nanotechnologies (NN18), 3-6 July 2018, Thessaloniki, Greece
8. A. Rovisco, R. Branquinho, J. Martins, E. Fortunato, R. Martins and P. Barquinha, Seed-layer free zinc tin oxide tailored nanostructures for nanoelectronic applications produced by low-temperature hydrothermal synthesis, 2018 MRS Fall Meeting, November 25 - 30, 2018 Hynes Convention Center, Boston, Massachusetts, USA
9. Shrabani Panigrahi, Santanu Jana, Tomás Calmeiro, Daniela Nunes, Rodrigo Martins, Elvira Fortunato, Imaging the Charge Carrier Distribution Inside Solar Cell Using Kelvin Probe Force Microscopy", nanoPT 2018, Lisboa, Portugal, 07-09 February 2018.)

10. Shrabani Panigrahi*, Santanu Jana, Tomás Calmeiro, Daniela Nunes, Rodrigo Martins, Elvira Fortunato Cross-sectional Analysis of Surface Potential inside Solar Cells Using Kelvin Probe Force Microscopy, ABXPV Perovskite Thin Film Photovoltaics, 27th-28th February 2018.

Poster Presentations

1. M.I. Caupers, J. Leppaniemi, M. Vilkmán, L. Pereira, E. Fortunato, Rodrigo Martins, M. Smolander, Optimization of Printed Inverted Organic Solar Cells, Innovations in Large Area Electronics Conference, innoLA6-2018, 23-24 January 2018, Genome Campus Conference Centre, Hinxton, UK.
2. J. Almeida, J. Leppaniemi, L. Pereira, E. Fortunato, Rodrigo Martins, A. Aastalo, Fabrication and Functionalization of printed In_2O_3 Thin Film Transistor for Biosensing Applications, Innovations in Large Area Electronics Conference, innoLA6-2018, 23-24 January 2018, Genome Campus Conference Centre, Hinxton, UK.
3. J.T. Carvalho, M. Franco, V. Dubceac, A. Kiazadeh, M. Gall, A. Clausner, A. Garitagoitia Cid, E. Zschech, JE. Fortunato, Rodrigo Martins, L. Pereira, Printed ZnO Nanoparticles for applications in transistors and memory devices, Innovations in Large Area Electronics Conference, innoLA6-2018, 23-24 January 2018, Genome Campus Conference Centre, Hinxton, UK.
4. Andriy Lyubchik, Hugo Águas, Elvira Fortunato, and Rodrigo Martins Effect of chemo-electronic energy conversion of water adsorption on surface of ZrO_2 based nanopowder system, European Advanced Energy Materials and Technology Congress, Stockholm, Sweden, 25-28 March 2018.
5. A. Kiazadeh, E. Carlos, J. Deuermeier, R. Branquinho, J. Martins, P. Barquinha, R. Martins, E. Fortunato, Solution processed AlOx as dielectric and resistive switching active material towards system-on-panel applications, 6th Dresden Nanoanalysis Symposium, Dresden, Germany August 31, 2018.
6. A. C. Marques, R. Martins, B. Costa-Silva, G. Sales and E. Fortunato, Development and optimization of point-of-care nanobiosensing platforms, 6th Dresden Nanoscale Symposium, Dresden, Germany, 31 August 2018.
7. A. C. Marques, L. Santos, S. Pereira, U. Emanuele, S. Sinopoli, R. Igreja, G. Sales, R. Martins and E. Fortunato, A Planar Electrochromic Device using WO_3 Nanoparticles and a Modified Paper-Based Electrolyte, Eurosensors 2018 Conference, Graz, Austria, 9–12 September 2018.
8. A. C. Marques, B. J. Coelho, R. Martins, J. P. Veiga and E. Fortunato, Lab-on-paper technology, EIT Raw Materials @ Schools Annual Meeting, Bologna, Italy, 2018.
9. Emanuel Carlos, Asal Kiazadeh, Jonas Deuermeier, Rita Branquinho, Rodrigo Martins, Elvira Fortunato, "Opportunities with solution-processed high-k dielectrics for ReRAM applications" - New Memory Paradigms: Memristive Phenomena and Neuromorphic Applications, Faraday Discussion, 15–17 October 2018, - Aachen - Germany 2018.
10. B. J. Coelho, B. Veigas, H. Águas, E. Fortunato, R. Martins, P.V. Baptista, and R. Igreja, "Digital Microfluidics Devices for Nucleic Acid Amplification." Biosensors 2018, 15-15 June, Miami (USA)
11. I. Cunha, R. Barras, P. Grey, D. Gaspar, E. Fortunato, R. Martins, L. Pereira; "Reusable and recyclable cellulose electrolytes for paper electronics". Symposium R: Solid state ionics: advanced functional materials for solid state devices. E-MRS 2018 Spring Meeting, June 18th -22th, 2018, Strasbourg, France.
12. Suman Nandy, Sumita Goswami, Anna Rovisco, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, "Atomic force microscopy: Impact on nanoscale charge-transport dynamics", 6th Dresden Nanoanalysis Symposium, Dresden, August 31, 2018.
13. S. Goswami, S. Nandy, R. Martins and E. Fortunato, Biowaste-derived carbon functionalized with polyaniline: Recycling to multifunctional application', Symposium W: Hybrid materials: state of the art and new frontiers of the E-MRS 2018 Spring Meeting, 18-22 June 2018, Strasbourg, France.
14. J. Martins, P. Bahubalindrani, A. Rovisco, A. Kiazadeh, R. Martins, E. Fortunato and P. Barquinha, Bias Stress and Temperature Impact on InGaZnO TFTs and Circuits, 17th International Conference on Nanoimprint and Nanoprint Technologies, September 18-20, 2018, INL | Braga, Portugal.
15. A. Rovisco, R. Branquinho, J. Martins, M. Oliveira, D. Nunes, E. Fortunato, R. Martins and P. Barquinha, ZnSnO_3 Nanowires: Synthesis and Electrical Characterization inside SEM, 17th International Conference on Nanoimprint and Nanoprint Technologies, September 18-20, 2018, INL | Braga, Portugal.

Talks presented in 2017

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Rodrigo Martins, L. Pereira, E. Fortunato, Flexible Green Electronics for Smart Applications, International Conference on Advanced Nanomaterials and Nanotechnology, ICANN-2017, December 18-21, 2017, ICANN-2017, organized by the Centre for Nanotechnology at the Indian Institute of Technology Guwahati (IITG), India, Calcutá, India.
2. Elvira Fortunato, P. Barquinha and Rodrigo Martins, where science fiction meets reality? With Metal Oxide semiconductors, 2nd International Caparica Christmas Congress on Translational Chemistry 4th -7th December 2017, Portugal.
3. R. Martins, L. Pereira, D. Gaspar, Elvira Fortunato, Exploiting paper for the next Generation of Interactive Surfaces, 2nd International Caparica Christmas Congress on Translational Chemistry 4th - 7th December 2017, Portugal.
4. E. Fortunato and R. Martins, Oxide thin films for sustainable and flexible electronics, Materials Summit, Forum for the next generation researchers, 20-21 November 2017, Council of Europe, Strasbourg, France.
5. R. Martins, D. Gaspar, L. Pereira, A. Vicente, M. Mendes, H. Águas, P. Barquinha, R. Branquinho, P. Grey, I. Cunha and E. Fortunato, Next Generation of Electronic Eco-Systems on Foils, VI World Materials Summit, Forum for the next generation researchers, 18-19 November 2017, Council of Europe – European Youth Centre, Strasbourg, France.
6. R. Martins and E. Fortunato, The role of Materials Science in the Missions of the Future, Industrial Innovation Info Days, Organized by European Commission 3-4 October 2017 Brussels, Belgium.
7. E. Fortunato, R. Martins, Metal Oxide Materials as a Sustainable and Viable Alternative for Low Cost and High-Performance Electronics, 15th International Conference in Advanced Materials, IUMRS-ICAM 2017, 27th August to 1st Septemebr 201, Kyoto, Japan (plenary talk).
8. R. Martins and E. Fortunato, The Role of Materials Science in the challenges of the future, Symposium F1, Forum “Current Issues and Prospects in Materials Research, 15th International Conference on Advanced materials, IUMRS-ICAM 2017, 27th August to 1 September 2017, Kyoto, Japan (key note).
9. R. Martins, A. Vicente, P. Wojcik, M. Mendes, H. Águas, E. Fortunato, A statistics modeling approach for the optimization of thin film photovoltaic devices, 7th International Symposium on Energy, Manchester, England, 13-17 August 2017.
10. E. Fortunato and R. Martins, Sustainable materials applied to flexible electronics: the case of cellulose, SESSION 2: Nanotechnologies’ Applications for Electronics, EuroNanoForum 2017, EU Malta presidency, La Valleta 21-23 June 2017.
11. R. Martins, H. Águas, I. Bernacka-Wojcik, P. Alves, R. Igreja, B. Veigas, Pedro Baptista, E. Fortunato, Bio-microfluidic platform using gold nanopores, Aix en Provinces, École de Mines, Center of Microelectronics in Gardanne Provence, in the frame of the 3rd IC of the ELBYSIER program, 20-24 March 2017.
12. E. Fortunato, Ana Marques, B. Veigas, P. Batista, R. Martins, A low cost safe disposable platforms for rapid testing: lab-on-paper, Aix en Provinces, École de Mines, Center of Microelectronics in Gardanne Provence, in the frame of the 3rd IC of the ELBYSIER program, 20-24 March 2017.

Invited Talks

1. E. Fortunato, L. Santos, A. Gonçalves, A. Marques, L. Pereira, and R. Martins, Metal Oxide Materials as a Sustainable and Viable Alternative to Low Cost Electronics, Symposium ES03: Earth Abundant Metal Oxides, Sulfides and Selenides for Energy Systems and Devices, MRS Fall 2017, Boston.
2. E. Fortunato, L. Santos, A. Gonçalves, A. Marques, L. Pereira, and R. Martins, Synthesis of Metal Oxide Nanoparticles for Electrochromic and Thermo-chromic Applications, Symposium ES07, Chromogenic Materials and Devices, MRS, Fall meeting, 22-30 November 2017.
3. R. Martins, L. Pereira, P. Wojcik, L. Santos, P. Grey, and E. Fortunato, Metal Oxide Nanoparticles for Printed Electrochemical Applications, 4th International Conference on Advanced Electromaterials, ICAE 2017, 21-24 November 2017, Ramada Hotel, Jeju, South Korea.

4. E. Fortunato and R. Martins, Is the New Oxide Electronics (R)Evolution Solution-based? 4th International Conference on Advanced Electromaterials, ICAE 2017, 21-24 November 2017, Ramada Hotel, Jeju, South Korea.
5. P. Barquinha, P. Bahubalindrani, A. Kiazadeh, J. Martins, A. Santos, C. Fernandes, A. Santa, R. Branquinho, R. Martins, E. Fortunato, Flexible oxide electronics: current status and applications, OE-A Workshop on Smart Packaging and IoT, Oct. 12, 2017, Cambridge, UK.
6. L. Pereira, I. Cunha, R. Barras, P. Grey, J. T. Carvalho, D. Gaspar, E. Fortunato and R. Martins, Cellulose Based electronics and Iontronics, 4th Elbysier Intensive Program in Graphene Technologies, Lisbon, UNL, 9-13 October 2017.
7. H. Águas, A. Araújo, P. Alves, M.J. Oliveira, E. Fortunato, R. Martins Noble Metal Nanoparticles for molecular detection, 4th Elbysier Intensive Program in Graphene Technologies, Lisbon, UNL, 9-13 October 2017
8. P. Barquinha, A. Rovisco, S. Maiti, R. Branquinho, R. Martins, E. Fortunato, Nanoelectronics beyond silicon era, 4th ELBYSIER Intensive Course, Lisbon, Portugal, Oct 9 2017.
9. L. Pereira, L. Santos, P. Wojcik, P. Grey, J. T. Carvalho, D. Gaspar, E. Fortunato and R. Martins, Oxide nanoparticles based printed electrical and electrochemical devices on paper substrates, 15th International conference on Advanced Materials, symposium C4, IUMRS-ICAM 2017, August 27-September 1, 2017, Kyoto, Japan.
10. R. Martins and E. Fortunato, Missions of the Future, symposium K - Metal-oxide nanostructures: from photocatalysis to energy applications. XVI Brazil Materials Research Society Meeting, Gramado, 10-14 September 2017, Brazil.
11. E. Fortunato and R. Martins, Metal oxide materials as a sustainable and viable alternative for low cost and high-performance electronics, 15th International Conference on Advanced materials, IUMRS-ICAM 2017, Kyoto, 27th August to 1 September 2017, Japan, Symposium C1.
12. Rodrigo Martins, R. Branquinho, I. Cunha, D. Gaspar, P. Barquinha, L. Pereira, and Elvira Fortunato, Engineering Metal Oxide Semiconductors for Flexible Electronics, 232nd ECS MEETING, Oct. 1-5, 2017, National Harbor, MD (greater Washington, DC area), H01: State of Art Program on Compound Semiconductors 60 (SOTAPOCS 60), Session Growth, Characterization, and Modeling.
13. E. Fortunato, A. Pimentel, L. Santos, A. Gonçalves, A. Marques, D. Gaspar, L. Pereira, P. Barquinha and R. Martins, Metal oxide nanoparticles used from optical sensors to biosensors, SPIE, Photonics West, Conference 10105, Oxide-based Materials and Devices VIII, Session 8, oxide-based Photonics, 30th January to 2nd February 2017, San Francisco, U.S.A.
14. R. Martins and E. Fortunato, Open Smart Hubs: The Materials Cross-Road in Europe. WORKSHOP 1: MATCH European Innovation Networks on Advanced Materials, EuroNanoForum 2017. EU Malta presidency, 21-23 June 2017.
15. Hugo Águas, Andreia Araújo, Maria J. Oliveira, Pedro Alves, Elvira Fortunato, Rodrigo Martins, Coinage Metal Nanoparticles for Molecular Detection, Nanomeeting 2017, May 30 – June 2, 2017 at the Belarusian State University of Informatics and Radioelectronics in Minsk, Belarus.
16. Hugo Águas, Andreia Araújo, Maria J. Oliveira, Pedro Alves, Elvira Fortunato, Rodrigo Martins – Paper substrates, an alternative cost-effective platform for trace analyte detection by SERS, 24 February 2017, Schrödinger Lecture Theatre, School of Physics, Trinity College Dublin, Ireland.
17. R. Martins, M. Mendes, L. Pereira, D. Gaspar, P. Barquinha, A. Vicente, H. Águas, E. Fortunato, Exploiting Systems on Foils: Papertronics, SPIE, Photonics West, Conference 10105, Oxide-based Materials and Devices VIII, Session 9, Thin Film Transistors, 30th January to 2nd February 2017, San Francisco, U.S.A.

Oral Presentations

1. R. Martins, L. Pereira, L. Santos, P. Wojcik, E. Fortunato, WO3 nanoparticle Engineering for Printed Electrochemical Applications, Symposium ES07, Chromogenic Materials and Devices, MRS, Fall meeting, 22-30 November 2017.
2. Manuel J. Mendes, Olalla S. Sobrado, Sirazul Haque, Andreia Araújo, Antonio Vicente, Andriy Lyubchik, Tiago Mateus, Hugo Águas, Elvira Fortunato and Rodrigo Martins, Capturing light with wave-optical traps on thin and ultra-thin solar cells, European Materials Research Society, E-MRS, May 2017), Spring Meeting, Symposium E Strasbourg, France.

3. Manuel J. Mendes, Sirazul Haque, Olalla Sanchez-Sobrado, Andreia Araújo, António Vicente, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Optimal Light-capturing with Wave-Optical Traps on Silicon and Perovskite Thin-film Solar Cells. Printed Electronics and Solar Cells - Industry Day, Apr. 2017, COST Action MP1307 – StableNextSol, Lisbon, Portugal.
4. M. A. Barreiros, V. Corregidor, M. J. Brites, J. Pinto, M. J. Mendes and L.C. Alves, Macro and micro characterization of a mixed cation/mixed halide, Printed Electronics and Solar Cells - Industry Day, Apr. 2017, COST Action MP1307 – StableNextSol, Lisbon, Portugal.
5. Andreia Araújo, Ana Pimentel, Maria João Oliveira, Manuel J. Mendes, Ricardo Franco, Elvira Fortunato, Hugo Águas and Rodrigo Martins, Direct growth of plasmonic nanorod forests on paper substrate for low-cost flexible 3D SERS platforms, NanoPorTugal International Conference, February 16th-19th, 2017, Porto, Portugal.
6. M. J. Mendes, O. Sanchez-Sobrado, S. Haque, A. Araújo, A. Vicente, A. Lyubchik, T. Mateus, H. Águas, E. Fortunato, R. Martins, Photonic Nanostructures for Solar Cell Light Trapping with Colloidal Lithography, Jornadas do i3N, February 2017 (www.eventos.fct.unl.pt/jornadas/i3n), Reitoria UNL, Lisbon, Portugal.
7. P. Barquinha, C. Fernandes, A. Santos, E. Carlos, R. Branquinho, A. Kiazadeh, J. Martins, A. Rovisco, R. Martins, E. Fortunato, “Sustainable, multifunctional and flexible electronics platform based on oxides”, NanoPT 2017, Porto, February 2017.
8. P. Barquinha, P. Bahubalindrani, “Oxide thin films for sustainable, multifunctional and flexible electronics”, ULSIC vs TFT 2017, Hernstein, Austria, May 2017.
9. P. Barquinha, “Transparent and flexible electronics with embedded energy harvesting based on oxide nanowire devices (TREND)”, EurASc2017 - Symposium “The Future in Science in the 21st Century: Science and Technology for the better future of Humankind”, Lisbon, October 2017.
10. L. Pereira, A new era of electronics and photonics on paper, EurASc2017 - Symposium, The Future in Science in the 21st Century: Science and Technology for the better future of Humankind, October 26 & 27, 2017, Lisbon, Portugal.

Poster Presentations

1. Daniela Salgueiro, Asal Kiazadeh, Rita Branquinho, Lidia Santos, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Solution Based Zinc Tin Oxide TFTs—The Dual Role of the Organic Solvent, Symposium EM10—Solution-Processed Inorganics for Electronic and Photonic Device Applications, MRS Fall 2017, Boston, USA.
2. Emanuel Carlos, Rita Branquinho, Asal Kiazadeh, Jorge Martins, Pedro Barquinha, Elvira Fortunato, Rodrigo Martins, Boosting the Electrical Performances of Solution-Based High- κ Multilayer Dielectrics at Low Temperature and Their Application in Electronic Structures, Symposium EM10—Solution-Processed Inorganics for Electronic and Photonic Device Applications, MRS Fall 2017, Boston, USA. Nominated as best poster award.
3. Rita Branquinho, Ana Santa, Emanuel Carlos, Daniela Salgueiro, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Solution Combustion Synthesis—Applications in Oxide Electronics, Symposium EM10—Solution-Processed Inorganics for Electronic and Photonic Device Applications, MRS Fall 2017, Boston, USA.
4. Raquel Borda d' Água, Rita Branquinho, Maria Duarte, Elisabete Maurício, Ana Fernando, Rodrigo Martins, Elvira Fortunato, Efficient Coverage of ZnO Nanoparticles on Cotton Fibres for Antibacterial Finishing Using a Rapid and Low Cost In Situ Synthesis, Symposium BM06: 2D Nanomaterials in Health Care, MRS Fall 2017, Boston, USA.
5. Andreia dos Santos, Nuno Pinela, Elvira Fortunato, Rodrigo Martins, Hugo Águas, Rui Igreja, Development of e-skin thin film piezoresistive sensors, MNE- 43RD International Conference on Micro and nanoengineering, 18-22 September; Braga, Portugal.
6. Beatriz Jorge Coelho, Bruno Veigas, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Pedro Viana Baptista, Rui Igreja, MNE- 43RD International Conference on Micro and nanoengineering, 18-22 September; Braga, Portugal.
7. Inês Cunha, Raquel Barras, Paul Grey, Diana Gaspar, Elvira Fortunato, Rodrigo Martins, Luis Pereira “Cellulose Ion EcoSitcker applied as gate dielectric in paper electrolyte-gated transistors”, 5th Dresden Nanoanalysis Symposium, 1st September 2017, Dresden, Germany, 3rd best presentation award.

8. Paul Grey, Sónia Pereira, Susete N. Fernandes, Elvira Fortunato, Rodrigo Martins and Luis Pereira, Electrolyte and Paper Gated Transistors, 5th Dresden Nanoanalysis Symposium, 1st September 2017, Dresden, Germany.
9. Diana Gaspar, E. Fortunato, R. Martins, Luis Pereira "Cellulose based substrates for application in electronic devices" 5th Dresden Nanoanalysis Symposium, 1st September 2017, Dresden, Germany
10. Maria João Oliveira, Pedro Quaresma, Miguel P. Almeida, Andreia Araújo, Eulália Pereira, Elvira Fortunato, Rodrigo Martins, Ricardo Franco, and Hugo Águas, "Office paper decorated with silver nanostars - an alternative cost effective platform for trace analyte detection by SERS", Surface Enhanced Raman Scattering - SERS: Faraday Discussions, August 30th – September 1st 2017, Glasgow, United Kingdom.
11. D. Salgueiro, E. Carlos, A. Santa, A. Kiazadeh, P. Barquinha, R. Branquinho, R. Martins, E. Fortunato, "Solution Based Thin Film Transistors: From Lab To Fab", Encontro Ciência 2017, Lisbon, July 2017.
12. J. Martins, R. Martins, E. Fortunato, P. Barquinha, "TCAD Simulation of Amorphous Indium-Gallium-Zinc Oxide Thin-Film Transistors", Encontro Ciência 2017, Lisbon, July 2017.
13. A. Rovisco, R. Branquinho, E. Fortunato, R. Martins, P. Barquinha, "Solution-based multicomponent oxide semiconductor nanowires for electronic applications", Encontro Ciência 2017, Lisbon, July 2017.
14. Raquel Barras, Inês Cunha, Diana Gaspar, Elvira Fortunato, Rodrigo Martins Luis Pereira "Printable cellulose-based sensors for paper electronics", Materiais 2017, Aveiro, April 2017. Best Poster Presentation Award.
15. José T. Carvalho, Paul Grey, Inês Cunha, Elvira Fortunato, Rodrigo Martins, Luis Pereira, "Fully Printed Zinc Oxide Transistors on Paper", Materiais 2017, Aveiro, April 2017.
16. Inês Cunha, Raquel Barras, Paul Grey, Diana Gaspar, Elvira Fortunato, Rodrigo Martins, Luis Pereira, "Cellulose-based hydrogel stickers applied as gate dielectric in paper electrolyte-gated transistors", 5th International Conference on Multifunctional, Hybrid and Nanomaterials, Lisbon, March 6th-10th, 2017.
17. J. Rosa, A. Kiazadeh, L. Santos, J. Deuermeier, J.V. Pinto, R. Martins, H.L. Gomes, E. Fortunato, Memristors using IGZO nanoparticles, 43rd Micro and NanoEngineering Conference (MNE), 18 a 22 de setembro de 2017, Braga, Portugal.

Talks presented in 2016

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins, Imitar a natureza como ferramenta de sucesso na investigação científica, Sapiencia talk given during the aperture of the year of the senior University USALMA, Almada, 22 November 2016.
2. Manuel J. Mendes, Olalla Sanchez, Andreia Araújo, Antonio Vicente, Andriy Lyubchuk, Tiago Mateus, Hugo Águas, Elvira Fortunato and Rodrigo Martins, Photonic-enhanced high-efficient thin film photovoltaics, 5th IUMRS World Materials Summit, Rizhao, Cinha, 19 November 2016.
3. E. Fortunato, L. Santos, A. Gonçalves, A. Pimetel, A. Marques, R. Martins, Metal Oxide Nanoparticles: from optical sensors to biosensors, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October, 2016 Platanias, Crete, Greece.
4. E. Fortunato, P. Barquinha, D. Gaspar, R. Branquinho, E. Carlos, L. Pereira, A. Vicente, H. Águas, and R. Martins, Green electronics: a technology for a sustainable future, XV Brazil MRS Meeting, Nanocellulose materials: the keystone for a plethora of multifunctional applications, Campinas, 25-29 September 2016, Brazil.
5. E. Fortunato, D. Gaspar, L. Pereira, A. Vicente, H. Águas, A. Leitão, M. Gama and R. Martins, Cellulose and bacterial cellulose in electronics, Plenary session given to the University of Campinas for PhD students, 28 September 2016.
6. R. Martins, Raw Materials Scarcity and Products Sustainability, XV Brazil MRS Meeting, Symposium R Campinas, 25-29 September, Brazil.
7. E. Fortunato E. Carlos, R. Branquinho, D. Salgueiro, A. Kiazadeh, P. Barquinha, R. Martins, Green electronics for a sustainable future, SPIE Optics and Photonics 2016, San Diego, 28 August – 1 September 2016, plenary talk.
8. R. Martins, M. Mendes, L. Pereira, D. Gaspar, P. Barquinha, A. Vicente, H. Águas, E. Fortunato, Eco-Systems on Foil Technology, plenary talk given at IMEC, within the the PhD IMEC doctoral programme, 5 October 2016.

9. R. Martins, D. Gaspar, L. Pereira e E. Fortunato, "Exploiting Paper as Active Component in Novel Transistor Architectures, International Workshop on Materials Physics, NIMP Conference Hall, 405A Atomistilor Str., Magurele, 23-25 May 2016, Romania.
10. E. Fortunato, A. Pimentel, L. Santos, A. Gonçalves, A. Marques, D. Gaspar, L. Pereira, P. Barquinha and R. Martins, Why metal oxide nanoparticles are so interesting? International Workshop on Materials Physics, NIMP Conference Hall, 405A Atomistilor Str., Magurele, 23-25 May 2016, Romania.
11. R. Martins, Pedro Barquinha, L. Pereira, E. Fortunato, The front edge of materials societal challenges, 7th Conference on Materials Science & Engineering, UGALMAT 2016, 19-21 May 2016, Galati, Romania.
12. R. Martins, Pedro Barquinha, L. Pereira, E. Fortunato, Multifunctional metal oxides on the front edge of new societal challenges, TO-BE 2016 Spring Meeting, University of Warwick, England, 6-8 April 2016.

Invited Talks

1. R. Martins, D. Gaspar, L. Pereira, A. Vicente, H. Águas and E. Fortunato, Exploiting the Surface for the Next generation of Eco-Systems on foil Technology: Papertronics, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October, 2016 Platanias, Crete, Greece.
2. L. Pereira, L. Santos, D. Gaspar, P. Grey, I. Cunha, J. T. Carvalho, E. Fortunato and R. Martins, Oxide nanoparticles based electrical and electrochemical devices on paper substrates, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October 2016, Platanias, Crete, Greece.
3. P. Barquinha, C. Fernandes, D. Lima, J. Martins, A. Rovisco, J. Pinto, A. Kiazadeh, R. Branquinho, D. Salgueiro, L. Pereira, R. Martins, E. Fortunato, Flexible oxide electronics: getting multifunctionality, sustainability and speed all together, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October, 2016 Platanias, Crete, Greece.
4. Rodrigo Martins, Diana Gaspar, Luís Pereira, Elvira Fortunato, Paper electronics: a strategic area of the industry of the future, XV Brazil MRS Meeting, Simposium B, Nanocellulose materials: the keystone for a plethora of multifunctional applications, Campinas, 25-29 September, Brazil.
5. Rodrigo Martins and Elvira Fortunato, Sustainable Materials on the front edge of Innovation, XV Brazil MRS Meeting, Simposium V, Sustainable development of materials for advanced energy and electronics, extractive materials and transportation products, Campinas, 25-29 September, Brazil.
6. E. Fortunato, E. Carlos, R. Branquinho, D. Salgueiro, A. Kiazadeh, P. Barquinha, R. Martins, Green materials for sustainable electronics, IMID 2016, The 16th International Meeting on Information Display. Invited talk. August 23-26 2016, Jeju, South Korea.
7. M. J. Mendes, O. Sanchez, A. Araújo, A. Vicente, A. Lyubchyk, T. Mateus, H. Águas, E. Fortunato and R. Martins Optimal high-index spheroidal structures for nanophotonic-enhanced thin film solar cells, 13th International Conference on Nanosciences & Nanotechnologies (NN16), 5-8 July 2016, Thessaloniki, Greece.
8. Elvira Fortunato, Ana Marques, Mafalda Costa, Bruno Veigas, Pedro Baptista, Rodrigo Martins, Paper-based biosensors, 3rd Austrian Biomarkers symposium 2016 on Early Diagnostics, 10-11 March 2016, Viena, Austria.
9. E. Fortunato, L., Santos, A. Gonçalves, A. Pimentel, D. Nunes, A. Marques, R. Martins, Why metal oxide nanoparticles are so interesting? Workshop of Materials Physics, organized by the National Institute of Materials Physics (NIMP), Magurele, Romania, between 23 and 25 of May 2016.
10. L. Pereira, P. Grey, R. Martins, E. Fortunato "Tungsten oxide TFTs", 6th Transparent Conductive Materials Conference 2016, October, Crete, Greece.
11. M. Mendes, H. Águas, E. Fortunato, R. Martins, Advanced materials and characterization techniques for solar cells III, E-MRS Spring Meeting Conference, Symposium: T, Lille, France, 2-5 May 2016.
12. M. Mendes, H. Águas, E. Fortunato, R. Martins, Nano-Electronics, Photonics, Phononics, Plasmonics, Energy, 13th International Conference on Nanosciences & Nanotechnologies (NN16), Thessalonik, Greece, 5-8 July 2016.
13. P. Barquinha, C. Fernandes, A. Sachetti, J. Martins, A. Rovisco, J. Pinto, A. Kiazadeh, R. Branquinho, D. Salgueiro, S. Pereira, P. Grey, L. Pereira, R. Martins and E. Fortunato Oxides: a sustainable approach for transparent and flexible electronics, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.

Oral Presentations

1. C. Fernandes, D. Lima, A. Kiazadeh, P. Barquinha, E. Fortunato, R. Martins, Low temperature amorphous ZTO TFTs on flexible substrates using a combinatorial approach, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October, 2016 Platanias, Crete, Greece.
2. S. Ullah, R. Branquinho, T. Mateus, R. Martins, E. Fortunato, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October, 2016 Platanias, Crete, Greece.
3. D. Gaspar, L. Pereira, E. Fortunato, R. Martins, Hydrogenated ZnO thin films with improved electro-optical properties, 6th International Symposium on Transparent Conductive Materials, TCM 2016, 9-13 October, 2016 Platanias, Crete, Greece.
4. Daniela Nunes, Ana Pimentel, Lidia Santos, Pedro Barquinha, Elvira Fortunato, Rodrigo Martins, TiO₂ Nanorod Structures for Photocatalytic Applications, Symposium ES1: Materials Science and Chemistry for Grid-Scale Energy Storage.
5. Daniela Nunes, Ana Pimentel, Tomas Calmeiro, Andreia Araujo, Lidia Santos, Suman Nandy, Joana Pinto, Pedro Barquinha, Elvira Fortunato, Rodrigo Martins, Flexible TiO₂ Platforms for UV Sensing, Symposium PM4: Novel Materials, Fabrication Routes and Devices for Environmental Monitoring, Nov 28, 2016 - 1:45 PM - PM4.2.02.
6. Asal Kiazadeh, Henrique L. Gomes, Joana Vaz Pinto, Jorge Martins, Ana Rovisco, Rodrigo Martins, Elvira Fortunato, and Pedro Barquinha, Operational and light-induced instabilities of Parylene-passivated depletion-mode IGZO TFTs, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.
7. Paul Grey, Luís Pereira, Sónia Pereira, Pedro Barquinha, Inês Cunha, Rodrigo Martins and Elvira Fortunato Tungsten Oxide Electrochemical Transistors with Electrical and Optical Modulation, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.
8. D. Gaspar, L. Pereira, E. Fortunato, and R. Martins, Flexible Planar Dual Gate Oxide Transistors on Paper, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.
9. Jonas Deuermeier, Hans Wardenga, Tomás Calmeiro, Suman Nandy, Rodrigo Martins, Andreas Klein, and Elvira Fortunato, Combined in situ conductance and XPS analysis tracks down highly conductive grain boundaries in copper oxide thin films, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.
10. M. J. Mendes, O. Sanchez, A. Araújo, S. Morawiec, A. Vicente, A. Lyubchik, T. Mateus, H. Águas, I. Ferreira, I. Crupi, F. Priolo, E. Fortunato and R. Martins, Photonic-enhanced solar cells with plasmonic and wave-optical dielectric nanostructures, T, Advanced materials and characterization techniques for solar cells III, E-MRS spring Meeting, Lille, France, May 2-6, 2016.
11. J. T. Carvalho, P. Grey, I. Cunha, L. Pereira, E. Fortunato, R. Martins, Fully-Printed Zinc Oxide Electrolyte-Gated Transistors on Paper, Symposium F, Advanced Materials for printing, E-MRS spring Meeting, Lille, France, May 2-6, 2016.

Poster Presentations

1. D. Salgueiro, E. Carlos, A. Santa, A. Kiazadeh, P. Barquinha, R. Branquinho, R. Martins, E. Fortunato, "Solution Based Thin Film Transistors: From Lab To Fab", Encontro Ciência 2017, Lisbon, July 2017.
2. J. Martins, R. Martins, E. Fortunato, P. Barquinha, "TCAD Simulation of Amorphous Indium-Gallium-Zinc Oxide Thin-Film Transistors", Encontro Ciência 2017, Lisbon, July 2017.
3. A. Rovisco, R. Branquinho, E. Fortunato, R. Martins, P. Barquinha, "Solution-based multicomponent oxide semiconductor nanowires for electronic applications", Encontro Ciência 2017, Lisbon, July 2017.
4. D. Nunes, T. Calmeiro, S. Nandy, J.V. Pinto, A. Pimentel, P. Barquinha, P.A. Carvalho, E. Fortunato, R. Martins, Charging effects and surface potential variations in Cu-based nanowires, NanoPT, Braga, 16-19 February 2016.
5. Ana Santa, Rita Branquinho, Pedro Barquinha, Daniela Salgueiro, Rodrigo Martins, Elvira Fortunato, Water-based solution combustion synthesis of AlO_x for thin film transistors, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.

6. Emanuel Carlos, Rita Branquinho, Asal Kiazadeh, Pedro Barquinha, Rodrigo Martins and Elvira Fortunato, FUV-assisted low temperature AlOx solution-based dielectric for oxide TFTs, Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016. Best poster awarded.
7. Emanuel Carlos, Rita Branquinho, Pedro Barquinha, Rodrigo Martins and Elvira Fortunato, Effect of chemical precursors in combustion processing of solution based AlOx dielectric for GIZO TFTs, AA, Solution processing and properties of functional oxide thin films and nanostructures II, E-MRS spring Meeting, Lille, France, May 2-6, 2016. 2nd Best poster awarded.
8. Andreia Araújo, Manuel J. Mendes, Tiago Mateus, António Vicente, Daniela Nunes, Tomas Calmeiro, Elvira Fortunato, Hugo Águas and Rodrigo Martins, Influence of the Substrate on the Morphology of Selfassembled Ag Nanoparticles by Rapid Thermal Annealing, Symposium T, Advanced materials and characterization techniques for solar cells III – T.P2.60, E-MRS spring Meeting, Lille, France, May 2-6, 2016.
9. R Barras, I Cunha, L Pereira, E Fortunato and R Martins, Printable cellulose-based electroconductive composite film for paper electronics, Simposio F – Advanced Materials for printing, E-MRS spring Meeting, Lille, France, May 2-6, 2016.

Talks presented in 2015

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Hugo Águas, I. Bernacka-Wojcik, A. Araújo, P. V. Baptista, R. Franco, E. Fortunato, R. Martins, Plasmonic Metal Nanoparticles: A tool for molecular and Bio detection, NanoBio&Med 2015, 18-20 November 2015, Barcelona, Spain.
2. E. Fortunato, A. Pimentel, A. Gonçalves, D. Salgueiro, P. Barquinha, L. Pereira, L. Santos, R. Martins, How materials innovation will promote device revolution? 7th International Conference on Innovations in Thin Film Processing and Characterization, ITFPC 2015, 16-20 November 2015, Nancy, France.
3. R. Martins, A. Vicente, H. Águas, T. Mateus, E. Fortunato, Solar Cells on Cellulose Paper and Packaging Card Board, IUMRS-ICAM Conference, Jeju, Korea, 25-29th October 2015.
4. R. Martins, L. Pereira, P. Barquinha, E. Fortunato, Paper Electronics and the Challenges of the Future, KAUST, South Arabia, 22nd October 2015.
5. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Multifunctional Metal Oxides: From Materials to Device Applications, KAUST, South Arabia, 22nd October 2015.
6. E. Fortunato, A. Pimentel, A. Gonçalves, P. Barquinha, L. Pereira, L. Santos, R. Martins, How metal oxides innovation will promote device (r)evolution? Workshop du GDR OXYFUN "Oxydes Conducteurs Transparents et X-Chromes, 15-16 October 2015, Poitiers, France.
7. E. Fortunato, D. Gaspar, L. Pereira, A. Leitão, M. Gama and R. Martins, From bacteria to nanopaper and to optoelectronic devices, International Symposium on Bacterial NanoCellulose, 9-11 September 2015, Gdank, Poland.
8. R. Martins, L. Pereira, A. Vicente, P. Barquinha, H. Águas, D. Gaspar, B. Veigas, MN Mafalda, T. Mateus, A. Araújo, Elvira Fortunato, Solar cells on cellulose paper to back up electronics and optoelectronic devices on low cost sustainable flexible electronics (the paper-e), in International Summer School on Materials for Energy Conversion, July 6-11, 2015, Bucharest, Romania (ROCAM 2015).
9. E. Fortunato, G. Gonçalves, P. Barquinha and R. Martins, Why amorphous transparent conducting and semiconducting oxides are so attractive?, in International Summer School on Materials for Energy Conversion, July 6-11, 2015, Bucharest, Romania (ROCAM 2015).
10. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira and R. Martins, Materials for a new window of the ICT age, 8th International Conference on Advanced Materials, ROCAM 2015, Bucharest, 7-10 July 2015.
11. R. Martins, L. Pereira, A. Vicente, P. Barquinha, H. Águas, D. Gaspar, B. Veigas, MN Mafalda, T. Mateus, A. Araújo, E. Fortunato, Applications of cellulose to electronic and optoelectronic devices and the impact on low cost sustainable flexible electronics (the paper-e), CSSD-UDJG 2015- 3rd Scientific Conference of the Doctoral Schools, from "Dunărea de Jos" University of Galați, June 4-5, 2015, Galați, Romania.

12. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira and R. Martins, Transparent electronics based on metal oxides thin films and nanoparticles, CSSD-UDJG 2015- 3rd Scientific Conference of the Doctoral Schools, from “Dunărea de Jos” University of Galați, June 4-5, 2015, Galați, Romania.
13. E. Fortunato, P. Barquinha, R. Martins, The golden age of nanomaterials, Olimpíadas da Física 2015, 18 April 2015, Ponta Delgada, Azores.
14. E. Fortunato, P. Barquinha, L. Pereira and R. Martins Towards oxide-based electronics, TO-BE Spring Meeting 2015, 30 March to 02 April 2015, Aveiro, Portugal.
15. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira and R. Martins, A review on metal oxide semiconductors applied to transistors: from nanofilms to nanoparticles, nanoPT2015 - Nanoscience and Nanotechnology International Conference, 11-13 February 2015, Porto, Portugal.

Invited Talks

1. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira, R. Martins, Materials for a new window of ICT age, 3rd International Conference on Advanced Electromaterials, (ICAE 2015), 17-20 November 2015, Jeju, South Korea.
2. R. Martins, A. Vicente, H. Águas, T. Mateus, E. Fortunato, Solar Cells on Paper and Packaging Card Board, 3rd International Conference on Advanced Electromaterials, (ICAE 2015), 17-20 November 2015, Jeju, South Korea.
3. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira, R. Martins, How metal oxides innovation will promote device (r)evolution?, 7th International Workshop on Flexible & Printable Electronics (IWFPE 2015), 04-06 November d 2015, Jeonju, South Korea.
4. Rodrigo Martins, Diana Gaspar, Luis Pereira, Elvira Fortunato, Flexible In-plane Dual Gate Paper Transistor, 7th International Workshop on Flexible & Printable Electronics (IWFPE 2015), 04-06 November d 2015, Jeonju, South Korea.
5. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira, R. Martins, Materials for a New Window of ICT age, IUMRS-ICAM Conference, Jeju, South Korea, 25-29th October 2015.
6. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, P. Barquinha, L. Pereira, R. Martins, Metal Oxides: Multifunctional Materials for the New Age of ICT, IMID2015 August 18-21 2015, EXCO, Daegu, South Korea.
7. Pedro Barquinha, Jorge Martins, Ana Rovisco, Joana Pinto, Daniela Salgueiro, Asal Kiazadeh, Luís Pereira, Rodrigo Martins and Elvira Fortunato, Low-damage and sustainable coatings for oxide electronics, EUROMAT 2015, Advanced Surface Coating and Plating Techniques, Warsaw, 20-24 September 2015.
8. Pedro Barquinha, Luís Pereira, Daniela Salgueiro, Lídia Santos, Sónia Pereira, Pawel Wojcik, Paul Grey, Rodrigo Martins and Elvira Fortunato, Oxide based electrochemical devices, EUROMAT 2015, EUROMAT 2015, Materials for printing electronics, Warsaw, 20-24 September 2015.
9. L. Pereira, P. Wojcik, L. Santos, P. Barquinha, S. Pereira, P. Grey, R. Martins and E. Fortunato, Printed tungsten oxide thin films: application, to electrochemical devices, EUROMAT 2015, EUROMAT 2015, Materials for printing electronics, Warsaw, 20-24 September 2015.
10. L. Pereira, P. Wojcik, D. Gaspar, L. Santos, P. Grey, E. Fortunato, and R. Martins, Materials for Flexible Electric and Electrochromic Devices on paper substrates, EUROMAT 2015, EUROMAT 2015 Innovative Solution-Based Coatings and Flexible Applications, Warsaw, 20-24 September 2015.
11. P. Barquinha, L. Pereira, R. Martins, E. Fortunato, “Metal oxide thin films and nanostructures as key materials for future ICTs”, Energy Materials Nanotechnology, EMN 2015 Spain, San Sebastian 1-4 September 2015.
12. Elvira Fortunato and Rodrigo Martins, The (R)evolution of conventional materials: metal oxides and cellulose, The 76th JSAP Autumn Meeting, Nagoya, Japan, 13-16 September 2015.
13. Elvira Fortunato, Diana Gaspar, M. Gama, Alexandre Leitão, Luís Pereira and Rodrigo Martins, From bacteria to nanopaper and to optoelectronic devices, 2nd Symposium on Bacterial NanoCellulose, Gdansk, Poland, September, 9-11, 2015.
14. P. Barquinha, J. Martins, A. Rovisco, D. Salgueiro, A. Kiazadeh, E. Fortunato, R. Martins, Sustainable indium-free oxide TFTs for flexible displays, The 15th International Meeting on Information Display, IMID2015, 18-21 August, EXCO, Daegu, South Korea.

15. Elvira Fortunato, Rita Branquinho, Lidia Santos, Daniela Salgueiro, Pedro Barquinha, Luís Pereira and Rodrigo Martins, Metal oxides: multifunctional materials for the new age of ICT, The 15th International Meeting on Information Display, IMID2015, 18-21 August, EXCO, Daegu, South Korea.
16. R. Martins, L. Pereira, A. Vicente, H. Águas, D. Gaspar, T. Mateus, A. Araújo, E. Fortunato, Solar Cells on paper, Solar Cells on Cellulose Paper to Back up Smart Paper Electronics, 8th International Conference on Advanced Materials, ROCAM 2015, Bucharest, 7-10 July 2015.
17. Elvira Fortunato and Rodrigo Martins, How Materials Innovations will lead to Device Revolution? Transducers 2015, Anchorage, Alaska, 21-25 June 2015.
18. E. Fortunato, P. Barquinha, L. Pereira, R. Martins, Oxide Based Thin Film Transistors, The 5th International Symposium on Organic and Inorganic Electronic Materials and Related Nanotechnologies (EM-NANO 2015), TOKI MESSE Niigata Convention Centre, Niigata, Japan, June 16-19, 2015.
19. R. Martins, L. Pereira, E. Fortunato, Paper electronics, Conference of the Doctoral School of UDJG, (CSSD-UDJG 2015), Galati, Romania, 3-5 June 2015.
20. E. Fortunato, P. Barquinha, R. Martins, The (re)evolution of metal oxides thin films, PE² 2015 – 6th Power Electronics for Plasma Engineering Conference, 05-06 May 2015, Ditzingen, Germany.
21. Elvira Fortunato, D. Gaspar, R. Branquinho, L. Santos, Luis Pereira and Rodrigo Martins High-performance intelligent flexible materials based on cellulose fibers, I SIMBI 2015 – Simpósio Internacional em Materiais e Biosistemas, 28-29 April, 2015, Lavras, Brasil.
22. Elvira Fortunato, R. Branquinho, Lidia Santos, Daniela Salgueiro, Pedro Barquinha, Luis Pereira and Rodrigo Martins Oxide Based Electronics - A Coming Technology, SVCTechCon 2015, 25-28 April 2015, Santa Clara, EUA.
23. Elvira Fortunato, R. Branquinho, Lidia Santos, Daniela Salgueiro, Pedro Barquinha, Luis Pereira and Rodrigo Martins, The Golden Age of Hold Materials used for New and Disruptive Applications, ICN2 Seminar, University of Barcelona, 17 April 2015.
24. R. Martins, Policy and Lobbying on Materials Science and Engineering, High Level Workshop on Materials Science and Engineering in Europe, organized by the ESF Materials Science and Engineering Committee (MatSEEC), Brussels, Belgium, 16-17 April 2015.
25. Rodrigo Martins, Pedro Barquinha, Luís Pereira and Elvira Fortunato, Materials for a new window of the ICT age, 3rd Dresden Nanoanalysis Symposium, 17 April 2015.
26. L. Pereira, P. Wojcik, D. Gaspar, P. Grey, R. Martins and E. Fortunato “Development of printable WO₃ electrochromic displays”, A3Ple workshop, LOPEC 2015, 4 March, Munchen, Germany.
27. Rodrigo Martins, L. Pereira, P. Barquinha, L. Elvira Fortunato, The Programme Horizon 2020 and the activities performed at CENIMAT/I3N opened to the world, Fraunhofer Institut, Wolzbourg, 13th February 2015.
28. Elvira Fortunato, Pedro Barquinha, Luis Pereira and Rodrigo Martins New Challenges for Transparent Conducting and Semiconducting Oxides, 39th International Conference and Expo on Advanced Ceramics and Composites, (ICACC 2015), 25-29 January 2015, Daytona Beach, (EUA).

Oral Presentations

1. Elvira Fortunato, A. C. Marques, L. Santos, M. N. Costa, J. M. Dantas, P. Duarte, A. Gonçalves, C. A. Salgueiro, R. Martins, Office Paper Platform for Bioelectrochromic Detection of Electrochemically Active Bacteria Using Tungsten Trioxide Nanoprobes, MRS Fall Meeting 2015, 29 November to 04 December 2015, Boston, USA.
2. R. Martins, A. Vicente, H. Águas, T. Mateus, E. Fortunato, Solar Cells on Cellulose Paper to Back-up Smart paper Electronics, MRS Fall Meeting 2015, 29 November to 04 December 2015, Boston, USA.
3. J.V. Pinto, C. Fernandes, A. Rovisco, J. Martins, A. Kiazadeh, P. Barquinha, R. Martins, E. Fortunato, Low temperature electronics based on Parylene-C hybrid devices, E-MRS 2015 Spring Meeting, Lille, France, 11-15 May 2015.
4. A. Lyubchyk, A. Vicente, B. Soule, P. Alves, T. Mateus, M. J. Mendes, H. Águas, E. Fortunato, and R. Martins, Mapping the electrical properties of ZnO-based TCOs grown at room temperature and improved by controlled post-deposition annealing, Symposium G, Materials for electronics and optoelectronic applications away from silicon. - EMRS 2015 Fall Meeting Warsaw, Poland, Sept 15-18.

5. Hugo Águas, António Vicente, Tiago Mateus, Diana Gaspar, Manuel J. Mendes, Luís Pereira, Elvira Fortunato, Rodrigo Martins, Thin film silicon photovoltaic cells on paper for flexible indoor applications, International Conference on Amorphous and Nanocrystalline Semiconductors, ICANS26, Aachen, 13-18 September, Aachen, Germany.
6. A. Vicente, H. Águas, T. Mateus, A. Araújo, A. Lyubchik, S. Siitonen, E. Fortunato, R. Martins, Solar cells for self-sustainable intelligent packaging, International Conference on Amorphous and Nanocrystalline Semiconductors, ICANS26, Aachen, 13-18 September, Aachen, Germany.
7. D. Gaspar, L. Pereira, A. Delattre, E. Fortunato, R. Martins, Influence of the fibrils on the performance of oxide-based FETs using paper as dielectric, May 11th-15th 2015, EMRS Spring 2015 Symposium, Lille, France.
8. R. Igreja, D. Matos, M. Soares, V. Rodrigues, H. Águas, R. Franco, L. Pereira, E. Fortunato, R. Martins, Low-cost paper based digital microfluidic devices for biosensing applications. EMRS Spring Meeting, Lille - France 11-15 May 2015.
9. P. Duarte, L. Pereira, S. Pereira, A. Pimentel, M. Dionísio, E. Fortunato, R. Martins "Superionic Conductive Paper as Electrolyte for Electrochromic Devices", EMRS Spring Meeting 2015, 11-15 May, Lille, France.
10. D. Nunes, T. Calmeiro, S. Nandy, J.V. Pinto, A. Pimentel, P. Barquinha, P.A. Carvalho, E. Fortunato, R. Martins, Mapping of Localized Charges in Cu-Based Nanowires, ICMAT2015, 28 June to 3 July 2015, Singapore (book of abstracts BB11-4).
11. D. Nunes, T. Calmeiro, S. Nandy, J.V. Pinto, A. Pimentel, P. Barquinha, P.A. Carvalho, E. Fortunato, R. Martins, Mapping of localized charges in Cu-based nanowires, EMRS Spring Meeting 2015, 11-15 May 2015, Lille, France (book of abstracts 3M86C).

Poster Presentations

1. E. Fortunato, D. Gaspar, L. Pereira, H. Águas, A. Vicente, R. Martins, Bacterial Nanocellulose as an Electronic Material: Application to Solar Cells and Thin Film Transistors, MRS Fall Meeting 2015, 29 November to 04 December 2015, Boston, USA.
2. Andreia Araújo, Carlos Caro, Manuel J Mendes, Maria João Oliveira, Elvira Fortunato, Ricardo Franco, Hugo Águas, Rodrigo Martins, Highly efficient nanoplasmonic SERS on cardboard packaging substrates for toxin detection, Symposium U- Materials and biosensor systems for in vitro diagnostic applications, E-MRS Spring Meeting Lille (France) from May 11 to 15, 2015.
3. Hugo Águas, Tiago Mateus, António Vicente, Diana Gaspar, Manuel J. Mendes, Luís Pereira, Elvira Fortunato, and Rodrigo Martins, Thin film silicon paper solar cells for low-cost flexible indoor applications, Symposium C- Advanced inorganic materials and structures for photovoltaics -, E-MRS Spring Meeting Lille (France) from May 11 to 15, 2015.
3. D. Nunes, T. Calmeiro, S. Nandy, J.V. Pinto, A. Pimentel, P. Barquinha, P.A. Carvalho, E. Fortunato, R. Martins, Charging effects and surface potential variations in Cu-based nanowires, XIV Brazil MRS meeting, 27 September to 1 October 2015, Rio de Janeiro, Brazil (book of abstracts A.P2.38).
4. D. Nunes, A. Pimentel, J.V. Pinto, T.R. Calmeiro, S. Nandy, P. Barquinha, P.A. Carvalho, E. Fortunato and R. Martins, Microwave synthesized TiO₂ films for photocatalytic applications, XIV Brazil MRS meeting, 27 September to 1 October 2015, Rio de Janeiro, Brazil (book of abstracts C.P2.96).
5. D. Nunes, A. Pimentel, J.V. Pinto, T.R. Calmeiro, S. Nandy, P. Barquinha, P.A. Carvalho, E. Fortunato and R. Martins, Microwave synthesized TiO₂ films for photocatalytic applications, ICMAT2015, 28 June to 3 July 2015, Singapore (book of abstracts Q-PO2-12).

Talks presented in 2014

Plenary/ Key note speaker/ Summer Schools/invited Interview

1. R. Martins, L. Pereira, P. Barquinha, E. Fortunato, Advanced Materials: from Elements in Products to the Industrial Revolution of the Future, Second International Conference of Young Researchers on Advanced Materials, IUMRS-ICYRAM 2014, Hainan International Convention & Exhibition Center, Haikou, China, October 24-27, 2014.

2. R. Martins, L. Pereira, D. Gaspar, A. Vicente, P. Barquinha, E. Fortunato, Advanced functional paper for electronics and bio sensing applications, 5th International Symposium on Transparent Conductive Materials, TCM2014, Platanias-Chania, Crete, Greece 12-17 October 2014.
3. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Why amorphous oxides are so interesting? 5th International Symposium on Transparent Conductive Materials, TCM2014, Platanias-Chania, Crete, Greece 12-17 October 2014.
4. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, The (re)evolution of conventional/old materials: metal oxides and cellulose, 14th International Conference on Plasma Surface Engineering September 15 - 19, 2014, in Garmisch-Partenkirchen, Germany.
5. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Metal Oxide Nanomaterials and Nanoparticles applied to Field Effect Transistors, A new window on the Information age, ANM2014, University of Aveiro, Portugal, and July 2nd to 4th, 2014.
6. R. Martins, P. Siffert, E. Fortunato, The Relevancy of Materials in Boosting Innovation: From Raw Materials to Creative Applications, Shechtman International Symposium, 2014 – Sustainable Industrial Processing Summit and Exhibition, 29 June-04 July 2014, Cancun, Mexico.
7. R. Martins, E. Fortunato, P. Siffert, Advanced Materials: from Research to E-MRS Commitments, IUMRS, ICEM 2014, TWTC exhibition Hall, Taipei, 10-14 June 2014.
8. E. Fortunato, R. Branquinho, L. Santos, D. Salgueiro, L. Pereira, P. Barquinha, R. Martins, Materials and Nanoelectronics, 1st International Symposium on Nanoparticles-Nanomaterials and Applications, Caparica, 20th-22nd January 2014 (ISN2A-2014).

Invited Talks

1. Rodrigo Martins, Elvira Fortunato, The European Programme Horizon 2020 Open to the world, 15th December 2014, (University of Austin, USA).
2. Rodrigo Martins, The European Union's programme for Research and Innovation SIM, Brussels, Belgium, 25 November 2014.
3. R. Martins, O renascer dos materiais para uma vida melhor, Academia de Engenharia, Hotel Tivoli, Lisboa, 20 November 2014.
4. L. Pereira, P. Wojcik, L. Santos, S. Pereira, P. Barquinha, R. Martins, E. Fortunato, Tungsten oxide thin films and nanoparticles: application to electrochemical devices, 5th International Symposium on Transparent Conductive Materials, TCM2014, Platanias-Chania, Crete, Greece 12-17 October 2014.
5. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Transparent Conducting and Semiconducting Oxides, E-MRS Fall Meeting, Warsaw, Poland, September 15th -18th 2014.
6. R. Martins, L. Pereira, P. Barquinha, E. Fortunato, The (R)evolution of conventional materials: metal oxides and cellulose, IUMRS, ICA 2014, Fukuoka, Japan, 24-30 August 2014.
7. R. Martins, E. Fortunato, Advanced Materials and nanotechnologies for a better life, The 5th International Conference in Advanced Nanomaterials, Aveiro, Portugal, July 2-4, 2014.
8. Margarethe Hofmann, Ehrenfried Zschech, Rodrigo Martins, Raw materials scarcity and product sustainability - Challenges to Materials Science and Engineering, Industrial Technology 2014 (smart growth through Innovation), Athens, 9-11 April 2014.
9. R. Martins, A. Nathan, P. Barquinha, L. Pereira, E. Fortunato, CMOS Oxides used for Amplifiers and Logic Circuits on Paper, CIMTEC 2014, 6th Forum on New Materials, Session FH-2 - Material design and device development of Symposium FH "Recent Developments in the Research and Application of Transparent Conducting and Semiconducting Oxides", Montecatini June 15-20, 2014, Italy.
10. R. Martins, E. Fortunato, Advanced Functional Materials @ Nova, 1st Sino-Portugal Advanced Materials Innovation Forum (SPAMIF 2014), Hangzhou, 31st May 2014, China.
11. R. Martins, P. Siffert, E. Fortunato, Materials for a Better Life, talk given at National Centre for Scientific Research "Demokritos", Athens, Greece, 13 March 2014.
12. R. Martins, The Bright Future of Materials: From basic Knowledge to the Industry, IV ENEM 2014, Caparica, 6 March 2014.
13. Rodrigo Martins, Elvira Fortunato, Luís Pereira, Pedro Barquinha, António Vicente, Tiago Mateus, Diana Gaspar, Paulo Duarte, Paper electronics and criativity of the future sustainable electronics, JORTEC, Caparica, 11th February 2014.

14. L. Pereira, P. Wocik, L. Santos, R. Martins, E. Fortunato, "Smart windows and nanostructured coatings", Nanotechnology on construction materials workshop, Portuguese Professional Engineer Association, Lisbon, Portugal, February 27th, 2014.
15. Arokia Nathan, Sungsik Lee, Yifan Yang, P. Barquinha, L. Pereira, R. Martins, Brian Cobb, G.H. Gelinck, Oxide TFT Circuit Building Blocks and Design Tools, International Thin-Film Transistor Conference 23-24 January 2014, Delft, The Netherlands, ITC2014.
16. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Beyond conventional materials: metal oxide semiconductors and cellulose paper, SEcondo Convegno Nazionale Sensori, Roma - Università La Sapienza, Dipartimento di Chimica: aula La Ginestra 19 - 21 February 2014.

Oral Presentations

1. Daniela Nunes, T.R. Calmeiro, J.V. Pinto, S. Nandy, A. Pimentel, A. Kiazadeh, P. Barquinha, P.A. Carvalho, E. Fortunato and R. Martins, Localized mapping of electronic characterization of Cu-based nanowires, EMRS 2014, Fall meeting, Warsaw, Poland, 15-18 September 2014.
2. A. Pimentel, D. Nunes, P. Duarte, J. Rodrigues, F. Costa, T. Monteiro, R. Martins, E. Fortunato, Microwave radiation as alternative to ZnO nanorods synthesis, The 5th International Conference in Advanced Nanomaterials, Aveiro, Portugal, July 2-4, 2014.
3. Iwona Bernacka-Wojcik, Hugo Águas, F. F. Carlos, Paulo Lopes, Bruno Veigas, Pawel Jerzy Wojcik, Pedro Simões, Rui Igreja, Elvira Fortunato, Pedro Viana Baptista, Rodrigo Martins, Bio-microfluidic platform for gold nanoprobe based DNA detection with embedded microlenses for improved performance, Biosensors 2014, 27-30 May 2014, Melbourne, Australia.
4. P.J Wojcik, L. Pereira, R. Martins, E. Fortunato, Printable thermosetting composite solid-state electrolyte for flexible electrochemical devices, European Materials Research Society (E-MRS) 2014 Spring Meeting, 27-29 May 2014, Lille, France.
5. L. Santos, P. Barquinha, R. Branquinho, D. Salgueiro, L. Pereira, R. Martins, E. Fortunato Hydrothermal synthesis of GIZO nanoparticles for solution-processed electrolyte-gated transistors, May 26th-30th, 2014 EMRS 2014 Spring Meeting, Lille, France.
6. P.J Wojcik, L. Santos, L. Pereira, R. Martins, E. Fortunato, Metal Oxide Nanoparticle Engineering for Printed Electrochemical Applications, European Materials Research Society (E-MRS) 2014 Spring Meeting, 27-29 May 2014, Lille, France.
7. P.J. Wojcik, L Pereira, R. Martins, E. Fortunato, Printable materials for low-cost flexible electrochromic devices, European Materials Research Society (E-MRS) 2014 Spring Meeting, 27-29 May 2014, Lille, France.
8. P.J Wojcik, D. Gaspar, A. Delattre, L. Pereira, R. Martins, E. Fortunato, Paper electrochemical devices based on metal oxide semiconductor and thermosetting composite solid-state electrolyte, European Materials Research Society (E-MRS) 2014 Spring Meeting, 27-29 May 2014, Lille, France.
9. S. Pereira, P. Barquinha, L. Pereira, R. Martins and E. Fortunato, Flexible Electrolyte-Gated Electrochromic Transistors Based on WO₃, ITC 2014 - International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.
10. P. Barquinha¹, A. Rovisco, J. Martins, L. Pereira, P. Bahubalindrani, V. Tavares, R. Martins, E. Fortunato, Sputtered amorphous zinc-tin oxide TFTs and circuits on flexible substrates, ITC 2014 - International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.
11. L. Santos, R. Branquinho, D. Salgueiro, P. Barquinha, L. Pereira, R. Martins, E. Fortunato, Solid state electrolyte gated TFT based on GIZO nanoparticles, ITC 2014 - International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.
12. R. Branquinho, D. Salgueiro, L. Santos, P. Barquinha, R. Martins, E. Fortunato, Aqueous combustion synthesis of Al₂O₃ for application as gate dielectric in solution-processed TFTs, ITC 2014 - International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.

Poster Presentations

1. D. Salgueiro, R. Branquinho, L. Santos, L. Pereira, P. Barquinha, R. Martins, E. Fortunato, Thin-Film Transistors based on amorphous Ga-Zn-Sn-O semiconductor by combustion processing, ITC 2014 - International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.

2. R. Barros, J. Deuermeier, P. Barquinha, R. Martins and E. Fortunato, Influence of the multicomponent gate dielectric deposited by Atomic Layer Deposition on p-type SnO_x based TFTs, ITC 2014 - International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.
3. J. Deuermeier, T. Bayer, A. Fuchs, R. Martins, A. Klein and E. Fortunato, Excess oxygen to atomic layer deposition of Al₂O₃ provided by Cu₂O and indium-tin oxide substrates, International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.
4. B. Iniguez, A. Castro-Carranza, M. Cheralathan, S. Mijalkovic, P. Barquinha, R. Martins, E. Fortunato, M. Estrada and A. Cerdeira, Compact model for amorphous oxide semiconductor TFTs at different temperatures, International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.
5. P. Bahubalindrani, B. Silva, V. Tavares, P. Barquinha, N. Cardoso, P. Oliveira, R. Martins and E. Fortunato, Basic Analog Circuits Using a-GIZO TFTs: Simulation using Neural Models and Validation, International Thin-Film Transistor Conference, 23-24 January 2014 | Delft, The Netherlands.

Talks presented in 2013

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. Rodrigo Martins, P. Siffert, E. Fortunato, Cooperating in the Cross-Cutting Field of Advanced Materials: from knowledge to Industry, Oxford Summit of Leaders 'Science and Education', 16–19 December 2013, Oxford, United Kingdom.
2. Rodrigo Martins, E. Fortunato, Paper electronics: green electronics for the future, 4th World Summit, 14th-15th October 2013, Strasbourg, France, organized by E-MRS under the umbrella of IUMRS.
3. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Transparent electronics: from physical to chemical routes, IVC-19/ICSS-15 and ICN+T 2013, September 9-13, Paris, France.
4. Rodrigo Martins, Luis Pereira, Elvira Fortunato, Smart Green Electronics with and on Paper, on the International Conference in Advanced Materials, IUMRS-ICAM2013, 22-28 September 2013, Qingdao, China.
5. R. Martins, L. Pereira, E. Fortunato, Paper-Based Electronics: a low cost, smart, safe, sustainable and disposable platform, 5^o Congresso Ibero-Americano de Cerâmica, 19-22 May 2013, Natal, Brazil.
6. Rodrigo Martins, "The importance of materials for sustainable development in Europe: From basic knowledge to Public-Private Partnerships", in European Funding for Science and Innovation: Callenges and opportunities in Portugal, 19th April 2013, organized by group of the progressive alliance of Socialists and Democrats in the European Parliament.
7. R. Martins, The European Materials Value Chain, Materiais 2013, 25-27 March 2013, Coimbra, Portugal.
8. R. Martins "The European Materials Networking", MatVal and Alliance for Materials (A4M) workshop on a value chain approach to materials research and innovation, Rome, Italy, 7-8 February 2013.
9. R. Martins, "The Future of Nanomaterials in Europe and in the World", JORTEC, Campus de Caparica, 21 February 2013.

Invited Talks

1. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Transparent electronics: recent advances, Iberoamerican Optics Meeting/ Latinamerican Meeting on Optics, Lasers and Applications, RIAO/OPTILAS, July 22-26, Porto, Portugal
2. R. Martins, P. Siffert, E. Fortunato, Cooperating in the cross-cutting field of materials, Oxford Summit of Leaders 'Science and Education, 16–19 December 2013, Oxford, United Kingdom.
3. E. Fortunato, P. Barquinha, L. Pereira, R. Martins, Metal Oxide Based Devices Produced by Chemical and Physical Routes, MRS Fall Meeting, 1-6 Decmber 2013, Boston, USA.
4. E. Fortunato, J. Inacio, Mafalda, R. Martins, Low cost, safe, disposable and self-sustainable paper-based biosensor platform for tuberculosis diagnostic testing: Lab-on-Paper, Boston, MRS Fall, Decmber 2013, Boston, USA.
5. E. Fortunato, P. Barquinha, L. Pereira, R. Martins, New semiconductors based on metal oxide thin films and nano particles, The 5th International Workshop on Flexible & Printable Electronics, Core Rivera Hotel, 20-22 November 2013, Jeonju, Jeollabuk-do, Korea.

6. E. Fortunato, R. Martins, Beyond Conventional Electronics: Metal Oxide Semiconductors, IEEE, 2013 Nuclear Science Symposium and Medical Imaging Conference, & Workshop on Room Temperature Semiconductors X Ray, Gamma-Ray Detectors, 2013 IEEE NSS/MIC/RTSD, in Alternative Semiconductor Materials and Detectors symposia, 27 October - 2 November 2013, COEX, Seoul, Korea.
7. R. Martins, E. Fortunato, Paper Electronics or the Future of Paper? Institute for Korean traditional paper Hanji (한지, 韓紙), Korean traditional handmade paper, 23 November 2013, Korea.
8. E. Fortunato, R. Martins, L. Pereira, D. Gaspar, P. Wojcik, Korean traditional handmade paper: paper characterization and first approach as electronic material, Institute for Korean traditional paper Hanji (한지, 韓紙), Korean traditional handmade paper, 23 November 2013, Korea.
9. E. Fortunato, R. Martins, Multifunctional nanoscale metal oxides, on symposium C (Oxide Materials and Application) of the International Conference in Advanced Materials, IUMRS-ICAM2013, 22-28 September 2013, Qingdao, China.
10. E. Fortunato, L. Pereira, P. Barquinha, R. Martins, Transparent electronics: from physical to chemical routes, 19th International Vacuum Conference, IVC 19, 9-12 September 2013, Paris, France.
11. Elvira Fortunato and Rodrigo Martins, Novel approaches for metal oxide thin film transistors, The 13th International Meeting on Information Display, IMID 2013, 26-29 August 2013, Deagu, Korea.
12. Rodrigo Martins, A. Vicente, Luis Pereira, D. Nunes, H. Águas, Elvira Fortunato, Solar Cells on Paper to Power Paper Electronics, 25th International Conference on Amorphous and Nanocrystalline Semiconductors (ICANS25), Toronto, Canada, 18 – 23 August 2013.
13. Elvira Fortunato, Pedro Barquinha, Luís Pereira and Rodrigo Martins, Multifunctional Nanoscale Oxide conductors/semiconductors, XXII International Materials Research Congress, Cancun, Mexico, 11-15 August 2013.
14. Elvira Fortunato, Pedro Barquinha, Luís Pereira and Rodrigo Martins, Multifunctional Nanoscale oxides: From Materials to Applications, ISPSA-XVI 2013, 2-5 July 2013, Jeju, Korea.
15. E. Fortunato, P. Barquinha, L. Pereira, R. Martins, Transparent Oxide Electronics, ICMAT 2013-MRS-S, 7th Int. Conference on Materials for Advanced Technologies, 30 June to 5th July, Suntec, Singapore.
16. L. Bedel, J. Amouroux, T. Andreu, A. Bengaouer, S. Cavadias, R. Fernandes, C. Henriques, J. Klein, C. Lombard, A.R. Machado, O. Maigrot, R. Martins, JR Morante, T. Pardal, M. N. da Ponte, G. Roux, P. Siffert, CO₂ - loop for Energy storage and conversion to Organic chemistry Processes through advanced catalytic Systems, ICCDU XII conference – Alexandria June 2013.
17. Alejandra Castro-Carranza, Muthupandian Cheralathan, Slobodan Mijalkovic, Pedro Barquinha, Elvira Fortunato, Rodrigo Martins, Magali Estrada, Antonio Cerdeira and Benjamin Iñiguez, Compact model for amorphous oxide semiconductor TFTs, CTFT workshop, Grenoble June 21, 2013.
18. Rodrigo Martins, Luis Pereira, Elvira Fortunato, Paper Electronics: a challenge for the future, Society for Information Display (SID 2013), Session 29: Flexible Barriers and Substrate, Vancouver Convention and Exposition Center, Vancouver, Canada, 22-May 2013.
19. R. Martins, "The future of Research in Materials Science in Europe", Jornadas Técnicas de Engenharia de Materiais, IST, Lisboa, 22 de March 2013.

Oral Presentations

1. Alicja Elzbieta Kownacka, Daniela Nunes, Rodrigo Martins, Pedro Barquinha, Elvira Fortunato, Synthesis of Zinc Stannate Nanoparticles: Hydrothermal vs. Microwave, NN13 - 10th International Conference on Nanosciences & Nanotechnologies, 09-12 Jul 2013, Thessaloniki, Greece.
2. P. Duarte, A. C. Santos, S. Pereira, L. Pereira, E. Fortunato, R. Martins, Cellulose Solid Electrolyte for Paper based Devices, EMRS 2013 Fall meeting, Warsaw, Poland, 15-19 September 2013.
3. P.J Wojcik, A. Delattre, L. Pereira, R. Martins, E. Fortunato, Fully Printed Electrochromic Display on Paper, European Materials Research Society (E-MRS) 2013 Fall Meeting, 16-20 September 2013, Warsaw, Poland.
4. A. Araújo, R. Barros, T. Mateus, D. Gaspar, N. Neves, A. Vicente, S.A Filonovich, P. Barquinha, E. Fortunato, A.M. Ferraria, A.M.B. do Rego, A. Bicho, H. Águas and R. Martins, Role of a disperse carbon interlayer on the performances of tandem a-Si solar cell, 25th International Conference on Amorphous and Nanocrystalline Semiconductors (ICANS25), Toronto, Canada, 18 – 23 August 2013
5. P.J. Wojcik, L. Santos, L. Pereira, R. Martins and E. Fortunato, Metal Oxide Nanoparticle Engineering for Printed Electrochemical Applications, 10th International Conference on Nanosciences & Nanotechnologies, 9-12 July, Thessaloniki, Greece.

6. P.J. Wojcik, L. Pereira, R. Martins and E. Fortunato, Fully Printed, Flexible Electrochromic Display Based on Tungsten Oxide and Thermosetting Solid-State Electrolyte, 6th International Symposium on Flexible Organic Electronics, 8-11 July 2013, Thessaloniki, Greece.
7. P. J Wojcik, L. Santos, L. Pereira, R. Martins, E. Fortunato, E.: Printable organic and inorganic materials for flexible electrochemical devices, JORTEC 2014, 10-17 Feb 2014.

Talks presented in 2012

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins and E. Fortunato, "Nanomaterials, Nanotechnology and Engineering of Materials", International Council for Science of UN-ICSU, CODATA workshop on the description of Nanomaterials, Ministry of Science and High Education, Paris, France, 23-24 February 2012.
2. R. Martins "The wonderful world of Thin Films", lesson given at Galaty University Senate during the Diploma Honoris Causa ceremony, 2nd April 2012, University of Danea de Jos, Galati, Romania.
3. R. Martins (E-MRS president), "Materials Challenges within HORIZON 2020", ITRE breakfast debate promoted by MEP rapporteur of HORIZON 2020 (Graça Carvalho), 31st May 2012, Brussels, European Parliament.
4. R. Martins and E. Fortunato, "Relevancy of Nanotechnologies and Nano analysis to paper electronics", Nanofair 2012, June 12-13, 2012, Dresden.
5. R. Martins and E. Fortunato, "The future can be built using imagination", 60th anniversary of Rotary of Almada, June 9, 2012, Almada, Portugal (plenary talk).
6. R. Martins, P. Siffert, E. Fortunato, "Materials challenges for the future", Industrial Technologies Conf. 2012: Materials, Aarhus, 19-21 June 2012 Denmark, in the frame of denish EU Presidency (plenary talk).
7. R. Martins, P. Siffert, E. Fortunato, "The Challenges of the future", 3rd International Conference on "Sustainable development, knowledge society and smart future manufacturing technologies" KNOWLEDGE, June 27-30, 2012, Jurmala, Latvia.
8. R. Martins (E-MRS president) "Materials - A key factor of Innovation and Development in Europe", European Parliament, STOA workshop on Materials for the 2020 Challenges, Brussels, 10th July 2012.
9. R. Martins (E-MRS president) "'What a materials research society recommends', Materials Summit 2012, European Commission, Brussels, 10th Septemeber 2012, building of Directorate G – rue du Champ de Mars 21.
10. R. Martins, E. Fortunato, "Oxide Logic Circuits on Paper", 4rd International Symposium on Transparent Conductive Materials, TCM2012, October 21-25 2012, Crete, Greece (key note).
11. E. Fortunato, P. Barquinha, L. Pereira, R. Martins, "From passive to active oxide semiconductors", 4th International Symposium on Transparent Conductive Materials, TCM2012, October 21-25, 2012, Crete, Greece (keynote speaker).
12. R. Martins, Materials Matters, Pan European networks: Science and Technology, 5, December 2012, pp. 77-79 (interview).

Invited Talks

1. L. Pereira, P. Barquinha, E. Fortunato and R. Martins, "Multicomponent dielectrics for oxide TFT", SPIE West Photonics Oxide-based Materials and Devices III (conference 8363), January 22-25, 2012, S. Francisco, USA.
2. R. Martins, I. Ferreira, E. Fortunato, "The present status of development of paper electronics", SPIE West Photonics, Oxide-based Materials and Devices III (conference 8363), January 22-25, 2012, S. Francisco, USA.
3. R. Martins and E. Fortunato, "P-type oxide thin film transistors produced at low temperatures", SPIE 2012, Conference 8263: Oxide-based Materials and Devices III, 21 - 26 January 2012, Moscone Center, S. Francisco, California USA.
4. E. Fortunato, R. Martins, "Solution based oxide TFTs", Printed Electronics Europe 2012, 3-4 April, 2012, Berlin, Germany.

5. R. Martins, I. Ferreira and E. Fortunato, "Paper electronics: from thin film transistors to solid state batteries", Energy, Materials and Nanotechnology meeting (Workshop F: Villa Conference on Optoelectronic Materials and Devices), 2012 ENM Meeting, April 16-20, 2012 at the Doubletree by Hilton Orlando at SeaWorld hotel, USA.
6. E. Fortunato R. Martins, "Solution based oxides: from transparent conductive oxides to thin film transistors", Energy, Materials and Nanotechnology meeting (Workshop E: Villa Conference on Complex Oxide Heterostructures), 2012 ENM Meeting, April 16-20, 2012 at the Doubletree by Hilton Orlando at SeaWorld hotel, USA.
7. E. Fortunato, R. Martins, "High mobility TCOS", "E-MRS Spring Meeting, Symposium Y on "Advanced materials and characterization techniques for solar cells", May 15-17, 2012, Congress Center - Strasbourg, France.
8. E. Fortunato and R. Martins, "Transparent Electronics: From materials to devices" Optocoat 2012, 31st May, Alicante, Spain.
9. E. Fortunato, R. Martins, Transparent electronics, Workshop on nanoTCM at Grenoble, France, 14-15 June 2012.
10. R. Martins, P. Barquinha, L. Pereira, E. Fortunato, "Oxides with and on paper", Workshop on Novel conducting oxide materials for energy and optoelectronic applications, 15th June 2012, Dublin, Ireland.
11. E. Fortunato, P. Barquinha, L. Pereira, R. Martins, "Transparent electronics: from materials to devices", Workshop on Novel conducting oxide materials for energy and optoelectronic applications, 15th June 2012, Dublin, Ireland.
12. E. Fortunato, R. Martins, "From paper to electronics", CMOS Emerging Technologies Conference, July 18-20, 2012, in Vancouver, BC, Canada.
13. R. Martins, I. Ferreira, E. Fortunato, A. Nathan, "CMOS Circuits on Paper Create Potential for Flexible, Cheap, Low Power, Recyclable Electronics", CMOS Emerging Technologies Conference, July 18-20, 2012, in Vancouver, BC, Canada.
14. E. Fortunato, R. Martins, "p and n-type Oxide Thin Film Transistors", International Symposium on Compound Semiconductors, ISCS 2012 (co-located with IPRM) 26-30 August 2012, University of Santa Barbara, USA.
15. R. Martins and H. Águas, "Solar tiles, a new building construction commitment", 20th Conference FORUM ENGELBERG 2012, 5th - 7th September 2012, 6390 Engelberg /Switzerland.
16. R. Martins, E. Fortunato and P. Siffert, "Materialforschung ist ein entscheidender Innovationsfaktor", 20th Conference FORUM ENGELBERG 2012, 5th - 7th September 2012, 6390 Engelberg /Switzerland.

Talks presented in 2011

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins, Public-Private Technology initiative, in the frame of the STOA Workshop CO2: a Future Chemical Fuel, European Parliament, Rue Wiertz 60, 1047 Brussels, 22nd March 2011.
2. R. Martins, E. Fortunato, I. Ferreira, 100% Green Electronics, IEEE, Advancing Technologies for Humanity, Millenium conferences, 21st March 2011, Caparica Portugal.
3. R. Martins, "The new challenges for photovoltaics as a long term reliable affordable energy resource", International Doctoral School in Functional materials, IDS, FunMat, organized by Univ. Bordeaux, First Summer School, March 13-18, 2011 – Lisbon, Portugal.
4. R. Martins, (E-MRS President), "Materials: a key factor of Innovation and Development in Europe", EUROMAT/FEMS, Mantpellier, France, 15th September 2011.
5. R. Martins, "New concepts for innovation in the field of materials", FUMAT 2011, Future materials for grand Challenges of our time- organized in frame of the Polish Presidency of the Council of the EU, Warsaw, Poland, 22-23 September 2011.
6. R. Martins, "The Contributions of Radu Grigorovici to the Understanding of the Disordered Semiconductors and Today's Potential of the Oxide Disordered Semiconductors", in "Radu Grigorovici Centenary", Romanian Academy of Sciences, 10th October 2011.
7. R. Martins, E. Fortunato, Tagus Park, venha tomar um café com: Rodrigo Martins e Elvira Fortunato a falarem sobre: "Transparent electronics: from fiction to science" e "paper electronics", Oeiras, 26 October 2011.

8. R. Martins (E-MRS president), "Materiais: Que prioridades futuras na Europa?", World materials Day, organised by Sociedade Portuguesa dos materiais e a Ordem dos Engenheiros, 2 November 2011, Campus de Caparica, Portugal.
9. R. Martins, E. Fortunato, "Electronics with and on paper", Deuxièmes Journées du GDR (Le Groupement de Recherche du CNRS) en Electronique Organique, Electronique sur le papier, Grenoble les 14-15 November 2011.

Invited Talks

1. R. Martins, E. Fortunato, "Away from silicon era: the paper-e", SPIE Photonics West, electronics Oxide-based Materials and Devices II (Conference 7940), S. Francisco, USA, 22-27 January 2011.
2. E. Fortunato, R. Martins, "P-type oxide based thin film transistors produced at low temperatures", SPIE Photonics West, electronics Oxide-based Materials and Devices II (Conf. 7940), S. Francisco, USA, 22-27 January 2011.
3. E. Fortunato, R. Martins, "P- and n-type oxide TFTs", 7th International Thin-Film Transistor Conference, 3rd – 4th March 2011, Clare College, Cambridge, UK.
4. E. Fortunato, R. Martins, "Transparent Electronics: from n- to p-type oxide thin film transistors", Printed Electronics Europe, April 5-6, 2011 in Dusseldorf, Germany.
5. R. Martins, E. Fortunato, O Papel do Papel na Electrónica Verde (Paper-E), 11 de abril de 2011, Lisboa, Residência de Estudantes de Montes Claros (Opus Dei), Portugal.
6. E. Fortunato, R. Martins, "Transparent Electronics: from n- to p-type oxide thin film transistors", Villa Conference on Interactions Among Nanostructures, April 21-25, 2011 Las Vegas, Nevada, USA.
7. E. Fortunato, R. Martins, "Advances in high mobility n- and p- type oxide semiconductors", MRS Spring Meeting, Symposium on Complex Oxide Materials for Emerging Energy Technologies, S. Francisco, April 26-29, 2011, USA.
8. E. Fortunato, R. Martins, "Transparent Electronics: from n- to p-type oxide thin film transistors", 4th WCU Symposium on Nanobio Materials and Electronics (WCU-04), 5-7 May 2011, University of Muenster, Germany.
9. L. Pereira, R. Martins, E. Fortunato, "Oxide electronics: a present for the future" "International Conference on Applications of Optics and Photonics AOP2011, Braga, 3-7 May 2011.
10. R. Martins, I. Ferreira, L. Pereira, E. Fortunato, "The paper as a support and component for future electronics", Centre Technique du Papier (CTP), 16th May 2011, Grenoble, France.
11. E. Fortunato, R. Martins, "O papel electrónico e a influência da sua composição e estrutura no seu desempenho", empresa Suzano, S. Paulo, Brazil, 2 June 2011.
12. R. Martins, and E. Fortunato, "Positioning University Nanotechnology Research for Commercial Success: The paper electronics, UTEN workshop, CENIMAT, Lisbon, Portugal, 26th September 2011.
13. R. Martins, I. Ferreira, E. Fortunato, "Paper electronics: The Green electronics for the Future", Institute of Physics and Materials, Bucharest, 11th October 2011.
14. R. Martins, E. Fortunato, "Nanobiodetection based on nano-sensors an Au nPs systems", Plastic Electronics – Seminar on Bioelectronics, October 11-13, Dresden, Germany.
15. E. Fortunato, R. Martins, "Investigação, Inovação e Diversificação", Forum de Tecnologias, Comunicação e Multimédia, A nova Geração Tecnológica e o seu Impacto na Sociedade do Conhecimento organizado pela ACIST, Talatona, Luanda, Angola, 16-17 November 2011.
16. E. Fortunato, R. Martins, "Where science fiction meets reality? With oxide semiconductors!", MRS Fall Meeting, Symposium M on Oxide Semiconductors: Defects, Growth and Device Fabrication, 28 November – 2 December 2011, Boston, Massachusetts.
17. E. Fortunato, R. Martins, "Review on oxide thin film transistors" MRS Fall Meeting, Symposium T Large-Area Processing and Patterning for Active Optical and Electronic Devices III, 28 November – 2 December 2011, Boston, Massachusetts.
18. I. Ferreira, E. Fortunato, R. Martins "Solid State Paper Battery", MRS Fall Meeting, Symposium F: Mobile Energy, 28 November – 2 December 2011, Boston, Massachusetts.
19. R. Martins, E. Fortunato, "Review on oxide thin film transistors" MRS Fall Meeting, Symposium T Large-Area Processing and Patterning for Active Optical and Electronic Devices III, 28 November – 2 December 2011, Boston, Massachusetts.
20. E. Fortunato, R. Martins, "New developments on oxide electronics", IDW 2011, 18th International Display Workshops, December 7-9 2011 Nagoya Congress Center, Nagoya, Japan.

21. R. Martins, L. Pereira, E. Fortunato, "The paper electronics: from circuit board substrate to integrate harvesting devices", chair and invited speaker of the 6th International Conference of the Africa Materials Research Society, 11-16 December 2011, Victoria Falls, Zimbabwe.
22. E. Fortunato, R. Martins, P. Barquinha. The challenges of the transparent electronics, 6th International Conference of the Africa Materials Research Society, 11-16 December 2011, Victoria Falls, Zimbabwe.

Talks presented in 2010

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins and E. Fortunato, "Oxides semiconductors: from materials to devices", International, Wilhelm & Else Heraeus Summer School on Sustainable Electronic Materials", Physikzentrum in Bad Honnef/Germany, 1-10 August 2010.
2. E. Fortunato and R. Martins, "Post silicon era: oxide based integrated circuits", International, Wilhelm & Else Heraeus Summer School on Sustainable Electronic Materials", Physikzentrum in Bad Honnef/Germany, 1-10 August 2010.
3. E. Fortunato, R. Martins, "Oxide Semiconductors: from Materials to Devices", Plenary, 11th International Balkan Workshop on Applied Physics, July 7-9, 2010, Constanta, Romania.
4. R. Martins, Transport in oxide semiconductors and TFT, key note in TCM 2010, 3rd Int. Symp. on Transparent Conductive Materials, 16 - 21 October, 2010 Analipsi / Hersonissos, Crete, Greece.
5. E. Fortunato, R. Martins, "From n-type to p-type oxide based Thin Film Transistors (TFTs)", 3rd International Conference on Advanced Nano Materials, 12-15 September 2010 - Agadir, Morocco.
6. E. Fortunato, R. Martins, "Multifunctional oxides", Plenary lecture at 11th International Symposium on Multiscale, Multifunctional and Functionally Graded Materials, 26-29 September 2010, Guimarães, Portugal.
7. E. Fortunato, R. Martins, "Oxide electronics", Summer School 3rd BuildMoNa Workshop for Doctoral Candidates, University of Leipzig, Germany, 4 - 5 October 2010.

Invited Talks

1. E. Fortunato, R. Martins, "Sputtered amorphous multicomponent dielectrics for oxide based TFTs", SPIE Photonics West, 23 - 28 January 2010, The Moscone Center, San Francisco, California, USA.
2. R. Martins, E. Fortunato, "Floating gate memory paper transistor", SPIE Photonics West, Symposium Oxide-Based Materials and Devices, S. Francisco, 23-28 January, 2010.
3. E. Fortunato, R. Martins, "Sputtered amorphous multicomponent gate dielectrics for GIZO TFTs", ITC'10 International Thin-Film Transistor Conf. 2010 -New Functional Materials and Its Application- January 28-29, 2010, Egret Himeji (Hyogo), Japan.
4. R. Martins, I. Ferreira, "A (R)Evolução esperada na conversão de energia de origem fotovoltaica, Workshop em Energia e Biomassa organizada pela Rede de Competências em Tecnologias de Energias Renováveis, 26 February 2010, Universidade do Minho.
5. R. Martins, "Novas formas de utilização da conversão de energia de origem fotovoltaica" - Auditório Municipal, Jornadas Culturais da Escola Secundária Manuel da Fonseca, Santiago do Cacém, 25-26 March 2010.
6. R. Martins e E. Fortunato: "As Nanotecnologias" Escola Secundária de Loulé, 17 de May de 2010.
7. E. Fortunato, R. Martins, "New Amorphous Oxide-based ISFETs for Biosensor Applications", MRS Spring Meeting, Symposium on Functional Materials and Nanostructures for Chemical and Biochemical Sensing, San Francisco, April 6-9, 2010 USA.
8. R. Martins, E. Fortunato, "Away from the silicon era: The paper electronics" 11th International Balkan Workshop on Applied Physics, Constanta, Roménia, 7-9 July 2010.
9. R. Martins, "Away from silicon era: the paper electronics", 4th International Meeting on Developments in Materials, Processes and Applications of Emerging Technologies", MPA-4, 28-30 July 2010, University of Minho, Braga, Portugal.
10. R. Martins, E. Fortunato, Cidades e regiões: a espinha dorsal da inovação na Europa, CCDR, Lisboa e Vale do Tejo, Plano Tecnológico Nacional, Lisboa, FIL/ Parque das Nações, 22 September 2010

11. E. Fortunato e R. Martins, How can the new technologies help the cities, UE Open Days, Bruxelas, October 2010.
12. R. Martins, E. Fortunato, Green electronics for the future, 3rd International Conference on Advanced Nano Materials, ANM2010, 12-15 September 2010 - Agadir, Morocco.
13. L. Pereira, R. Martins, "Multicomponent oxides for flexible and transparent electronics – MULTIFLEXIOXIDES" FP7 Session Advances in materials within the EU Framework Programmes, Varsóvia, Polónia, 16 September 2010, E-MRS Fall Meeting.
14. R. Martins e E. Fortunato, "Cidades e regiões: a espinha dorsal da inovação na Europa", Portugal Tecnológico, FIL, Parque das Nações, Lisboa 20-22 September 2010.
15. E. Fortunato and R. Martins, How can the new technologies help the cities, Open days, Cities and regions, Brussels, Belgium, 5th October 2010.
16. R. Martins, Transport in oxide semiconductors and Thin Transistors, Orama workshop in TCM 2010, 3rd International Symposium on Transparent Conductive Materials, 16 - 21 October, 2010 Analipsi / Hersonissos, Crete, Greece.
17. E. Fortunato, R. Martins, "Amorphous multicomponent oxide-based TFTs and p-type TFTs", Summer School "OXIDE Materials for Electronic Applications", Satellite to TCM2010 Organized by the "ORAMA" IP Consortium, 15-17 October 2010 Analipsi/Hersonissos, Crete, Greece.
18. R. Martins, I. Ferreira, L. Pereira, P. Barquinha, G. Gonçalves, N. Correia, E. Fortunato, "A electronica de e com papel", workshop da JSPM, IST, 12 November 2010.
19. R. Martins, E. Elangovan, S. Parthiban, G. Gonçalves, and E. Fortunato, "High Mobility Transparent Conductive Oxides". MRS 2010 Fall meeting, Symposium MM: Transparent Conducting Oxides and Applications, Boston, USA, November 29 - December 2, 2010.
20. E. Fortunato, R. Martins, "Fully Transparent n- and p-type oxide TFT", MRS 2010 Fall meeting, Symposium F: Low Temperature Processed Thin Film Transistors, Boston, USA, November 29 - December 2, 2010.
21. R. Martins, E. Fortunato, "Green Electronics for the Future: The paper electronics", 2010 International Chemical Congress of Pacific Basin Societies, Materials and Technologies, Dec. 15-20, 2010, Honolulu, Hawaii, USA.
22. R. Martins, E. Fortunato, I. Wojcick, G. Gonçalves, P. Wojcick, "Make Light out of Light", 2010 Int. Chemical Congress of Pacific Basin Societies, Materials and Technologies, December 15-20, 2010, Honolulu, Hawaii, USA.
23. R. Martins, E. Fortunato, I. Wojcick, L. Pereira, P. Wojcick, "Ink Jet Printing Electrochromic Devices", 2010 International Chemical Congress of Pacific Basin Societies, Materials and Technologies, December 15-20, 2010, Honolulu, Hawaii, USA.
24. E. Fortunato, R. Martins, "From n-type to p-type oxide TFT all room temperature processed", 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem), Honolulu, Hawaii, USA, December 15-20, 2010.

Talks presented in 2009

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins and E. Fortunato, Paper-e, the electronics of future, 12th International Conference on Technology Policy and Innovation (ICTPI), 13-14 July, Porto, Portugal.

Invited Talks

1. R. Martins, E. Fortunato, "Write-erase and read paper memory transistor", Instituto de Física de São Carlos da Universidade de S. Paulo, São Carlos Brasil, 15 January 2009.
2. R. Martins, E. Fortunato "Transistor e Memória de e com Papel", Suzano papel e Celulose, S. Paulo Brazil, 16 January 2009.
3. R. Martins, L. Pereira, P. Barquinha, I. Ferreira, R. Prabakaran, G. Gonçalves, A. Gonçalves, E. Fortunato, "Role of order and disorder in covalent semiconductors and ionic oxides used to produce thin film transistors." Zinc oxide and related compounds: order within the disorder, Zinc Oxide Materials and Devices; Conferência, OPTO 2009, SPIE Photonics West, S. José, 24-29 January 2009, USA.

4. E. Fortunato and R. Martins, "Electronic devices on and with paper", EUROPEAN COMMISSION, Information Society and Media Directorate-General, Components Microsystems and Systems DG ICT, 16 February de 2009, Avenue Beaulieu 33, room 0/58, Brussels, Belgium.
5. R. Martins and E. Fortunato, "Active and Passive Oxides semiconductors @ FCT-UNL, for the new post silicon era", i.techpartner, forum, New Materials, 5-6 March, Valencia, Spain, organizado pela UE.
6. R. Martins, I. Ferreira, E. Fortunato, "Novas Formas de Conversão de Energia Fotovoltaica", 17 April 2009, conferência, no Comando da Logística (Edifício CEUTA, Av. Infante Santo, 49, 6.º Piso, Lisboa), a convite do Quartel-Mestre General (Comandante da Logística do Exército), Tenente-General Joaquim Formeiro Monteiro.
7. R. Martins, E. Fortunato, "Multicomponent Oxides as passive and active semiconductors for PV applications", EMRS spring meeting, Strasbourg, France, 12th June, 2009. French-Romanian Workshop in the frame of symposium B of EMRS spring meeting 2009.
8. R. Martins, I. Bernacka, L. Silva, E. Fortunato, "Inkjet printed optoelectronic DNA sensor", 4th China Medical Biotech Forum, CMBF 2009, 8-10, 2009 in Dalian, China, with a theme of "Translating Bio-Innovations into Industrialization", track 2-3 Nanoparticles for Diagnostics and Manufacturing.
9. R. Martins, I. Ferreira, E. Fortunato, Novas Formas de Conversão de Energia Fotovoltaica: Revestimentos Cerâmicos Fotovoltaicos, 7 May 2009, JORTEC, FCTUNL, Caparica.
10. R. Martins, I. Ferreira, E. Fortunato, "A Conversão de energia Fotovoltaica: Novos desafios", 13 May 2009, Rotary Club do Entrocamento, Golegã, Portugal.
11. R. Martins, E. Fortunato, As implicações e as Aplicações das Nanotecnologias, Porto de Mós, 19 May 2009.
13. R. Martins and E. Fortunato, From Invention to Innovation and the way to Patents: PI2, "Disseminating IP Knowledge in Universities", organized by INPI, 5th June 2009, Salão Nobre da Universidade de Lisboa, Portugal.
14. Rodrigo Martins, "Order and disorder in multicomponent passive and active oxides", 11th International Conference on Advanced Materials, ICAM, symposium M- Frontiers in Photonic and Photovoltaic Materials and Processes, 20-25 September 2009, Rio de Janeiro, Brazil.
15. R. Martins, "Análise de Factores Condicionantes para a Evolução do sector de energia solar de origem fotovoltaica", Oportunidades de Negócio da Energia Solar, organized by NPF, 30 September – 1 October, 2009, Lisboa, Portugal.
16. R. Martins, L. Pereira, P. Barquinha, I. Ferreira, N. Correia, E. Fortunato, "Self sustained n-type memory transistor devices based on natural cellulose paper fibers", International Meeting on Information Display, IMID 2009, October 12-16, 2009 / KINTEX, Korea.

Talks presented in 2008

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins, E. Fortunato, "Amorphous Oxide Semiconductors: from materials to devices", 2nd Int. Symposium on Transparent Conductive Oxides, IS-TCO 2008, 22 - 26 October, 2008, Hersonissos, Crete, Greece.

Invited Talks

1. E. Fortunato, R. Martins, "TCOs for photovoltaics", International Conference on Solar Cells (IC-SOLACE 2008)' 21 to 23 January 2008, Cochin University, India.
2. E. Fortunato, R. Martins, "Recent progress on amorphous oxide based thin film transistors", 4th International TFT Conference (ITC '08) Jan.24-25, 2008, Kyung Hee University, Seoul, South Korea.
3. E. Fortunato, R. Martins, "The (R)Evolution of TFTs", seminar at the Kyung Hee University, 26 January 2008, Seoul, South Korea.
4. E. Fortunato, R. Martins, "DNA detection using amorphous silicon sensors with gold nanoparticles", 2nd Workshop on Low-Dimensional Structures: Properties and Applications, 31 January, Aveiro, Portugal.

5. R. Martins, "A Sociedade, a Investigação e a Educação: oportunidades e desafios" palestra convidada pelo Rotary Club de Almada, Hotel Costa da Caparica, 15 April 2008.
6. E. Fortunato, R. Martins, "DNA detection using amorphous silicon sensors with gold nanoparticles", NanoSpain 2008, April 14-18, Braga, Portugal.
7. E. Fortunato, R. Martins, "Recent Advances on Amorphous Oxide Based Thin Film Transistors", International Conference on Metallurgical Coatings and Thin Films", San Diego, California, EUA, 28 April- 2 May 2008, USA.
8. E. Fortunato, R. Martins, "Amorphous Oxides Thin Film Transistors", Electrical department, Cambridge University, 3-4 June 2008.
9. E. Fortunato, R. Martins "Transparent Hybrid Devices", 2nd International Conference on Functional Materials & Devices, (ICFMD-2008), Faculty of Applied Sciences, Universiti Teknologi MARA (UiTM), June 16th - 19th, 2008, Kuala Lumpur, Malaysia.
10. E. Fortunato, R. Martins, "Novel Functionalized Nano Oxided Hybrid Circuits for Biodetection Applications", 2nd International Conference on Advanced Nano Materials, ANM 2008, 22-25 June 2008, Aveiro, Portugal.
11. R. Martins, E. Fortunato, "Amorphous ionic oxides vs amorphous covalent oxides: from materials to devices", 2nd International Conference on Advanced Nano Materials, ANM 2008, June 22 -25 2008, Aveiro, Portugal.
12. R. Martins, L. Silva, E. Fortunato, "Characterization of Optoelectronic Platforms Using an Amorphous/Nanocrystalline Silicon Biosensor", "Third International Conference on Optical, Optoelectronic Photonic Materials and Applications 2008, ICOOPMA2008, Edmonton, Canada, 20-25 July 2008.
13. E. Fortunato, R. Martins, "Why amorphous oxide semiconductors are so attractive for thin film transistors?", ICOOPMA 2008, Third International Conference on Optical, Optoelectronic and Photonic Materials and Applications, 20 - 25 July 2008, Edmonton, Canada.
14. E. Fortunato, R. Martins, "Is the future of electronics transparent?", Keynote lecture presented at 11 Conference on Plasma Surface Engineering (Pse 2008), September 15-19 2008, Garmisch, Germany.
15. R. Martins, E. Fortunato, "Entrepreneurship: The Lisbon Commitments", Warsaw, Poland, 15-19 September 2008, EMRS fall meeting, ComplexEIT Workshop.
16. E. Fortunato, R. Martins, L. Pereira, "High-Performance Flexible Hybrid Field-Effect Transistors Based on Cellulose Fiber Paper (Paper Transistor)", 4th Global Plastic Electronics Conference, Berlin, Germany, 27-29 October 2008.
17. R. Martins, "From Innovation to Entrepreneurship", Universidade do Algarve, 20 November 2008.
18. E. Fortunato, R. Martins, "High mobility indium free amorphous oxide based thin film transistors", IMID/IDMC/Asia Display, October 13-17, 2008, Ilsan, Korea.
19. E. Fortunato, R. Martins, "The Revolution of thin film transistors", Albanova University Centre, 6 November 08, Stockholm, Sweden.
20. E. Fortunato, R. Martins, "Technological issues for high performances oxide TFTs", IEEE Lasers & Electro-optics Society (i.e. LEOS 2008), Newport Beach, California, USA, Nov. 9-13, 2008.
21. E. Fortunato, R. Martins, "Transparent Conductors and Semiconductors for Optoelectronics", Materials Research Society (MRS) Fall 2008 December 1 - 5, Boston, 2008, USA.
22. E. Fortunato, R. Martins, "Paper transistor", IDTechEx, Research and Analysis of Printed Electronics, RFID and their Applications, Printed Electronics USA 08, 2-5 December, San Jose, USA.

Talks presented in 2007

Plenary/ Keynote speaker/ Summer Schools/invited Interview

1. R. Martins, E. Fortunato, "Electrical transport in Amorphous Oxides", Int. Symp. on Transp. Amorphous Oxide Semiconductor 2007 (TAOS 2007)", 20-23 May 2007, Tokyo, Japan.
2. E. Fortunato, R. Martins, "Transparent Thin Film Transistors", International Materials Forum 2007: Frontiers in Materials Science & Technology, Focus: Functional Materials, August 2 and 3, 2007 in Bayreuth, Germany.

Invited Talks

1. E. Fortunato, R. Martins, "Is the future of TFTs transparent?", 2007 International Thin Film Transistors Conf., ITC'07 in conjunction with SID-Mid Europe Chapter Spring Meeting, January 25-26, 2007, Rome, Italy.
2. R. Martins, "Nanotecnologias, Nanomodulação e Nanofabricação", Instituto Nacional de Metrologia, Normalização e Qualidade Industrial-INMETRO Rio de Janeiro, Brasil, 2nd May 2007.
3. R. Martins, E. Fortunato, "Novel Nanostructures for optoelectronic applications such as solar cells", II International Symposium on Advanced Materials and Nanostructures", São Carlos, Brasil, 3-4 de May 2007.
4. E. Fortunato, R. Martins, "Novel oxides for thin film transistors applications". "II International Symposium on Advanced Materials and Nanostructures", São Carlos, Brazil, May 3-4, 2007.
5. R. Martins, E. Fortunato, "Order and disorder in covalent semiconductors and ionic oxides", 3-rd Intern. Conf. On Amorph. and Nanostructured Chalcogenides (ANC-3), Brasov, Romania, 2-6 July 2007.
6. E. Fortunato, R. Martins, "High mobility amorphous oxides semiconductors: from materials to devices", 3rd International Conference on Amorphous and Nanostructured Chalcogenides, 2-6 July 07, Brasov, Romania.
7. E. Fortunato, R. Martins, "ZnO TFT Technology", International Display Manufacturing Conference and Exhibition 2007 (IDMC) ", Taipei, Taiwan, July 03-06, 2007.
8. E. Fortunato, R. Martins, "Transparent Thin Film Transistors", International Materials Forum 2007: Frontiers in Materials Science & Technology, Focus: Functional Materials, August 2 and 3, 2007 in Bayreuth, Germany.
9. E. Fortunato, R. Martins, "High mobility oxide semiconductors", ICANS22, 22nd International Conference on Amorphous and Nanocrystalline Semiconductors, 19-24 August, Colorado, USA 2007.
10. E. Fortunato, R. Martins, "Progresses on oxidized based thin film transistors", HP Corvallis, USA, 29 August 2007.
11. E. Fortunato, R. Martins, "Thin Film Devices on flexible substrates", 3rd Global Plastic Electronics 2007 Conference & Showcase, Frankfurt Oct. 23 & 24, 2007, Germany.
12. E. Fortunato, R. Martins, "Si based DNA Nanosensing" High Level Conference on Nanotechnologies, 19th November 2007, Braga, Portugal, organized by EU and the Portuguese Presidency of the European Union.
13. E. Fortunato, R. Martins, "ZnO based semiconductor", MRS Fall Meeting 2007, 26-30 November 07, Boston.
14. R. Martins, "Materiais Avançados: Nanotecnologias, Semicondutores Covalentes e Semicondutores Iônicos", Departamento de Engenharia Metalúrgica e de Materiais da FEUP, 12 November 2007.

Talks presented in 2006

Plenary/ Keynote speaker/ Summer Schools/invited Interview

Invited Talks

1. E. Fortunato, R. Martins, "Oxide based transparent electronics", LDSS Workshop 2006, January 27-28, 2006, Aveiro, Portugal.
2. E. Fortunato, R. Martins, "Zinc oxide: a new "elastronic" material", E-MRS Spring Meeting, Symposium K: Zinc oxide and related materials, May 28 – June 2, 2006, Nice, France.
3. E. Fortunato, R. Martins, "Results on IZO, GIZO and ZnO TFTs", Seminar SAIT - SAMSUNG Suwon, Korea, 11 July 2006.
4. R. Martins, E. Fortunato, "Transport Properties in Single and Multicomponent n-Type Oxide Semiconductors", ICOOPMA-2006, chaired by Jai Singh, Charles Darwin University, Darwin Australia, 16-20 July 2006.
5. E. Fortunato, R. Martins, "Zinc oxide: from materials to devices", POLYSE 2006 – International Conference on Polycrystalline Semiconductors September 5-10, 2006, University of Postdam, Germany.

6. E. Fortunato, R. Martins, "Transparent electronic: from materials to devices", 1st International Symposium on Transparent Conducting Oxides, Keynote Speaker, October 23 -25, 2006, Crete, Greece.
7. E. Fortunato, R. Martins, "Transparent conductive ZnO thin films deposited on polymer substrates by R.F. magnetron sputtering at room temperature", 2nd Global Plastic Electronics 2006 Conf. & Showcase, Frankfurt Oct. 24 & 25, 2006.
8. E. Fortunato, R. Martins, "Is the future of TFTs transparent?", International Symposium on Transparent Amorphous Oxide Semiconductors (TAOS 2006), November 22, 2006, Tokyo Institute of Technology, Suzukakedai Campus, Japan.
9. E. Fortunato, R. Martins, "The applications and implications of transparent electronics", National Institute of Advanced Industrial Science and Technology, 20 November 06, Tsukuba, Japan.
10. E. Fortunato, R. Martins, "The (R)Evolution of Thin Film Transistors", MRS Fall Meeting, Symposium K: Zinc oxide and related materials, November 27 – December 1, 2006, Boston, USA.

PAPERS Published from 1979 to 2021

Year 2021

- 1) R. Martins, Discover Materials: the pathway to explore materials as activators of the challenges of the future, Discover Materials Vol. 1 (1), (2021), 1-2.
- 2) Jorge Martins, Asal Kiazadeh, Joana V Pinto, Ana Rovisco, Tiago Gonçalves, Jonas Deuermeier, Eduardo Alves, Rodrigo Martins, Elvira Fortunato, Pedro Barquinha, Ta2O5/SiO2 Multicomponent Dielectrics for Amorphous Oxide TFTs, Electronic Materials, Vol. 2 (2021), pp. 1-16.

Year 2020

- 3) E. Carlos, R. Branquinho, R. Martins, A. Kiazadeh, E. Fortunato, Recent Progress in Solution-Based Metal Oxide Resistive Switching Devices, Advanced Materials, 2004328 (2020), doi: 10.1002/adma.202004328
- 4) AIB Rovisco, R Branquinho, JV Pinto, R Martins, E Fortunato, P Barquinha, Hydrothermal Synthesis of Zinc Tin Oxide Nanostructures for Photocatalysis, Energy Harvesting and Electronics, Novel Materials, 2020.
- 5) AF Carvalho, AJS Fernandes, R. Martins, E. Fortunato, FM Costa, Laser-Induced Graphene Piezoresistive Sensors Synthesized Directly on Cork Insoles for Gait Analysis, Advanced Materials Technologies, (2020), 2000630, doi: 10.1002/admt.202000630.
- 6) Kezheng Li, Sirazul Haque, Augusto Martins, Elvira Fortunato, Rodrigo Martins, Manuel J Mendes, Christian S Schuster Light trapping in solar cells: simple design rules to maximize absorption, Optica, Vol. 7 (2020), pp. 1377-1384.
- 7) Z. Landolsi, I. Ben Assaker, D. Nunes, E. Fortunato, R. Martins, R. Chtourou, S. Ammar, Enhanced electrical and photocatalytic properties of porous TiO₂ thin films decorated with (2)O₃ nanoparticles, J. Materials Science-Materials in Electronics, 2020, Doi:10.1007/s10854-020-04588-
- 8) Santanu Jana, Emanuel Carlos, Shrabani Panigrahi, Rodrigo Martins, and Elvira Fortunato, Toward Stable Solution-Processed High Mobility p-Type Thin Film Transistors Based on Halide Perovskites, ACS Nano, 2020, dx.doi.org/10.1021/acsnano.0c02862
- 9) AC Lourenço, AS Reis-Machado, E. Fortunato, R. Martins, MJ Mendes, Sunlight-driven CO₂-to-fuel conversion: Exploring thermal and electrical coupling between photovoltaic and electrochemical systems for optimum solar-methane production, Materials Today Energy, Vol. 17 (2020), 100425.
- 10) Paulo Duarte, Sónia Pereira, Inês Cunha, Ana Pimentel, Madalena Dionísio, Elvira Fortunato, Rodrigo Martins and Luís Pereira, Cellulose-Based Solid Electrolyte Membranes Through Microwave Assisted regeneration and Application in Electrochromic Displays, Frontiers in Materials, Vol. 7 (2020), 269, <https://doi.org/10.3389/fmats.2020.00269>.
- 11) Sara L Silvestre, Diana Araújo, Ana C Marques, Carolina Pires, Mariana Matos, Vítor Alves, Rodrigo Martins, Filomena Freitas, Maria AM Reis, Elvira Fortunato, Microneedle Arrays of Polyhydroxyalkanoate by Laser-Based Micromolding Technique, ACS Applied Bio Materials, Vol. 3 (2020), pp. 5856-5864. *Cited 1*

- 12) A. Santos, E. Fortunato, R. Martins, H. Águas, R. Igreja, Transduction Mechanisms, Micro-Structuring Techniques, and Applications of Electronic Skin Pressure Sensors: A Review of Recent Advances, *Sensors*, Vol. 20 (16) (2020), 4407, doi 10.3390/s20164407. *Cited 1*
- 13) SH Ferreira, J. Deuermeier, S. Sequeira, D. Nunes, A. Gonçalves, R. Martins, R. Monteiro, E. Fortunato, Industrial Waste Residue Converted into Value-Added ZnO for Optoelectronic Applications, *ACS Applied Electronics Materials*, Vol. 2(7) (2020), pp. 1960-1969, DOI: 10.1021/acsaelm.0c00270.
- 14) M. Pereira, J. Deuermeier, R. Nogueira, PA Carvalho, PA (Carvalho, R. Martins, E. Fortunato, A. Kiazadeh, Noble-Metal-Free Memristive Devices Based on IGZO for Neuromorphic Applications, *Advanced Electronics Materials*, (2020), 2000242, doi: 10.1002/aelm.202000242
- 15) B.P. Falcão, J.P. Leitão, M.R. Soares, J. Rodrigues, L. Ricardo, H. Aguas, R. Martins, R.N. Pereira, Size-dependent critical transition in the origin of light emission from core-shell Si-SiO(2)nanoparticles, *J. of Materials Chemistry C*, Vol. 8 (26) (2020), pp. 9012-9023, Doi: 10.1039/d0tc01442g
- 16) M. Tiberio, T. Calmeiro, S. Nandy, D. Nunes, R. Martins, E. Fortunato, J. Deuermeier, Orientation dependence of electrical properties of polycrystalline Cu₂O thin films, *Semiconductor Science and Technology*, Vol. 35 (7) (2020), 075016, DOI: 10.1088/1361-6641/ab883b.
- 17) M.V. Pereira, A.C. Marques, D. Oliveira, R. Martins, F.T.C. Moreira, M.G.F. Sales, E. Fortunato, Paper-Based Platform with an In Situ Molecularly Imprinted Polymer for beta-Amyloid, *ACS Omega*, Vol. 5 (21) (2020), pp. 12057-12066, DOI: 10.1021/acsomega.0c00062. *Cited: 2*
- 18) B. Tiwari, P. Ganga Bahubalindrani, A. Santos, A. Santa, C. Figueiredo, M. Pereira, R. Martins, E. Fortunato, P. Barquinha, Low-Voltage High-Speed Ring Oscillator with a-InGaZnO TFTs, *IEEE Journal of the Electron Devices Society*, Vol. 8 (2020), pp. 584-588. DOI: 10.1109/JEDS.2020.2997101.
- 19) Sirazul Haque, Miguel Alexandre, Manuel J. Mendes, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Design of wave-optical structured substrates for ultra-thin perovskite solar cells, *Applied Materials Today* 20 (2020) 100720. *Cited: 3*
- 20) A.C. Lourenço, A.S. Reis-Machado, E. Fortunato, R. Martins, M.J. Mendes, Sunlight-driven CO₂-to-fuel conversion: Exploring thermal and electrical coupling between photovoltaic and electrochemical systems for optimum solar-methane production, *Materials Today Energy* 17 (2020) 100425. *Cited: 1*
- 21) Ana Filip, Viorica Musat, Nicolae Tigau, Silviu Polosan, Ana Pimentel, Sofia Ferreira, Daniela Gomes, Tomás Calmeiro, Rodrigo Martins, Elvira Fortunato, ZnO nanostructures grown on ITO coated glass substrate by hybrid microwave-assisted hydrothermal method, *OPTIK*, Vol. 208 (2020), UNSP 164372, DOI: 10.1016/j.ijleo.2020.164372
- 22) Emanuel Carlos, Rodrigo Martins, Elvira Maria Correia Fortunato, Rita Branquinho, Solution combustion synthesis: towards a sustainable approach for metal oxides, *Chemistry—A European Journal*, DOI: 10.1002/chem.202000678. *Cited: 7*
- 23) Emanuel Carlos, Spilios Dellis, Nikolaos Kalfagiannis, Loukas Koutsokeras, Demosthenes C Koutsogeorgis, Rita Branquinho, Rodrigo Martins, Elvira Fortunato, Laser induced ultrafast combustion synthesis of solution-based AlO_x for thin film transistors, *Journal of Materials Chemistry C*, Vol. 8 (18) (2020), pp. 6176-6184, DOI: 10.1039/d0tc01204a. *Cited: 1*
- 24) Ana Rovisco, Andreia dos Santos, Tobias Cramer, Jorge Martins, Rita Branquinho, Hugo Águas, Beatrice Fraboni, Elvira Fortunato, Rodrigo Martins, Rui Igreja, Pedro Barquinha, Piezoelectricity Enhancement of Nanogenerators Based on PDMS and ZnSnO₃ Nanowires through Microstructuration, *ACS Applied Materials & Interfaces*, Vol. 12 (16) (2020), pp. 18421-30. *Cited: 7*
- 25) Ana C. Marques, Ana R Cardoso, Rodrigo Martins, M Goreti F Sales, Elvira Fortunato, Laser-Induced Graphene-Based Platforms for Dual Biorecognition of Molecules, *ACS Applied Nano Materials*, Vol. 3(3) (2020), pp. 2795-2803. *Cited: 3*
- 26) Emanuel Carlos, Jaakko Leppäniemi, Asko Sneek, Ari Alastalo, Jonas Deuermeier, Rita Branquinho, Rodrigo Martins, Elvira Fortunato, Printed, Highly Stable Metal Oxide Thin-Film Transistors with Ultra Thin Highk Oxide Dielectric, *Advanced Electronic Materials*, Vol. 6 (3) (2020), pp. 1901071. *Cited: 14*
- 27) Pydi Ganga Bahubalindrani, Bhawna Tiwari, Maria Pereira, Ana Santa, Jorge Martins, Ana Rovisco, Vitor Tavares, Rodrigo Martins, Elvira Fortunato, Pedro Barquinha, Rail-to-Rail Timing Signals Generation Using InGaZnO TFTs For Flexible X-Ray Detector, *IEEE Journal of the Electron Devices Society*, Vol. 8 (2020), pp. 157-162. *Cited: 4*
- 28) Nuno Casa Branca, Jonas Deuermeier, Jorge Martins, Emanuel Carlos, Maria Pereira, Rodrigo Martins, Elvira Fortunato, Asal Kiazadeh, 2D Resistive Switching Based on Amorphous Zinc-Tin Oxide Schottky Diodes, *Advanced Electronics Materials*, Vol. 6(2) (2020), pp. 1900958. *Cited: 2*

- 29) Olalla Sanchez-Sobrado, Manuel J Mendes, Tiago Mateus, João Costa, Daniela Nunes, Hugo Aguas, Elvira Fortunato, Rodrigo Martins, Photonic-structured TCO front contacts yielding optical and electrically enhanced thin-film solar cells, *Solar Energy*, Vol. 196 (2020), pp. 92-98. *Cited: 2*
- 30) Sana Ullah, Rita Branquinho, Tiago Mateus, Rodrigo Martins, Elvira Fortunato, Tahir Rasheed, Farooq Sher, Solution Combustion Synthesis of Transparent Conducting Thin Films for Sustainable Photovoltaic Applications, *Sustainability*, Vol. 12 (2020), pp. 10423. *Cited: 1*
- 31) Pedro Centeno, Miguel F. Alexandre, Manuel Chapa, Joana V. Pinto, Jonas Deuermeier, Tiago Mateus, Elvira Fortunato, Rodrigo Martins, Hugo Águas, Manuel J. Mendes, Self-Cleaned Photonic-Enhanced Solar Cells with Nanostructured Parylene-C, *Advanced Materials Interfaces* (2020), pp. 2000264.
- 32) Beatriz Oliveira, Bruno Veigas, Alexandra R Fernandes, Hugo Águas, Rodrigo Martins, Elvira Fortunato, Pedro Viana Baptista, Fast Prototyping Microfluidics: Integrating Droplet Digital Lamp for Absolute Quantification of Cancer Biomarkers, *Sensors*, Vol. 6 (6) (2020), pp. 1624. *Cited: 1*
- 33) Joana Pereira Neto, Adriana Costa, Joana Vaz Pinto, André Marques-Smith, Júlio Costa, Rodrigo Martins, Elvira Fortunato, Adam Raymond Kampff, Pedro Barquinha, Transparent and flexible ECoG electrode arrays based on silver nanowire networks for neural recordings, *bioRxiv*, 2020.
- 34) P. Grey, SN Fernandes, D. Gaspar, J. Deuermeier, R. Martins, E. Fortunato, M.H. Godinho, L. Pereira, *ACS Applied Electronics Materials*, Ionically Modified Cellulose Nanocrystal Self-Assembled Films with a Mesoporous Twisted Superstructure: Polarizability and Application in Ion-Gated Transistors Vol. 2 (2) (2020), pp. 426-36, DOI: 10.1021/acsaelm.9b00652
- 35) Daniela Nunes, Tomas Freire, Andrea Barranger, João Vieira, Mariana Matias, Sonia Pereira, Ana Pimentel, Neusmar JA Cordeiro, Elvira Fortunato, Rodrigo Martins, TiO₂ Nanostructured Films for Electrochromic Paper Based-Devices, *Applied Sciences-Basel* Vol. 10 (4) (2020), pp. 1200. *Cited: 5*
- 36) José Rosa, Jonas Deuermeier, Pekka J Soinenen, Markus Bosund, Zhen Zhu, Elvira Fortunato, Rodrigo Martins, Mutsumi Sugiyama, Saoussen Merdes, Control of Eu Oxidation State in Y₂O₃:xSx: Eu Thin-Film Phosphors Prepared by Atomic Layer Deposition: A Structural and Photoluminescence Study, *Materials*, Vol. 13 (1) (2020), pp. 93. *Cited: 1*

Year 2019

- 37) Pier F Moretti, Bartosz A Grzybowski, Vasileios Basios, Elvira Fortunato, Maria Suarez Diez, Olga Speck, Rodrigo Martins, STEM materials: a new frontier for an intelligent sustainable world, *BMC Materials*, Vol. 1 (1) (2019) pp. 1-3.
- 38) Harriet E Manning, Pedro Barquinha, Wenguo Cui, Drew Evans, Emmanuel Kymakis, Haiyan Wang, Ehrenfried Zschech, Rodrigo Martins, The Launch of BMC Materials, Vol. 1 (1) (2019), 1-5
- 39) F Vieira, B Sarmiento, AS Reis-Machado, Jorge Facção, M.J. Carvalho, Manuel J. Mendes, E. Fortunato, Rodrigo Martins, Prediction of sunlight-driven CO₂ conversion: Producing methane from photovoltaics, and full system design for single-house application, *Materials Today Energy*, Vol. 14 (2019), pp. 100333. *Cited: 2*
- 40) Ana Marques, Bruno Veigas, Andreia Araújo, Beatriz Pagará, Pedro Viana Baptista, Hugo Águas, Rodrigo Martins, Elvira Fortunato, Based SeRS platform for one-Step Screening of tetracycline in Milk, *Scientific reports*, Vol. 9 (1) (2019), pp. 1-8. *Cited: 6*
- 41) Guilherme Ferreira, Sumita Goswami, Suman Nandy, Luis Pereira, Rodrigo Martins, Elvira Fortunato, Touch-Interactive Flexible Sustainable Energy Harvester and Self-Powered Smart Card, *Advanced Functional Materials*, (2019) pp. 1908994. *Cited: 5*
- 42) Paul Grey, Susete N Fernandes, Diana Gaspar, Jonas Deuermeier, Rodrigo Martins, Elvira Fortunato, Maria H Godinho, Luis Pereira, Ionically Modified Cellulose Nanocrystal Self-Assembled Films with a Mesoporous Twisted Superstructure: Polarizability and Application in Ion-Gated Transistors, *ACS Applied Electronic Materials*, 2019.
- 43) Maria João Oliveira, Miguel P. de Almeida, Daniela Nunes, Elvira Fortunato, Rodrigo Martins, Eulália Pereira, Hugh J. Byrne, Hugo Águas, Ricardo Franco, Design and Simple Assembly of Gold Nanostar Bioconjugates for Surface-Enhanced Raman Spectroscopy Immunoassays, *Nanomaterials*, Vol. 9 (11) (2019), pp. 1561. *Cited: 1*
- 44) Ehrenfried Zschech, Robert Sinclair, Rodrigo Martins, Marco Sebastiani, Sabrina Sartori, Editorial for the Special Issue "Characterization of Nanomaterials: Selected Papers from 6th Dresden Nanoanalysis Symposium", *Nanomaterials*, Vol. 9 (11) (2019), pp. 1527.

- 45) Ghisman Plescan Viorica, Viorica Musat, Ana Pimentel, Tomas R. Calmeiro, Emanuel Carlos, Liliana Baroiu, Rodrigo Martins, Elvira Fortunato, Hybrid (Ag)ZnO/Cs/PMMA nanocomposite thin films, *Journal of Alloys and Compounds*, Vol. 803, (2019), pp. 922-933, DOI: 10.1016/j.jallcom.2019.06.373. *Cited: 9*
- 46) M. Coll, J. Fontcubert, M. Althammer, M. Bibes, H. Boschker, A. Calleja, G. Cheng, M. Cuoco, R. Dittmannk, B. Dhill, I. El Baggari, M. Fanciulli, I. Fina, E. Fortunato, C. Frontera, S. Fujita, V. Garcia, S.T.B. Goennenwein, C.-G. Granqvist, J. Grollier, R. Gross, A. Hagfeldt, G. Herranz, K. Hono, E. Houwman, M. Huijben, A. Kalaboukhov, D.J. Keeble, G. Koster, L.F. Kourkoutis, J. Levy, M. Lira-Cantu, J.L. MacManus-Driscoll, Jochen Mannhart, R. Martins, S. Menzel, T. Mikolajick, M. Napari, M.D. Nguyen, G. Niklasson, C. Paillard, S. Panigrahi, G. Rijnders, F. Sánchez, P. Sanchis, S. Sanna, D.G. Schlom, U. Schroeder, K.M. Shen, A. Siemon, M. Spreitzer, H. Sukegawa, R. Tamayo, J. van den Brink, N. Pryds, F. Miletto Granozio, Towards Oxide Electronics: a Roadmap, *Applied Surface Science* 482 (2019), pp. 1–93. *Cited: 97*
- 47) Rodrigo Ferrão De Paiva Martins, Pedro Miguel Candido Barquinha, Elvira Maria Correia Fortunato, Tobias CRAMER, Beatrice Fraboni, Sensitive field effect device and manufacturing method thereof, US Patent (2019), 16349830.
- 48) Rodrigo Martins, Diana Gaspar, Luís Pereira Elvira Fortunato, Invited Paper: Designing the Future with Sustainable Multifunctional Paper Platforms, *SID Symposium Digest of Technical Papers*, Vol. 50 (2019), pp. 253-54.
- 49) Joana Figueira, Cristina Gaspar, José Tiago Carvalho, Joana Loureiro, Elvira Fortunato, Rodrigo Martins, Luís Pereira, Sustainable Fully Printed UV Sensors on Cork Using Zinc Oxide/Ethylcellulose Inks, *Micromachines*, Vol 10 (9) (2019), pp. 601. *Cited: 5*
- 50) Marco Moreira, Emanuel Carlos, Carlos Dias, Jonas Deuermeier, Maria Pereira, Pedro Barquinha, Rita Branquinho, Rodrigo Martins, Elvira Fortunato, Tailoring IGZO Composition for Enhanced Fully Solution-Based Thin Film Transistors, *Nanomaterials*, Vol. (9) (2019), pp. 1273. *Cited: 7*
- 51) Sumita Goswami, Gowra Raghupathy Dillip, Suman Nandy, Arghya Narayan Banerjee, Ana Pimentel, Sang Woo Joo, Rodrigo Martins, Elvira Fortunato, Biowaste-derived carbon black applied to polyaniline-based high-performance supercapacitor microelectrodes: Sustainable materials for renewable energy applications, *Electrochimica Acta*, Vol. 316 (2019) pp. 202-218. *Cited: 7*
- 52) Giacomo Torrisi, João S. Luis, Olalla Sanchez-Sobrado, Rosario Racitia, Manuel J. Mendes, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Antonio Terrasi, Colloidal-structured metallic micro-grids: High performance transparent electrodes in the red and infrared range, *Solar Energy Materials and Solar Cells*, Vol. 197 (2019), pp. 7-12. *Cited: 7*
- 53) Nuno Ferreira, Ana Marques, Hugo Águas, Hanna Bandarenka, Rodrigo Martins, Cristian Bodo, Bruno Costa-Silva, Elvira Fortunato, Label-free nanosensing platform for breast cancer exosome profiling, *ACS sensors*, Vol. 4 (8) (2019), pp. 2073-2083. *Cited: 11*
- 54) O. Sanches-Sobrado, M.J. Mendes, S. Haque, T. Mateus, H. Águas, E. Fortunato, R. Martins, Lightwave trapping in thin film solar cells with improved photonic-structured front contacts, *J. of Materials Chemistry. C*, Vol 7 (21), (2019), pp6456-6464, DOI 10.1039/c8tc06092d. *Cited: 9*
- 55) M. Chapa, M.F. Alexandre, M.J. Mendes, H. Aguas, E. Fortunato, R. Martins, All-Thin-Film Perovskite/C-Si Four-Terminal Tandems: Interlayer and Intermediate Contacts Optimization, *ACS Applied Energy Materials*, Vol.2 (6), (2019), pp. 3979-3985, DOI: 10.1021/acsaem.9b00354. *Cited: 7*
- 56) Ana Rovisco, Rita Branquinho, Jorge Martins, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, Growth Mechanism of Seed-Layer Free ZnSnO₃ Nanowires: Effect of Physical Parameters, *Nanomaterials*, Vol. 9 (7) (2019) pp. 1002. *Cited: 7*
- 57) M. L. Matias, D. Nunes, A. Pimentel, S. H. Ferreira, R. Borda d'Água, M. P. Duarte, E. Fortunato, and R. Martins, Paper-Based Nanoplatforms for Multifunctional Applications, *J. of Nanomaterials*, (2019) DOI: 10.1155/2019/6501923, 16 pages. *Cited: 4*
- 58) Sumita Goswami, Andreia dos Santos, Suman Nandy, Rui Igreja, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Human-motion interactive energy harvester based on polyaniline functionalized textile fibers following metal/polymer mechano-responsive charge transfer mechanism, *Nano Energy* 60 (2019), pp. 794–801. *Cited: 5*
- 59) P. Grey, S.N. Fernandes, D. Gaspar, E. Fortunato, R. Martins, M.H. Godinho, L. Pereira, Field-Effect Transistors on Photonic Cellulose Nanocrystal Solid Electrolyte for Circular Polarized Light Sensing, *Advanced Functional Materials*, Vol. 29 (21), (2019), art^o 1805279, DOI: 10.1002/adfm.201805279. *Cited: 13*

- 60) M. Alexandre, M. Chapa, S. Haque, M.J. Mendes, H. Águas, E. Fortunato, R. Martins, Optimum Luminescent Down-Shifting Properties for High Efficiency and Stable Perovskite Solar Cells, *ACS Applied Energy Materials*, Vol. 2 (4), (2019), pp. 2930-2938, DOI: 10.1021/acsaem.9b00271. *Cited: 13*
- 61) Daniela Gomes, Ana Pimentel, Alexandra Gonçalves, Sonia Pereira, Rita Branquinho, Pedro Barquinha, Elvira Fortunato, Rodrigo Martins, Metal oxide nanostructures for sensor applications, *Semiconductor Science and Technology*, Vol 34 (4), (2019), art. 043001, DOI: 10.1088/1361-6641/ab011e. *Cited: 43*
- 62) A. dos Santos, N. Pinela, P. Alves, R. Santos, R. Farinha, E. Fortunato, R. Martins, H. Águas, R. Igreja, E-Skin Bimodal Sensors for Robotics and Prosthesis Using PDMS Molds Engraved by Laser, *Sensors*, Vol. 19 (4), (2019), art. 899, DOI: 10.3390/s19040899.
- 63) Maria João Brites, Maria Alexandra Barreiros, Victoria Corregidor, Luis Cerqueira Alves, Joana Vaz Pinto, Manuel Joao Mendes, Elvira Fortunato, Rodrigo Martins, João Mascarenhas, Ultra-Fast Low-Temperature Crystallization of Solar Cell Graded Formamidinium-Cesium Mixed-Cation Lead Mixed-Halide Perovskites Using a Reproducible Microwave-Based Process, *ACS Applied Energy Materials*, 2019, DOI: 10.1021/acsaem.8b02005. *Cited: 5*
- 64) CF Wang, HT Zhu, Y Meng, SB Nie, YN Zhao, B Shin, E. Fortunato, R. Martins, FK Shan, GX Liu, Sol-Gel Processed p-Type CuAlO₂ Semiconductor Thin Films and the Integration in Transistors, *IEEE Transactions on El. Devices*, Vol 66 (3), (2019), pp. 1458-1463, DOI: 10.1109/TED.2019.2893453.
- 65) B. Tiwari, PG Bahubalindrani, A. Santa, J. Martins, P. Mittal, J. Goes, R. Martins, E. Fortunato, P. Barquinha, Oxide TFT Rectifiers on Flexible Substrates Operating at NFC Frequency Range, *IEEE Journal of the Electron Devices Society*, Vol. 7 (1), (2019), pp. 329-334. *Cited: 7*
- 66) Raquel Barros, Kachirayil J Saji, João C Waerenborgh, Pedro Barquinha, Luís Pereira, Emanuel Carlos, Rodrigo Martins, Elvira Fortunato, Role of Structure and Composition on the Performances of P-Type Tin Oxide Thin-Film Transistors Processed at Low-Temperatures, *Nanomaterials*, Vol. 9 (2) (2019), pp. 320. *Cited: 13*
- 67) Bruno P. Falcão, Joaquim P. Leitão, Maria R. Soares, Lídia Ricardo, Hugo Águas, Rodrigo Martins, and Rui N. Pereira, Oxidation and Strain in Free-standing Silicon Nanocrystals, *Physical Review Applied*, Vol. 11, (2019), 024054. *Cited: 7*
- 68) Cinthia Alves-Barroco, Catarina Roma-Rodrigues, Natesan Balasubramanian, Marcia Aparecida Guimarães, Bernadete T Ferreira-Carvalho, Jayaraman Muthukumar, Daniela Nunes, Elvira Fortunato, Rodrigo Martins, Teresa Santos-Silva, Agnes MS Figueiredo, Alexandra R Fernandes, Ilda Santos-Sanches, Biofilm development and computational screening for new putative inhibitors of a homolog of the regulatory protein BrpA in *Streptococcus dysgalactiae* subsp. *Dysgalactiae*, *International Journal of Medical Microbiology*, 2019, DOI: 10.1016/j.ijmm.2019.02.001.
- 69) Shrabani Panigrahi, Santanu Jana, Tomás Calmeiro, Daniela Nunes, Jonas Deuermeier, Rodrigo Martins, Elvira Fortunato, Mapping the space charge carrier dynamics in plasmon-based perovskite solar cells, *Journal of Materials Chemistry A*, Vol. 7 (34) (2019) pp. 19811-19819. *Cited: 8*
- 70) Sirazul Haque, Manuel J Mendes, Olalla Sanchez-Sobrado, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Photonic-structured TiO₂ for high-efficiency, flexible and stable Perovskite solar cells, *Nano Energy*, 2019, Vol. 59 (2019), pp. 91-101, DOI: 10.1016/j.nanoen.2019.02.023. *Cited: 43*
- 71) Chunfeng Wang, Haotian Zhu, You Meng, Shengbin Nie, Yuna Zhao, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins, Fukai Shan, Guoxia Liu, Sol-Gel Processed p-Type CuAlO₂ Semiconductor Thin Films and the Integration in Transistors, *IEEE Transactions on Electron Devices*, 2019. *Cited: 10*
- 72) J Deuermeier, A Kiazadeh, A Klein, R Martins, E Fortunato, Multi-Level Cell Properties of a Bilayer Cu₂O/Al₂O₃ Resistive Switching Device, *Nanomaterials* Vol. 9 (2), (2019), pp. 289. *Cited: 11*
- 73) D Nunes, A Pimentel, M Matias, T Freire, A Araújo, F Silva, P Gaspar, S. Patrícia, P.A. Carvalho, E. Fortunato, R. Martins, Tailoring Upconversion and Morphology of Yb/Eu Doped Y₂O₃ Nanostructures by Acid Composition Mediation, *Nanomaterials* Vol. 9 (2), (2019), pp. 234. *Cited: 7*
- 74) José Tiago Carvalho, Viorel Dubceac, Paul Grey, Inês Cunha, Elvira Fortunato, Rodrigo Martins, Andre Clausner, Ehrenfried Zschech, Luís Pereira, Fully Printed Zinc Oxide Electrolyte-Gated Transistors on Paper, *Nanomaterials* Vol. 9 (2), (2019), pp. 169. *Cited: 10*
- 75) A.R. Cardoso, A.C. Marques, L. Santos, A.F. Carvalho, F.M. Costa, R. Martins, M.G.F. Sales, E. Fortunato, Molecularly-imprinted chloramphenicol sensor with laser-induced graphene electrodes, *Biosensors & Bioelectronics*, Vol. 124 (2019), pp. 167-175, DOI: 10.1016/j.bios.2018.10.015. *Cited: 40*

Year 2018

- 76) AF Carvalho, AJS Fernandes, C Leitao, J Deuermeier, AC Marques, R Martins, E Fortunato, FM Costa, Laser-Induced Graphene Strain Sensors Produced by Ultraviolet Irradiation of Polyimide, *Advanced Functional Materials*, Vol. 28, (52), (2018) article, 1805271, DOI: 10.1002/adfm.201805271. *Cited: 54*
- 77) D. Gaspar, J. Martins, P. Bahubalindrani, L. Pereira, E. Fortunato, R. Martins, Planar Dual-Gate Paper/Oxide Field Effect Transistors as Universal Logic Gates, *Advanced Electronics Materials*, Vol. 4 (12),(2018), 1800423. DOI: 10.1002/aelm.201800423. *Cited: 11*
- 78) A. Samouco, AC Marques, A. Pimentel, R. Martins, E. Fortunato, Laser-induced electrodes towards low-cost flexible UV ZnO sensors, *Flexible and Printed Electronics*, Vol. 3 (4) (2018), 044002, DOI: 10.1088/2058-8585/aaed77. *Cited: 15*
- 79) Youchao Cui, Youchao Cui, Youchao Cui, You Meng, You Meng, You Meng, Zhen Wang, Zhen Wang, Zhen Wang, Chunfeng Wang, Chunfeng Wang, Chunfeng Wang, Guoxia Liu, Guoxia Liu, Guoxia Liu, Guoxia Liu, Rodrigo Martins, Elvira Fortunato, Fukai Shan, High performance electronic devices based on nanofibers: Via a crosslinking welding process, *Nanoscale*, vol. 10, issue 41, (2018), p. 19427-19434. *Cited: 7*
- 80) A. Araujo, MJ Mendes, T Mateus, J. Costa, D. Nunes, E. Fortunato, H. Águas, R. Martins, Ultra-fast plasmonic back reflectors production for light trapping in thin Si solar cells, *Solar Energy*, Vol. 174 (2018), pp. 786-792, DOI: 10.1016/j.solener.2018.08.068. *Cited: 14*
- 81) D. Nunes, A. Pimentel, A. Araújo, T.R. Calmeiro, S. Panigrahi, J.V. Pinto, P. Barquinha, M. Gama, E. Fortunato, R. Martins, Enhanced UV Flexible Photodetectors and Photocatalysts Based on TiO₂ Nanoplatfoms, *Topics in Catalysis*, Vol. 61 (15-17), (2018), pp. 1591-1606, DOI: 10.1007/s11244-018-0968-4. *Cited: 10*
- 82) Andreia dos Santos, Nuno Pinela, Pedro Alves, Rodrigo Santos, Elvira Fortunato, Rodrigo Martins, Hugo Águas, Rui Igreja E-Skin Sensors: Piezoresistive E-Skin Sensors Produced with Laser Engraved Moulds, *Adv. Electron. Mater.* Vol. 4 (9) (2018), p 1870041. *Cited: 29*
- 83) Rodrigo Martins, Diana Gaspar, Manuel J. Mendes, Luis Pereira, Jorge Martins, Pydi Bahubalindrani, Pedro Barquinha, Elvira Fortunato, Papertronics: Multigate paper transistor for multifunction applications, *Applied Materials Today* 12, (2018) pp. 402-414. *Cited: 21*
- 84) Sana Ullah, Rita Branquinho, Ana Santa, Gonçalo Golçalves, Ivan Davoli, Fabio de Matteis, Rodrigo Martins, Elvira Fortunato, boosting highly transparent and conducting indium zinc oxide thin films through solution combustion synthesis: influence of rapid thermal annealing, *Semiconductor Science and Technology*, Vol. 33 (10), (2018), 105004. DOI:10.1088/1361-6641/aad5cc. *Cited: 8*
- 85) Jonas Deuermeier, Hongjun Liu, Laetitia Rapenne, Tomás Calmeiro, Gilles Renou, Rodrigo Martins, David Muñoz-Rojas, Elvira Fortunato, Visualization of nanocrystalline CuO in the grain boundaries of Cu₂O thin films and effect on band bending and film resistivity, *APL Materials*, Vol. 6 (9), (2018), p 096103. *Cited: 12*
- 86) F. Neves, A Stark, N Schell, MJ Mendes, H Aguas, E Fortunato, R Martins, JB Correia, A Joyce, Investigation of single phase Cu₂ZnSn_xSb_{1-x}S₄ compounds processed by mechanochemical synthesis, *Phys. Rev. Materials* 2, (2018), 075404. *Cited: 2*
- 87) Ana Rovisco, Rita Branquinho, Jorge Martins, Maria João Oliveira, Daniela Nunes, Elvira Fortunato, Rodrigo Martins, Pedro Barquinha, Seed-layer free zinc tin oxide tailored nanostructures for nanoelectronic applications: effect of chemical parameters, *ACS Applied Nano Materials*, 2018, DOI: 10.1021/acsanm.8b00743. *Cited: 11*
- 88) Pydi Bahubalindrani, Jorge Martins, Ana Santa, Vitor Tavares, Rodrigo Martins, Elvira Fortunato, Pedro Barquinha, High-Gain Transimpedance Amplifier for Flexible Radiation Dosimetry Using InGaZnO TFTs, *IEEE Journal of the Electron Devices Society*, Vol 6 (2018), pp. 760-765. *Cited: 17*
- 89) Emanuel Carlos, Asal Kiazadeh, Jonas Deuermeier, Rita Branquinho, Rodrigo Martins, Elvira Fortunato, Critical role of a double-layer configuration in solution-based unipolar resistive switching memories, *Nanotechnology*, Vol 29, 34 (2018). *Cited: 13*
- 90) Tobias Cramer, Ilaria Fratelli, Pedro Barquinha, Ana Santa, Cristina Fernandes, Franck D'Annunzio, Christophe Loussert, Rodrigo Martins, Elvira Fortunato, Beatrice Fraboni, Passive radiofrequency x-ray dosimeter tag based on flexible radiation-sensitive oxide field-effect transistor, *Sci. Adv.* 4, 2018; eaat1825. *Cited: 7*
- 91) You Meng, Ao Liu, Zidong Guo, Guoxia Liu, Byoungchul Shin, Yong-Young Noh, Elvira Fortunato, Rodrigo Martins, Fukai Shan, Electronic Devices Based on Oxide Thin Films Fabricated by Fibers-to-film Process, *ACS Applied Materials & Interfaces*, Vol. 10 (21), (2018), pp. 18057-18065. *Cited: 6*

- 92) Manuel J Mendes, Sirazul Haque, Olalla Sanchez-Sobrado, Andreia Araújo, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Optimal-Enhanced Solar Cell Ultra-thinning with Broadband Nanophotonic Light Capture, *Science*, Vol. 3 (2018), pp 238-254. *Cited: 16*
- 93) L Zhu, G He, J Lv, E Fortunato, R Martins, Fully solution-induced high-performance indium oxide thin film transistors with ZrO₂ x high-k gate dielectrics, *RSC Advances* 8 (30), (2018), 16788-16799. *Cited: 22*
- 94) L Zhu, G He, W Li, B Yang, E Fortunato, R Martins, Nontoxic, Eco-friendly Fully Water-Induced Ternary Zr–Gd–O Dielectric for High-Performance Transistors and Unipolar Inverters, *Advanced Electronic Materials* 4 (5), (2018), 1800100. *Cited: 22*
- 95) Cristina Fernandes, Ana Santa, Ângelo Santos, Pydi Bahubalindrani, Jonas Deuermeier, Rodrigo Martins, Elvira Fortunato, Pedro Barquinha, A Sustainable Approach to Flexible Electronics with Zinc, Tin Oxide Thin, Film Transistors, *Advanced Electronic Materials*, (2018), 1800032. *Cited: 43*
- 96) A Liu, H Zhu, G Liu, YY Noh, E Fortunato, R Martins, F Shan, Draw Spinning of Wafer-Scale Oxide Fibers for Electronic Devices, *Advanced Electronic Materials*, (2018), 1700644. *Cited: 9*
- 97) António T. Vicente, Andreia Araújo, Manuel J Mendes, Daniela Nunes, Maria J Oliveira, Olalla Sanchez-Sobrado, Marta P Ferreira, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Multifunctional cellulose-paper for light harvesting and smart sensing applications, *Journal of Materials Chemistry C* 6 (13), (2018), pp. 3143-3181. *Cited: 77*
- 98) Sumita Goswami, Suman Nandy, Jonas Deuermeier, Ana C Marques, Daniela Nunes, Shashikant P Patole, Pedro MFJ Costa, Rodrigo Martins, Elvira Fortunato, Green Nanotechnology from Waste Carbon–Polyaniline Composite: Generation of Wavelength-Independent Multiband Photoluminescence, for sensitive Ion Detection, *Advanced Sustainable Systems* 2 (1), 2018, 1700137, <https://doi.org/10.1002/adsu.201870002>. *Cited: 7*
- 99) H. Ben Wannes, R Benabderrahmane Zaghoulani, R Ouertani, A Araújo, MJ Mendes, H Aguas, E Fortunato, R Martins, W Dimassi, Study of the stabilizer influence on the structural and optical properties of sol-gel spin coated zinc oxide films, *Materials Science in Semicond. Processing*, Vol 74 (2018), pp. 80-87, DOI: 10.1016/j.mssp.2017.10.017. *Cited: 14*
- 100) R.B. d' Agua, R. Branquinho, MP Duarte Duarte, ME. Mauricio, AL Fernando, R. Martins, E. Fortunato, Efficient coverage of ZnO nanoparticles on cotton fibres for antibacterial finishing using a rapid and low cost in situ synthesis, *New Journal of Chemistry*, Vol. 42 (2) (2018), pp. 1052-1060, DOI: 10.1039/c7nj03418k. *Cited: 23*
- 101) P.U. Alves, R. Vinhas, AR Fernandes, SZ Birol, L Trabzon, I. Bernacka-Wojcik, R. Igreja, P. Lopes, PV Baptista, H. Aguas, E. Fortunato, R. Martins, Multifunctional microfluidic chip for optical nanoprobe based RNA detection - application to Chronic Myeloid Leukemia, *Scientific Reports*, Vol. 2 (2018), article 381 DOI: 10.1038/s41598-017-18725-9. *Cited: 10*
- 102) Pedro M. P. Salomé, Bart Vermang, Rodrigo Ribeiro-Andrade, Jennifer P. Teixeira, José M. V. Cunha, Manuel J. Mendes, Sirazul Haque, Jérôme Borme, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Juan C. González, Joaquim P. Leitão, Paulo A. Fernandes, Marika Edoff, and Sascha Sadewasser, Passivation of Interfaces in Thin Film Solar Cells: Understanding the Effects of a Nanostructured Rear Point Contact Layer, *Advanced Materials Interfaces*, article number 1701101, 2018, DOI: 10.1002/admi.201701101. *Cited: 45*
- 103) Víctor Martín, Vanessa Gonçalves, Soraya Rodríguez-Rojo, Daniela Nunes, Elvira Fortunato, Rodrigo Martins, María José Cocero, Catarina Duarte, Production of copper loaded lipid microparticles by PGSS (particles from gas saturated solutions) process, *Journal of Supercritical Fluids* Vol. 131 (2018), pp. 124–129. *Cited: 5*
- 104) S. Panigrahi, T. Calmeiro, R.M artins, E. Fortunato, E (Fortunato, Elvira), Light-induced current mapping in oxide based solar cells with nanoscale resolution, *Solar Energy Materials and Solar Cells*, Vol. 176 (2018), pp. 310-317, DOI: 10.1016/j.solmat.2017.10.012. *Cited: 1*

Year 2017

- 105) S. Goswami, S. Nandy, AN Banerjee, A. Kiazadeh, GR Dillip, JV. Pinto, SW Joo, R. Martins, E. Fortunato, Electro-Typing" on a Carbon-Nanoparticles-Filled Polymeric Film using Conducting Atomic Force Microscopy, *Advanced Materials*, Vol. 47 (47), (2017), article 1703079, DOI: 10.1002/adma.201703079. *Cited: 8*

- 106) A. Pimentel, A. Araujo, BJ Coelho, D. Nunes, MJ Oliveira, MJ Mendes, H. Aguas, R. Martins, E. Fortunato, 3D ZnO/Ag Surface-Enhanced Raman Scattering on Disposable and Flexible Cardboard Platforms, *Materials*, Vol. 10(12), (2017), article nº 1351. *Cited: 20*
- 107) Jose Rosa, Asal Kiazadeh, Lídia Santos, Jonas Deuermeier, Rodrigo Martins, Henrique Leonel Gomes, Elvira Fortunato, Memristors Using Solution-Based IGZO Nanoparticles, *ACS Omega*, Vol. 2 (2017), pp. 8366-8372. *Cited: 19*
- 108) Shrabani Panigrahi, Santanu Jana, Tomás Calmeiro, Daniela Nunes, Rodrigo Martins, and Elvira Fortunato, Imaging the Anomalous Charge Distribution Inside CsPbBr₃ Perovskite Quantum Dots Sensitized Solar Cells, *ACS Nano*, Vol 11 (2017), pp. 10214-10221, DOI: 10.1021/acsnano.7b04762, 2017.
- 109) Sumita Goswami, Suman Nandy, Jonas Deuermeier, Ana C. Marques, Daniela Nunes, Shashikant P. Patole, Pedro M. F. J. Costa, Rodrigo Martins, and Elvira Fortunato, Green Nanotechnology from Waste Carbon–Polyaniline Composite: Generation of Wavelength-Independent Multiband Photoluminescence for Sensitive Ion Detection, *Adv. Sustainable Syst.* 2017, 1700137, DOI: 10.1002/adsu.201700137.
- 110) E. Carlos, R. Branquinho, A. Kiazadeh, J. Martins, P. Barquinha, R. Martins, E. Fortunato, Boosting Electrical Performance of High-kappa Nanomultilayer Dielectrics and Electronic Devices by Combining Solution Combustion Synthesis and UV Irradiation, *ACS Appl. Materials & Interfaces*, Vol. 9 (46), (2017), pp. 40428-40437, DOI: 10.1021/acsmi.7b11752. *Cited: 34*
- 111) Shrabani Panigrahi, Santanu Jana, Tomás Calmeiro, Daniela Nunes, Rodrigo Martins, and Elvira Fortunato, Imaging the Anomalous Charge Distribution Inside CsPbBr₃ Perovskite Quantum Dots Sensitized Solar Cells, *ACS Nano*, Vol 11 (2017), pp. 10214-10221, DOI: 10.1021/acsnano.7b04762, 2017.
- 112) A Lyubchik, H Águas, E Fortunato, R Martins, O Lygina, S Lyubchik, N Mohammadi, E Lähderanta, AS Doroshkevich, T Konstantinova, I Danilenko, O Gorban, A Shylo, VK Ksenevich, NA Poklonski, Experimental Evidence for Chemo-Electronic Conversion of water Adsorption on the Surface of the Nanosized Yttria Stabilized Zirconia, *Physics, Chemistry and Application of Nanostructures: Reviews and Short Notes to Nanomeeting (2017)*, pp. 257-262. *Cited: 4*
- 113) BJ Coelho, B. Veigas, H. Aguas, E. Fortunato, R. Martins, PV Baptista, R. Igreja, A Digital Microfluidics Platform for Loop-Mediated Isothermal Amplification Detection, *Sensors*, Vol. 17 (11) (2017), article 2616. *Cited: 13*
- 114) Sara Maroufa, Abdelkrim Beniaiche, Kasra Kardarian, Manuel J. Mendes, Olalla Sanchez-Sobrado, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Low-temperature spray-coating of high-performing ZnO:Al films for transparent electronics, *Journal of Analytical and Applied Pyrolysis* Vol. 127 (2017) pp. 299–308. *Cited: 15*
- 115) A. Liu, HH Zhu, ZDGuo, Y. Meng, GX Liu, E. Fortunato, R. Martins, FK Shan, Solution Combustion Synthesis: Low-Temperature Processing for p-Type Cu:NiO Thin Films for Transparent Electronics, *Adv. Materials*, Vol. 29 (34), (2017), article nº: 1701599. *Cited: 88*
- 116) M. Smeets, K. Wilken, K. Bittkau, H. Aguas, L. Pereira, E. Fortunato, R. Martins, V. Smirnov, Flexible thin film solar cells on cellulose substrates with improved light management, *Phys. Status Solidi A*, Vol 214, (2017), art. 1700070, DOI: 10.1002/pssa.201700070. *Cited: 14*
- 117) Olalla Sanchez-Sobrado, Manuel J. Mendes, Sirazul Haque, Tiago Mateus, Andreia Araujo, Hugo Aguas, Elvira Fortunato and Rodrigo Martins, Colloidal-lithographed TiO₂ photonic nanostructures for solar cell light trapping, *Journal of Materials Chemistry C*, Vol. 5 (27) (2017), pp. 6852-6861, DOI: 10.1039/c7tc01756a. *Cited: 30*
- 118) Beatriz Coelho, Bruno Veigas, Elvira Fortunato, Rodrigo Martins, Hugo Águas, Rui Igreja and Pedro V. Baptista, Digital Microfluidics for Nucleic Acid Amplification, *Sensors*, 17, 1495 (2017), doi: 10.3390/s17071495. *Cited: 26*
- 119) A. Pimentel, A. Samouco, D. Nunes, A. Araujo, R. Martins, E. Fortunato, Ultra-Fast Microwave Synthesis of ZnO Nanorods on Cellulose Substrates for UV Sensor Applications, *Materials*, Vol. 10 (11) (2017), article nº 1308. DOI: 10.3390/ma10111308. *Cited: 36*
- 120) Jorge Martins, Pydi Bahubalindrani, Ana Rovisco, Asal Kiazadeh, Rodrigo Martins, Elvira Fortunato and Pedro Barquinha, Bias Stress and Temperature Impact on InGaZnO TFTs and Circuits, *Materials*, 10, (2017), 680; DOI:10.3390/ma10060680. *Cited: 16*
- 121) Maria João Oliveira, Pedro Quesada, Miguel Peixoto de Almeida, Andreia Araújo, Eulália Pereira, Elvira Fortunato, Rodrigo Martins, Ricardo Franco, Hugo Águas, Office paper decorated with silver

- nanostars-an alternative cost effective platform for trace analyte detection by SERS, *Scientific Reports*, Vol. 7 (2017), pp. 1-14. *Cited 44*
- 122) I Cunha, R Barras, P Grey, D Gaspar, E Fortunato, R Martins, L Pereira, Reusable Cellulose-Based Hydrogel Sticker Film Applied as Gate Dielectric in Paper Electrolyte-Gated Transistors, *Advanced Functional Materials* 27 (16) (2017), 1606755. *Cited: 42*
 - 123) P. Grey, D. Gaspar, I. Cunha, R. Barras, JT Carvalho, José Tiag, JR Ribas, Joao Rafael, E. Fortunato, R. Martins, L. Pereira, Handwritten Oxide Electronics on Paper, *Advanced, Materials, Technologies*, Vol. 2 (6), (2017), article nº1700009, DOI: 10.1002/admt.201700009. *Cited: 18*
 - 124) A. Araujo, A. Pimentel, M.J. Oliveira, M.J. Mendes, R. Franco, E. Fortunato, H. Águas, R. Martins, Direct growth of plasmonic nanorod forests on paper substrates for low-cost flexible 3D SERS platforms, *Flexible and Printed Electronics*, Vol. 2 (1), (2017), article nº 0140016.
 - 125) R. Barras, I. Cunha, D. Gaspar, E. Fortunato, R. Martins, L. Pereira, Printable cellulose-based electroconductive composites for sensing elements in paper electronics, *Flexible and Printed Electronics*, Vol. 2 (1), (2017), article nº 014006. DOI: 10.1088/2058-8585/aa5ef9. *Cited: 40*
 - 126) Pydi Ganga Bahubalindrani, Vítor Grade Tavares, Rodrigo Martins, Elvira Fortunato, and Pedro Barquinha, A Low-Power Analog Adder and Driver Using a-IGZO TFTs *IEEE Transactions on Circuits and Systems*, Vol. 64, (5) (2017), pp. 1118-1125. *Cited: 8*
 - 127) B. Veigas, J. Pinto, R. Vinhas, T. Calmeiro, R. Martins, E. Fortunato, PV Baptista, Quantitative real-time monitoring of RCA amplification of cancer biomarkers mediated by a flexible ion sensitive platform, *Biosensors & Bioelectronics*, Vol. 91, (2017), pp. 788-795. *Cited: 9*
 - 128) D. Gaspar, L. Pereira, K. Gehrke, B. Galler, E. Fortunato, R. Martins, High mobility hydrogenated zinc oxide thin films, *Solar Energy Materials and Solar Cells*, Vol. 163(2017), pp. 255-262. *Cited: 63*
 - 129) Ao Liu, Shengbin Nie, Guoxia Liu, Huihui Zhu, Chundan Zhu, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins and Fukai Shan, In situ one-step synthesis of p-type copper oxide for low-temperature, solution-processed thin-film transistors, *J. Mater. Chem. C*, 5 (2017), pp. 2524-2530. *Cited: 41*
 - 130) Tiago Pardal, Sofia Messias, Margarida Sousa, Ana S. Reis Machado, Carmen M. Rangel, Daniela Nunes, Joana V. Pinto, Rodrigo Martins, Manuel Nunes da Ponte, Syngas production by electrochemical CO₂ reduction in an ionic liquid based-electrolyte, *Journal of CO₂ Utilization*, 18, (2017), pp. 62–72; doi.org/10.1016/j.jcou.2017.01.007. *Cited: 33*
 - 131) António T. Vicente, Pawel J. Wojcik, Manuel J. Mendes, Hugo Águas, Elvira Fortunato, Rodrigo Martins, A statistics modelling approach for the optimization of thin film photovoltaic devices, *Solar Energy* 144 (2017) pp. 232–243. *Cited: 10*
 - 132) D. Nunes, A. Pimentel, L. Santos, P. Barquinha, E. Fortunato, R. Martins, Photocatalytic TiO₂ Nanorod Spheres and Arrays Compatible with Flexible Applications, *Catalysts*, Vol. 7 (2) (2017), article 60. *Cited: 44*
 - 133) S. Panigrahi, D. Nunes, T. Calmeiro, K. Kardarian, R. Martins, E. Fortunato, Oxide-Based Solar Cell: Impact of Layer Thicknesses on the Device Performance, *ACS Combinatorial Science*, Vol. 19 (2) (2017), pp. 113-120. *Cited: 14*
 - 134) Ao Liu, Zidong Guo, Guoxia Liu, Chundan Zhu, Huihui Zhu, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins, and Fukai Shan, Redox Chloride Elimination Reaction: Facile Solution Route for Indium-Free, Low-Voltage, and High-Performance Transistors, *Adv. Electron. Mater.* 3, (2017), article number 1600513. *Cited: 41*
 - 135) J. Socratous, S. Watanabe, K.K. Banger, C.N. Warwick, R. Branquinho, P. Barquinha, R. Martins, E. Fortunato, H.Sirringhaus, Energy-dependent relaxation time in quaternary amorphous oxide semiconductors probed by gated Hall effect measurements, *Physical Review B*, 95 (4), 045208 (2017), DOI: 10.1103/PhysRevB.95.045208. *Cited: 9*
 - 136) Jonas Deuermeier, Elvira Fortunato, Rodrigo Martins, and Andreas Klein, Energy band alignment at the nanoscale, *Applied Physics Letters*, 110, (2017), 051603. *Cited: 1*
 - 137) D. Salgueiro, A. Kiazadeh, R. Branquinho, L. Santos, P. Barquinha, R. Martins, E. Fortunato, Solution based zinc tin oxide TFTs: the dual role of the organic solvent, *J. of Physics D*, Vol. 50 (6), (2017), article 065106. *Cited: 19*
 - 138) Andreia Araújo, Ana Pimentel, Maria João Oliveira, Manuel J Mendes, Ricardo Franco, Elvira Fortunato, Hugo Águas and Rodrigo Martins, Direct growth of plasmonic nanorod forests on paper substrates foR low-cost flexible 3D SERS platforms, *Flex. Print. Electron* 2 (2017), article 014001 doi:10.1088/2058-8585/2/1/014001. *Cited: 31*

Year 2016

- 139) Oana Moldovan, Alejandra Castro-Carranza, Antonio Cerdeira, Magali Estrada, Pedro Barquinha, Rodrigo Martins, Elvira Fortunato, Slobodan Miljkovic, Benjamin Iñiguez, A compact model and direct parameters extraction techniques for amorphous gallium-indium-zinc-oxide thin film transistors, *Solid-State Electronics*, Vol. 126 (2016), pp. 81-86. *Cited: 16*
- 140) FM Pereira, I. Bernacka-Wojcik, RSR Ribeiro, MT Lobato, E. Fortunato R. Martins, R. Igreja, PAS Jorge, H. Aguas, AMG Oliva, Hybrid Microfluidic Platform for Multifactorial Analysis Based on Electrical Impedance, Refractometry, Optical Absorption and Fluorescence, *Micromachines*, 7 (10) (2016), article nº 181, DOI: 10.3390/mi7100181. *Cited: 1*
- 141) CD Zhu, A. Liu, GX Liu, GX Jiang, Y. Meng, E. Fortunato, R. Martins, FK. Shan, Low-temperature, nontoxic water-induced high-k zirconium oxide dielectrics for low-voltage, high-performance oxide thin-film transistors, *J. of Materials Chemistry C*, 4 (45) (2016), pp. 10715-10721; DOI: 10.1039/c6tc02607a. *Cited: 53*
- 142) D. Nunes, A. Pimentel, JV Pinto, TR Calmeiro, S. Nandy, P. Barquinha, L. Pereira, PA Carvalho, E. Fortunato, R. Martins, Photocatalytic behavior of TiO₂ films synthesized by microwave irradiation, *Catalysis Today*, "78 (2016), pp. 262-270, DOI: 10.1016/j.cattod.2015.10.038. *Cited: 19*
- 143) E. Carlos, R. Branquinho, A. Kiazadeh, P. Barquinha, R. Martins, E. Fortunato, UV-Mediated Photochemical Treatment for Low-Temperature Oxide-Based Thin-Film Transistors, *ACS Applied Materials and Interfaces*, 8 (45) (2016) pp. 31100-31108; DOI: 10.1021/acsami.6b06321. *Cited: 47*
- 144) M. Lorenz, M.S. R Rao, T. Venkatesan, E. Fortunato, P. Barquinha, R. Branquinho, D. Salgueiro, R. Martins, E. Carlos, A. Liu, F.K. Shan, M. Grundmann, H. Boschker, J. Mukherjee, M. Priyadarshini, N. DasGupta, D.J. Rogers, F.H. Teherani, E.V. Sandana, P. Bove, K. Rietwyk, A. Zaban, A. Veziridis, A. Weidenkaff, M. Muralidhar, M. Murakami, S. Abel, J. Fompeyrine, J. Zuniga-Perez, R. Ramesh, N.A. Spaldin, S. Ostanin, V. Borisov, I. Mertig, V. Lazenka, G. Srinivasan, W. Prellier, M. Uchida, M. Kawasaki, R. Pentcheva, P. Gegenwart, F.M. Granozio, J. Fontcuberta, N. Pryds, The 2016 oxide electronic materials and oxide interfaces roadmap, *J. of Physics D- Applied Physics*, 49, (43), art number 433001 (2016), DOI: 10.1088/0022-3727/49/43/433001. *Cited: 212*
- 145) Guixia Jiang, Ao Liu, Guoxia Liu, Chundan Zhu, You Meng, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins and Fukai Shan, Solution-processed high-k magnesium oxide dielectrics for low-voltage oxide thin-film transistors, *Appl. Phys. Lett.* 109, 183508 (2016); <http://dx.doi.org/10.1063/1.4966897>. *Cited: 36*
- 146) P. Grey, L. Pereira, S. Pereira, P. Barquinha, I. Cunha, R. Martins, E. Fortunato, Solid State Electrochemical WO₃ Transistors with High Current Modulation, *Advanced Electronic Materials*, Vol. 2 (9), (2016), artº nº 1500414. *Cited: 14*
- 147) A. Liu, GX Liu, CD Zhu, HH Zhu, E. Fortunato, R. Martins, FK Shan, Solution-Processed Alkaline Lithium Oxide Dielectrics for Applications in n- and p-Type Thin-Film Transistors, *Advanced Electronic Materials*, Vol. 2 (9), (2016), artº nº 1600140. *Cited: 36*
- 148) Andriy Lyubchik, António Vicente, Pedro U Alves, Bruno Catela, Bertrand Soule, Tiago Mateus, Manuel J Mendes, Hugo Águas, Elvira Fortunato, Rodrigo Martins, Influence of post-deposition annealing on electrical and optical properties of ZnO-based TCOs deposited at room temperature *Journal physica status solidi (a)* Vol. 213 (2016), pp. 2317-2328. *Cited: 20*
- 149) J.W Jin, A. Nathan, P. Barquinha, L. Pereira, E. Fortunato, R. Martins, B. Cobb, Interpreting anomalies observed in oxide semiconductor TFTs under negative and positive bias stress *AIP Advances*, Vol 6 (8) (2016), article 085321, DOI: 10.1063/1.4962151. *Cited: 12*
- 150) Ana Pimentel, Daniela Nunes, Sónia Pereira, Rodrigo Martins, Elvira Fortunato, Photocatalytic activity of TiO₂ nanostructured arrays prepared by microwave-assisted solvothermal method, *Semiconductor Photocatalysis: Materials, Mechanisms and Applications* (2016), pp. 81-103. *Cited: 10*
- 151) A. Kiazadeh, H. Gomes, P. Barquinha, J. Martins, A. Rovisco, J.V. Pinto, R. Martins, E. Fortunato, Improving positive and negative bias illumination stress stability in parylene passivated IGZO transistors, *Applied Physics Letters*, Vol 109 (5), article nº 051606 (2016). *Cited: 34*
- 152) A. Araujo, M. Mendes, T. Mateus, A. Vicente, D. Nunes, T. Calmeiro, E. Fortunato, H. Aguas, R. Martins, Influence of the Substrate on the Morphology of Self-Assembled Silver Nanoparticles by Rapid Thermal Annealing, *J. of Physical Chemistry C*, Vol 120 (32) (2016), pp. 18235-18242. *Cited: 33*

- 153) T. Cramer, A. Sacchetti, M.T. Lobato, P. Barquinha, V. Fischer, M. Benwadih, J. Bablet, E. Fortunato, R. Martins, B. Fraboni, Radiation-Tolerant Flexible Large-Area Electronics Based on Oxide Semiconductors, *Advanced Electronics Materials*, Vol. 2 (7), (2016), article number 1500489. *Cited: 19*
- 154) Mariana Oliveira, Dawei Liang, Joana Almeida, Cláudia R. Vistas, Filipe Gonçalves, Rodrigo Martins, A path to renewable Mg reduction from MgO by a continuous-wave Cr:Nd:YAG ceramic solar laser, *Solar Energy Materials and Solar Cells*, Vol. 155, (2016), pp. 430–435. *Cited: 15*
- 155) Ao Liu, Guoxia Liu, Huihui Zhu, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins and Fukai Shan, Hole mobility modulation of solution-processed nickel oxide thin-film transistor based on high-k dielectric, *Appl. Phys. Lett.* Vol. 108, 233506 (2016); <http://dx.doi.org/10.1063/1.4953460>. *Cited: 72*
- 156) Manuel J. Mendes, Andreia Araújo, António Vicente, Hugo Águas, Isabel Ferreira, Elvira Fortunato, Rodrigo Martins, Design of optimized wave-optical spheroidal nanostructures for photonic-enhanced solar cells, *Nano Energy*, Vol. 26 (2016), pp. 286–296. *Cited: 47*
- 157) Jonas Deuermeier, Hans F. Wardenga, Jan Morasch, Sebastian Siol, Suman Nandy, Tomás Calmeiro, Rodrigo Martins, Andreas Klein and Elvira Fortunato, Highly conductive grain boundaries in copper oxide thin films, *J. Appl. Phys.* 119, 235303 (2016); <http://dx.doi.org/10.1063/1.4954002>. *Cited: 17*
- 158) S. Panigrahi, T. Calmeiro, R. Martins, D. Nunes, E. Fortunato, Observation of Space Charge Dynamics Inside an All Oxide Based Solar Cell, *ACS nano*, Vol. 10 (2016), pp. 6139-46. *Cited: 12*
- 159) J. Deuermeier, TJM Bayer, H. Yanagi, A. Kiazadeh, R. Martins, A. Klein, E. Fortunato, Substrate reactivity as the origin of Fermi level pinning at the Cu₂O/ALD-Al₂O₃ interface, *Materials Research Express* Vol. 3 (2016), pp. 46404-46404. *Cited: 10*
- 160) Pydi Ganga Bahubalindrani, Asal Kiazadeh, Allegra Sacchetti, Jorge Martins, Ana Rovisco, Vítor Grade Tavares, Rodrigo Martins, Elvira Fortunato, Pedro Barquinha, Influence of channel length scaling on InGaZnO TFTs characteristics: Unity current-gain cutoff frequency, intrinsic voltage-gain, and on-resistance, *Journal of Display Technology*, Vol. 12 (2016), pp. 515-518. *Cited: 25*.
- 161) C. Besleaga, GE Stan, I. Pintilie, P. Barquinha, E. Fortunato, R. Martins, Transparent field-effect transistors based on AlN-gate dielectric and IGZO-channel semiconductor, *Applied Surface Science*, Vol. 379 (2016), pp. 270-276. *Cited: 13*
- 162) A. Gonçalves, J. Resende, AC Marques, JV Pinto, D. Nunes, A. Marie, R. Gonçalves, L. Pereira, R. Martins, E. Fortunato, Smart optically active VO₂ nanostructured layers applied in roof-type ceramic tiles for energy efficiency, *Solar Energy Materials and Solar Cells*, Vol. 150, (2016), pp. 1-9. *Cited: 44*
- 163) A. Pimentel, SH Ferreira, D. Nunes, T. Calmeiro, R. Martins, E. Fortunato, Microwave Synthesized ZnO Nanorod Arrays for UV Sensors: A Seed Layer Annealing Temperature Study, *Materials*, Vol. 9 (2016), ma9040299. *Cited: 50*.
- 164) P. Bahubalindrani, V. Tavares, P. Barquinha, P.G. de Oliveira, R. Martins, E. Fortunato, InGaZnO TFT behavioral model for IC design, *Analog Integrated Circuits and Signal Processing*, Vol. 87 (1) (2016), pp. 73-80. *Cited: 21*
- 165) P. Bahubalindrani, V. Tavares, J. Borme, P.G. de Oliveira, R. Martins, E. Fortunato, P. Barquinha, InGaZnO Thin-Film-Transistor-Based Four-Quadrant High-Gain Analog Multiplier on Glass, *IEEE Electron Device Letters*, 37 (4) (2016), pp. 419-421. *Cited: 12*
- 166) Fukai Shan, Ao Liu, Huihui Zhu, Weijin Kong, Jingquan Liu, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins, Guoxia Liu, High-mobility p-type NiO x thin-film transistors processed at low temperatures with Al₂O₃ high-k dielectric, *Journal of Materials Chemistry C*, Vol. 4 (2016), pp. 9438-9444. *Cited: 46*
- 167) A. Liu, G. LIU, H. Zhu, B. Shin, E. Fortunato, R. Martins and Fukai Shan, Eco-friendly, solution-processed In-W-O thin films and their applications in low-voltage, high-performance transistors, *J. Mater. Chem. C*, Vol. 4 (20), (2016), pp. 4478-4484. *Cited: 28*
- 168) K. M. Niang, P. M. C. Barquinha, R. F. P. Martins, B. Cobb, M. J. Powell, and A. J. Flewitt, A thermalization energy analysis of the threshold voltage shift in amorphous indium gallium zinc oxide thin film transistors under positive gate bias stress, *Applied Physics Letters*, 108, 093505 (2016). *Cited: 15*
- 169) A. Lyubchik, A. Vicente, B. Soule, P. Alves, T. Mateus, M. Mendes, H. Águas, E. Fortunato, R. Martins, "Mapping the electrical properties of ZnO-based transparent conductive oxides grown at room temperature and improved by controlled post-deposition annealing", *Advanced Electronic Materials*, Vol. 2, (2016), art 1500287. *Cited: 40*

- 170) S Goswami, S Nandy, TR Calmeiro, R Igreja, R Martins, E. Fortunato, Stress Induced Mechano-electrical Writing-Reading of Polymer Film Powered by Contact Electrification Mechanism, *Scientific Reports*, 6, (2016), article19514. *Cited: 10*
- 171) C. Zubizarreta, E. G-Berasategui, I. Ciarsolo, J. Barriga, D. Gaspar, R. Martins, E. Fortunato, The influence of target erosion grade in the optoelectronic properties of AZO coatings growth by magnetron sputtering, *Applied Surface Science*, doi:10.1016/j.apsusc.2016.01.147. *Cited: 11*
- 172) K. Kardarian, D. Nunes, P. Sberna, A. Ginsburg, D.A. Keller, J.V. Pinto, J. Deuermeier, A.Y. Anderson, A. Zaban, R. Martins, E. Fortunato, Effect of Mg doping on Cu₂O thin films and their behavior on the TiO₂/Cu₂O heterojunction solar cells, *Solar Energy Materials and Solar Cells Vol. 147* (2016), pp. 27-36, (DOI:10.1016/j.solmat.2015.11.041). *Cited: 49*.
- 173) D. Nunes, T.R. Calmeiro, S. Nandy, J.V. Pinto, A. Pimentel, P. Barquinha, R. Martins, Charging effects and surface potential variations of Cu-based nanowires, *Thin Solid Films*, 1–9 (2016). (doi:10.1016/j.tsf.2015.11.077). *Cited: 9*
- 174) I. Bernacka-Wojcik, P. Wojcik, H. Aguas, E. Fortunato, R. Martins, Inkjet printed highly porous TiO₂ films for improved electrical properties of photoanode, *Journal of Colloid and Interface Science*, Vol. 465 (2016), pp. 208-14. *Cited: 21*.
- 175) L. Santos, CM Silveira, E. Elangovan, JP Neto, J. Pinto, D. Nunes, L. Pereira, R. Martins, B. Viegas, J.J.G Moura, S. Todorovic, MG Almeida, E. Fortunato, Synthesis of WO₃ nanoparticles for biosensing applications *Sensors and Actuators, B, Vol. 223* (2016), pp. 186-194. *Cited: 45*
- 176) Peter J Bruggeman, Uwe Czarnetzki, M Lorenz, MS Ramachandra Rao, T Venkatesan, E Fortunato, P Barquinha, R Branquinho, D Salgueiro, R Martins, E Carlos, A Liu, FK Shan, M Grundmann, H Boschker, J Mukherjee, M Priyadarshini, N DasGupta, DJ Rogers, FH Teherani, EV Sandana, P Bove, K Rietwyk, A Zaban, A Veziridis, A Weidenkaff, M Muralidhar, M Murakami, S Abel, J Fompeyrine, J Zuniga-Perez, R Ramesh, NA Spaldin, S Ostanin, V Borisov, I Mertig, V Lazenka, G Srinivasan, W Prellier, M Uchida, M Kawasaki, R Pentcheva, P Gegenwart, F Miletto Granozio, J Fontcuberta, N Pryds, Retrospective on 'The 2012 Plasma Roadmap', *Journal of Physics D: Applied Physics*, Vol. 49 (43) (2016), pp. 431001.

Year 2015

- 177) Diana Gaspar, Luís Pereira, Anastasia Delattre, David Guerin, Elvira Fortunato, Rodrigo Martins, Engineered cellulose fibers as dielectric for oxide field effect transistors, *physica status solidi (c)*, Vol. 12 (2015), pp. 1421-1426. *Cited: 3*
- 178) M. Ferreira, J. Loureiro, A. Nogueira, A. Rodrigues, R. Martins, I.M.M Ferreira, SnO₂ thin Film Oxides Produced by rf Sputtering for Transparent Thermoelectric Devices, *Materials Today, Proceedings*, Vol. 2, (2) (2015), p. 647-653.
- 179) D. Nunes, T. Calmeiro, S. Nandy, J.V. Pinto, A. Pimentel, P. Barquinha, P.A. Carvalho, J. Walmsley, E. Fortunato, R. Martins, Charging effects and surface potential variations of Cu-based nanowires, *Thin Solid Films*, 2015, doi:10.1016/j.tsf.2015.11.077.
- 180) D. Nunes, A. Pimentel, J.V. Pinto, T.R. Calmeiro, S. Nandy, P. Barquinha, P.A. Carvalho, E. Fortunato and R. Martins, Photocatalytic behavior of TiO₂ films synthesized by microwave irradiation, *Catalysis Today*, 2015, doi:10.1016/j.cattod.2015.10.038.
- 181) J. Contreras, J. Tornero, I. Ferreira, R. Martins, L. Gomes, E. Fortunato, Simulated and Real Sheet-of-Light 3D Object Scanning Using a-Si:H Thin Film PSD Arrays, *Sensors*, Vol. 15 (12), (2015), pp. 29938-29949. *Cited: 1*
- 182) A. Alexa, N. Tigau, A. Petrica, A. Pimentel, P. Branquinho, D. Salgueiro, T. Calmeiro, R. Martins, E. Fortunato, V. Musat, Morphological and optical characterization of transparent thin films obtained at low temperature using ZnO nanoparticles, *J. of Optoelectronics and Advanced Materials*, Vol. 17 (9-10) (2015), pp. 1288-1295
- 183) R. Martins, Materials for Europe, in *Pan European Networks, Science and Technology*, 17 (2015), pp.92
- 184) A. Liu, GX Liu, HH Zhu, Y. Meng, HJ Song, B. Shin, E. Fortunato, R. Martins, F. Shan, A water-induced high-k yttrium oxide dielectric for fully-solution-processed oxide thin-film transistors, *Current Applied Physics*, Vol. 15 (2) (2015), pp. S71-S81. *Cited: 36*
- 185) A. Liu, Guoxia Liu, Huihui Zhu, Huijun Song, Byoungchul Shin, Elvira Fortunato, Rodrigo Martins and Fukai Shan, Water-Induced Scandium Oxide Dielectric for Low-Operating Voltage n- and p-Type

- Metal-Oxide Thin-Film Transistors, *Advanced Functional Materials*, Vol. 25 (46), (2015), pp. 7180. *Cited: 106*
- 186) Fukai Shan; Ao Liu; Guoxia Liu; You Meng; E. Fortunato, R. Martins, R. Low-Voltage High-Stability InZnO Thin-Film Transistor Using Ultra-Thin Solution-Processed ZrO₂ Dielectric, *Journal of Display Technology*, Vol. 11 (6) (2015), pp. 541-6.
 - 187) A. Liu, G. Liu, H. Zhu, B. Shin, E. Fortunato, R. Martins and F. Shan, Eco-friendly water-induced aluminum oxide dielectrics and their applications in hybrid metal oxide/polymer TFT, *RSC Adv.*, Vol. 5 (105) (2015), pp. 86606-86613. *Cited: 54*
 - 188) A. Lyubchik, S. Filonovich, T. Mateus, J.M. Mendes, A. Vicente, J.P. Leitao, B.P. Falcao, E. Fortunato, H. Aguas, R. Martins, Nanocrystalline thin film silicon solar cells: A deeper look into p/i interface formation; *Thin Solid Films*, Vol. 591 (2015), pp. 25-31. *Cited: 10*
 - 189) Ana Pimentel, Joana Rodrigues, Paulo Duarte, Daniela Nunes, FM Costa, T Monteiro, R Martins, E Fortunato, Effect of solvents on ZnO nanostructures synthesized by solvothermal method assisted by microwave radiation: a photocatalytic study, *Journal of Materials Science*, Vol. 50 (2015), pp. 5777-5787. *Cited: 76*
 - 190) P. Bahubalindrani, et al. Analog Circuits with High-Gain Topologies Using a-GIZO TFTs on Glass, *Journal of Display Technology*, Vol. 11 (6) (2015), JDT.2014.2378058. *Cited: 30*
 - 191) A. C. Marques, L. Santos, M. N. Costa, J. M. Dantas, P. Duarte, A. Gonçalves, R. Martins, C. A. Salgueiro & E. Fortunato, Office Paper Platform for Bioelectrochromic Detection of Electrochemically Active Bacteria using Tungsten Trioxide Nanoprobes, *Scientific Reports*, 5 art. nº 9910 (2015). *Cited: 71*
 - 192) Hugo Águas, Tiago Mateus, António Vicente, Diana Gaspar, Manuel J. Mendes, Wolfgang A. Schmidt, Luís Pereira, Elvira Fortunato, and Rodrigo Martins, Thin film silicon photovoltaic cells on paper for flexible indoor applications, *Advanced Functional Materials*, 25 (23) (2015), pp. 3592-3598. *Cited: 81*
 - 193) R. Martins, Forward in Pan European Networks, *Science and Technology*, 14 (2015), pp.3.
 - 194) E G-Berasategui, C Zubizarreta, R Bayón, J Barriga, R Barros, R Martins, E Fortunato, Study of the optical, electrical and corrosion resistance properties of AZO layers deposited by DC pulsed magnetron sputtering, *Surface and Coatings Technology* 271 (2015), pp. 141-147. *Cited: 15*
 - 195) A. Alexa, N. Tigau, A. Petrica, A Pimentel, R. Branquinho, D. Salgueiro, T. Calmeiro, R. Martins, E. Fortunato, V. Musat, Morphological and optical characterization of transparent thin films obtained at low temperature using ZnO nanoparticles, *J. of Optoelectronics and Advanced Materials*, Vol. 17 (9-10), (2015), pp. 1288-1295.
 - 196) A. Kiazadeh, D. Salgueiro, R. Branquinho, J. Pinto, HL Gomes, P. Barquinha, R. Martins, E. Fortunato, Operational stability of solution-based zinc tin oxide/SiO₂ thin film transistors under gate bias stress, *APL Materials*, 3 (6) (2015), pp. 62804-62804. *Cited: 10*
 - 197) Terho Kololuoma, Jaakko Leppäniemi, Himadri Majumdar, Rita Branquinho, Elena Herbei-Valcu, Viorica Musat, Rodrigo Martins, Elvira Fortunato, Ari Alastalo, Gravure printed sol-gel derived AlOOH hybrid nanocomposite thin films for printed electronics, *Journal of Materials Chemistry C* (2015). *Cited: 6*
 - 198) Iwona Bernacka-Wojcik, Hugo Águas, Fabio Ferreira Carlos, Paulo Lopes, Pawel Jerzy Wojcik, Mafalda Nascimento Costa, Bruno Veigas, Rui Igreja, Elvira Fortunato, Pedro Viana Baptista, Rodrigo Martins, Single nucleotide polymorphism detection using gold nanoprobes and bio-microfluidic platform with embedded microlenses, *Biotechnology and bioengineering* 112 (6) (2015), pp. 1210-9. *Cited: 7*
 - 199) J Rodrigues, D Mata, A Pimentel, D Nunes, R Martins, E Fortunato, AJ Neves, T Monteiro, FM Costa, One-step synthesis of ZnO decorated CNT buckypaper composites and their optical and electrical properties, *Materials Science and Engineering: B* 195, (2015) 38-44. *Cited: 22*
 - 200) A. Vicente, H. Águas, T. Mateus, A. Araújo, A. Lyubchik, S. Siitonen, E. Fortunato, R. Martins, Solar Cells for Self-Sustainable intelligent Packaging, *J. Materials Chemistry A*, 2015, DOI 10.1039/C5TA01752A. *Cited: 23*
 - 201) Pedro Barquinha, Sónia Pereira, Luís Pereira, Pawel Wojcik, Paul Grey, Rodrigo Martins, and Elvira Fortunato, Flexible and Transparent WO₃ Transistor with Electrical and Optical Modulation, *Advanced Electronic Materials*, 1(5) (2015), pp 30-40. *Cited: 29*
 - 202) L. Santos, P. Wojcik, J.V. Pinto, E. Elangovan, J. Viegas, L. Pereira, R. Martins, E. Fortunato, "Structure and Morphologic Influence of WO₃ Nanoparticles on the Electrochromic Performance of Dual-Phase a-WO₃ /WO₃ Inkjet Printed Films", *Ad. El. Materials*, 1 (1-2), (2015), pp. 2-12. *Cited: 39*

- 203) G. Liu, Ao Liu, H. Zhu, B. Shi, E. Fortunato, R. Martins, Y. Wang, F. Shan, Low-Temperature, Nontoxic Water-Induced Metal-Oxide Thin Films and Their Application in Thin-Film Transistors, *Advanced Functional Materials*, 25 (17) (2015), pp. 2564-2572. *Cited: 126*
- 204) M.J. Mendes, S. Morawiec, T. Mateus, A. Lyubchik, H. Aguas, I. Ferreira, E. Fortunato, R. Martins, F. Priolo, I. Crupi, "Broadband light trapping in thin film solar cells with self-organized plasmonic nanocolloids", *Nanotechnology*, 26. (13) (2015), pp. 135202. *Cited: 52*
- 205) D. Nunes, L. Santos, P. Duarte, A. Pimentel, J. V. Pinto, P. Barquinha, P. A. Carvalho, E. Fortunato, R. Martins, "Room Temperature Synthesis of Cu₂O Nanospheres: Optical Properties and Thermal Behavior", *Microscopy and Microanalysis*, 21 (1) (2015), pp. 108-119. *Cited: 14*
- 206) P.G. Bahubalindrani, V.G. Tavares, P. Barquinha, C. Duarte, N. Cardoso, P.G. de Oliveira, R. Martins, E. Fortunato, "a-GIZO TFT neural modeling, circuit simulation and validation", *Solid State Electronics*, 105 (2015), pp. 30-36. *Cited: 9*
- 207) S. Nandy, R. Thapa, M. Kumar, T. Som, N. Bundaleski, O. Teodoro, R. Martins, E. Fortunato, "Efficient Field Emission from Vertically Aligned Cu₂O- δ (111) Nanostructure Influenced by Oxygen Vacancy, *Advanced Functional Materials*", 25 (6) (2015), pp. 947-956. *Cited: 30*
- 208) P.J. Wojcik, L. Santos, L. Pereira, R. Martins, E. Fortunato, "Tailoring nanoscale properties of tungsten oxide for inkjet printed electrochromic devices", *Nanoscale*, 7 (5) (2015), pp. 1696-1708. *Cited: 29*
- 209) R. Branquinho, D. Salgueiro, A. Santa, A. Kiazadeh, P. Barquinha, L. Pereira, R. Martins, E. Fortunato, "Towards environmentally friendly solution-based ZTO/AlOx TFTs", *Semiconductor Science and Technology*, 30 (2) (2015), art number 024007. *Cited: 45*
- 210) S. Ullaha, F. De Matteis, R. Martins, R. Branquinho, E. Fortunato, I. Davoli, A Combination of Solution Synthesis & Solution Combustion Synthesis for Highly Conducting and Transparent Aluminum Zinc Oxide Thin Films. 2015 IEEE 15TH INTERNATIONAL CONFERENCE ON NANOTECHNOLOGY (IEEE-NANO) (2015), pp. 144-147
- 211) L. Santos, D. Nunes, T. Calmeiro, R. Branquinho, D. Salgueiro, P. Barquinha, L. Pereira, R. Martins, E. Fortunato, "Solvothermal Synthesis of Gallium-Indium-Zinc-Oxide Nanoparticles for Electrolyte-Gated Transistors", *ACS Applied Materials & Interfaces*, 7 (1), (2015), pp. 638-646. *Cited: 25*
- 212) M. Ferreira, J. Loureiro, A. Rodrigues, R. Martins, I. Ferreira, I. SnO₂ thin film oxides produced by rf sputtering for transparent thermoelectric devices, *Materials Today: Proceedings Vol. 2 (2) (2015)*, 647-53. *Cited: 9*
- 213) A.C. Baptista, A.M. Botas, A.P.C. Almeida, A.T. Nicolau, B.P. Falcao, M.J. Soares, J.P. Leitao, R. Martins, J.P. Borges, I. Ferreira, "Down conversion photoluminescence on PVP/Ag-nanoparticles electrospun composite fibers", *Optical Mat.*, 9, (2015), pp. 278-281. *Cited: 12*
- 214) M. Pavan, S. Ruhle, A. Ginsburg, D.A. Keller, H.N. Barad, P.M. Sberna, D. Nunes, R. Martins, A.Y. Anderson, A. Zaban, E. Fortunato, "TiO₂/Cu₂O all-oxide heterojunction solar cells produced by spray pyrolysis", *Solar Energy Materials and Solar Cells*, 132 (2015), pp. 549-556. *Cited: 133*
- 215) A. Correia, R. Martins, E. Fortunato, P. Barquinha, J. Goes, Design of a robust general-purpose low-offset comparator based on IGZO thin-film transistors, 2015 IEEE International Symposium on Circuits and Systems (ISCAS). Proceedings 2015, pp. 261-4, DOI: 10.1109/ISCAS.2015.7168620.
- 216) E. Fortunato, R. Martins, How materials innovations will lead to device revolution? 18th International Conference on Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS), Anchorage, AK, USA Data: 21-25 June 2015. 2015 Transducers, 2015, pp. 884-7.

Year 2014

- 217) R. Martins, Europe welcomes Brazilian spirit, *Materials Science in Brazil, Science Impact (IOP)*, 2014, p.9.
- 218) C. Zubizarreta, E.G. Berasategui, R. Bayon, R.E. Galindo, R. Barros, D. Gaspar, D. Nunes, D (Nunes, T. Calmeiro, R. Martins, E. Fortunato, J. Barriga "Evaluation of the optoelectronic properties and corrosion behavior of Al₂O₃-doped ZnO films prepared by dc pulsed magnetron sputtering, *J. Physics D- Applied Physics*, 47 (48) (2014), art nº 485501. *Cited: 3*.
- 219) Fukai Shan, Ao Liu, Guoxia Liu, You Meng, Elvira Fortunato, and Rodrigo Martins, Low-Voltage High-Stability InZnO Thin-Film Transistor Using Ultra-Thin Solution-Processed ZrO Dielectric, *J. of Display Technology*, 11 (6) (2014), pp. 541-546. *Cited: 15*

- 220) A. Valletta, G. Fortunato, L. Mariucci, P. Barquinha, R. Martins, E. Fortunato, "Contact Effects in Amorphous InGaZnO Thin Film Transistors", *J. Display Technology*, 11 (11) (2014), pp. 956-961. *Cited: 22*
- 221) R. Branquinho, D. Salgueiro, L. Santos, P. Barquinha, L. Pereira, R. Martins, E. Fortunato, "Aqueous Combustion Synthesis of Aluminum Oxide Thin Films and Application as Gate Dielectric in GZTO Solution-Based TFTs", *ACS Applied Materials & Interfaces*, 6 (22) (2014), pp. 19592-19599. *Cited: 112*
- 222) A. Liu, G.X. Liu, H.H. Zhu, F. Xu, E. Fortunato, E. Fortunato, R. Martins, F.K. Shan, Fully Solution-Processed Low-Voltage Aqueous In₂O₃ Thin-Film Transistors Using an Ultrathin ZrO_x Dielectric; *ACS Applied Materials and Interfaces*, 6 (20) (2014), pp. 17364-17369. *Cited: 127*
- 223) G.X. Liu, A. Liu, F.K. Shan, Y. Meng, B.C. Shin, E. Fortunato, R. Martins, High-performance fully amorphous bilayer metal-oxide thin film transistors using ultra-thin solution-processed ZrO_x dielectric, *Applied Physics Letters*, 105 (11) (2014) article nº 113509. *Cited: 90*
- 224) A. Araujo, C. Caro, MJ Mendes, D. Nunes, E. Fortunato, R. Franco, H. Águas, R. Martins, Highly efficient nanoplasmonic SERS on cardboard packaging substrates, *Nanotechnology*, 25 (41) (2014), art nº 415202. *Cited: 41*
- 225) D. Gaspar, A. Pimentel, M.J. Mendes, T. Mateus, BP Falcao, J.P. Leitao, J. Soares, A. Araujo, A. Vicente, S.A. Filonovich, H. Aguas, R. Martins, I. Ferreira, Ag and Sn Nanoparticles to Enhance the Near-Infrared Absorbance of a-Si:H Thin Films, *Plasmonics*, 9 (5) (2014), pp. 1015-1023. *Cited: 18*
- 226) R. Martins, *Materials Renaissance*, interview given to Pan European Networks: Science & Technology 12 (2014) pp. 93.
- 227) N. Neves, A. Lagoa, J. Calado, AMB Rego, E. Fortunato, R. Martins, I. Ferreira, Al-doped ZnO nanostructured powders by emulsion detonation synthesis - Improving materials for high quality sputtering targets manufacturing, *J. European Ceramic Society*, 34 (10) (2014), pp. 2325-2338. *Cited: 21*
- 228) D. Nunes, A. Pimentel, P. Barquinha, PA Carvalho, E. Fortunato, R. Martins, Cu₂O polyhedral nanowires produced by microwave irradiation, *J. Materials Chemistry C*, 2 (30) (2014), pp. 6097-6103. *Cited: 28*
- 229) L. Santos, J. Neto, A. Crespo, D. Nunes, N. Costa, I. Fonseca, P. Barquinha, L. Pereira, J. Silva, R. Martins, E. Fortunato, WO₃ Nanoparticle-Based Conformable pH Sensor. *ACS Applied Materials & Interfaces*, 6 (15) (2014) pp. 12226-34. *Cited: 95*
- 230) A. Pimentel, D. Nunes, P. Duarte, J. Rodrigues, FM Costa, T. Monteiro, R. Martins, E. Fortunato, Synthesis of Long ZnO Nanorods under Microwave Irradiation or Conventional Heating, *J. Materials Chemistry C*, 118 (26) (2014), pp. 14629-14639. *Cited: 98*
- 231) S. Morawiec, M.J. Mendes, S.A. Filonovich, T. Mateus, S. Mirabella, H. Águas, I. Ferreira, F. Simone, E. Fortunato, R. Martins, F. Priolo, I. Crupi, Broadband photocurrent enhancement in a-Si:H solar cells with plasmonic back reflectors, *Optics Express*, 24 (13) (2014) pp. A1059-A1070. *Cited: 63*
- 232) S. Zanarini, N. Garino, J.R. Nair, C. Francia, P.J. Wojcik, L. Pereira, E. Fortunato, R. Martins, S. Bodoardo, N. Penazzi, Contrast Enhancement in Polymeric Electrochromic Devices Encompassing Room Temperature Ionic Liquids, *Int. Journal of Electrochemical Science*, 9 (4) (2014), pp. 1650-1662. *Cited: 12*
- 233) R. Martins, L. Pereira, E. Fortunato, SID 2014 Frontline Technology: The Future Is Paper Based, p20-24. *Cited: 6*
- 234) D. Schmeisser, J. Haeberle, P. Barquinha, D. Gaspar, L. Pereira, R. Martins, E. Fortunato, Electronic structure of amorphous ZnO films, *Physica Status Solidi C*, Vol 11 (9-10) (2014), pp. 1476-1480. *Cited: 13*
- 235) R. Martins, *Pooling European Materials*, interview given to Pan European Networks: Science & Technology 10 (2014) pp. 106-108.
- 236) L. Pereira, D Gaspar, D Guerin, A Delattre, E Fortunato and R Martins, The influence of fibril composition and dimension on the performance of paper gated oxide transistors, *Nanotechnology* 25 (2014) art nº 094007 (11pp). *Cited: 50*
- 237) D. Gaspar, S N Fernandes, A G de Oliveira, J G Fernandes, P Grey, R V Pontes, L Pereira, R Martins, M H Godinho and E Fortunato Nanocrystalline cellulose applied simultaneously as the gate dielectric and the substrate in flexible field effect transistors, *Nanotechnology* 25 (2014) art nº 094008 (11pp). *Cited: 177*

- 238) M. N. Costa, B. Veigas, J. M. Jacob, D. S. Santos, J. Gomes, P. V. Baptista, R. Martins, J. Inácio and E. Fortunato, A low cost, safe, disposable, rapid and self-sustainable paper-based platform for diagnostic testing: lab-on-paper, *Nanotechnology* 25 (2014) art nº 094006 (12pp). *Cited: 154*
- 239) Bruno Veigas, Rita Branquinho, Joana Pinto, Pawel Wojcik, Rodrigo Martins, Elvira Fortunato, Pedro V Baptista, Ion sensing (EIS) real-time quantitative monitorization of isothermal DNA amplification, *Biosensors & bioelectronics* Vol 52 (2014), pp. 50-5. *Cited: 41*
- 240) J. Loureiro, N. Neves, R. Barros, T. Mateus, R. Santos, S. Filonovich, S. Reparaz, CM Sotomayor-Torres, F. Wyczisk, L. Divay, R. Martins, I. Ferreira, Transparent aluminium zinc oxide thin films with enhanced thermoelectric properties, *J. Materials Chemistry A*, 2 (18) (2014), pp. 6649-6655. *Cited: 81*
- 241) A. Liu, G. Liu, H. Zhu, Y. Meng, H. Song, B. Shin, E. Fortunato, R. Martins, F. Shan, "A water-induced high-k yttrium oxide dielectric for fully-solution-processed oxide thin-film transistors," *Current Applied Physics*, vol. 15, pp. S75-S81, 2014.
- 242) PJ Wojcik, L Pereira, R. Martins, E Fortunato, Statistical Mixture Design and Multivariate Analysis of Inkjet Printed a-WO₃/TiO₂/WO_x Electrochromic Films, *ACS Combinatorial Science*, 16 (1) (2014), pp. 5-16. *Cited: 17*
- 243) J. Contreras, R. Martins, P. Wojcik, S. Filonovitch, H. Águas, L. Gomes, E. Fortunato, I. Ferreira, Color sensing ability of an amorphous silicon position sensitive detector array system, *Sensors and Actuators A- Physical*, 205 (2014) pp. 26-37. *Cited: 4*
- 244) S. Pereira, A. Goncalves, N. Correia, J. Pinto, L. Pereira, R. Martins, E. Fortunato, Electrochromic behavior of NiO thin films deposited by e-beam evaporation at room temperature, *Solar Energy Materials and Solar Cells*, 120 (2014), pp. 109-115. *Cited: 82*
- 245) P. Bahubalindrani, V. Tavares, C. Duarte, N. Cardoso, P. Oliveira, P. Barquinha, R. Martins, E. Fortunato, Transparent Current Mirrors Using a-GIZO TFTs: Simulation with RBF Models and Fabrication, 2014 UKSim-AMSS 16th International Conference on Computer Modelling and Simulation (UKSim). *Proceedings 2014*, pp. 582-6, DOI: 10.1109/UKSim.2014.98.
- 246) Iwona Bernacka-Wojcik, Susana Ribeiro, Pawel Jerzy Wojcik, Pedro Urbano Alves, Tito Busani, Elvira Fortunato, Pedro Viana Baptista, José António Covas, Hugo Águas, Loic Hilliou, Rodrigo Martins, Experimental optimization of a passive planar rhombic micromixer with obstacles for effective mixing in a short channel length, *RSC Advances*, Vol. 4 (2014), pp. 56013-56025. *Cited: 12*
- 247) Joana Loureiro, Joao R Santos, Adriana Nogueira, Frederic Wyczisk, Laurent Divay, Sebastian Reparaz, Francesc Alzina, Clivia M Sotomayor Torres, John Cuffe, Fatima Montemor, Rodrigo Martins, Isabel Ferreira, Nanostructured p-type Cr/V 2 O 5 thin films with boosted thermoelectric properties, *Journal of Materials Chemistry A*, Vol. 2 (2014), pp. 6456-6462. *Cited: 22*

Year 2013

- 248) A.I. Danciu, V. Musat, T. Busani, JV Pinto, R. Barros, AM Rego, AM Ferrara, PA Carvalho, R. Martins, R (Martins, E. Fortunato, Uniform Arrays of ZnO 1D Nanostructures Grown on Al:ZnO Seeds Layers by Hydrothermal Method; *J. Nanoscience and Nanotechnology*, 13 (10) (2013), pp. 6701-6710. *Cited: 6*
- 249) P. Bahubalindrani, V. Grade Tavares, P. Guedes de Oliveira, P. Barquinha, R. Martins, E. Fortunato, High-gain amplifier with n-type transistors, 2013 IEEE International Conference of Electron Devices and Solid-state Circuits (EDSSC), pp. 2 pp. DOI: 10.1109/EDSSC.2013.6628203. *Cited: 16*
- 250) R Martins, L Pereira, E Fortunato, Paper Electronics: A Challenge for the Future (*invited paper*), *SID Symposium Digest of Technical Papers* 44 (1), (2013), pp. 365-367. *Cited: 5*
- 251) N. Garino, S. Zanarini, S. Bodoardo, J.R. Nair, S. Pereira, L. Pereira, R. Martins, E. Fortunato, N. Penazzi, Fast Switching Electrochromic Devices Containing Optimized BEMA/PEGMA Gel Polymer Electrolytes, *International Journal of Electrochemistry* (2013), 138753 (10 pp.), DOI: 10.1155/2013/138753.
- 252) P. Bahubalindrani, V. Grade Tavares, P. Barquinha, R. Martins, E. Fortunato, High-gain topologies for transparent electronics, *IEEE EUROCON 2013* (2013), pp. 2041-6 DOI: 10.1109/EUROCON.2013.6625261 .
- 253) PG Bahubalindrani, VG Tavares, P. Barquinha, C. Duarte, PG de Oliveira, R. Martins, E. Fortunato, "Transparent Current Mirrors With a-GIZO TFTs: Neural Modelling, Simulation and Fabrication" *J. Display Technology*, Vol 9 (12) (2013) pp. 1001-1006. *Cited: 16*

- 254) S. Nandy, G. Goncalves, JV Pinto, T. Busani, V. Figueiredo, L. Pereira, RFP Martins, E. Fortunato, "Current transport mechanism at metal-semiconductor nanoscale interfaces based on ultrahigh density arrays of p-type NiO nano-pillars", *Nanoscale*, Vol. 5 (23) (2013), pp. 11699-11709. *Cited: 21*
- 255) S. Parthiban, E. Elangovan, PK Nayak, A Goncalves, D. Nunes, L. Pereira, P. Barquinha, T. Busani, E. Fortunato, R. Martins, Performances of Microcrystalline Zinc Tin Oxide Thin-Film Transistors Processed by Spray Pyrolysis, *J. Display Technology*, Vol 9 (10) (2013) pp. 825-831. *Cited: 8*
- 256) E. Fortunato, R. Martins, O futuro do papel ou o papel do futuro? *Revista Pasta e Papel*, Outono 2013, pp. 28-35.
- 257) S. Nandy, A. Banerjee, E. Fortunato, R. Martins, A Review on Cu₂O and CuI-Based p-Type Semiconducting Transparent Oxide Materials: Promising Candidates for New Generation Oxide Based Electronics, *Reviews in Advanced Sciences and Engineering*, 2 (4), December 2013, pp. 273-304(32). *Cited: 88*
- 258) E. Fortunato, J. Jang, P. Barquinha, A. Nathan, and R. Martins, Editors of the Special issue on the 8th International Thin Film Transistor Conference (ITC 2012), forward message, *J. of Display Technology*, 9 (9) (2013), pp. 687.
- 259) R. Branquinho, J. Pinto, T. Busani, P. Barquinha, L. Pereira, PV Baptista, R. Martins, E. Fortunato, Plastic Compatible Sputtered Ta₂O₅ Sensitive Layer for Oxide Semiconductor TFT Sensors, *J. of Display Technology*, 9 (9) (2013), pp. 723-728. *Cited: 12*
- 260) J.V. Pinto, R. Branquinho, P. Barquinha, E. Alves, R. Martins, E. Fortunato, Extended-Gate ISFETs Based on Sputtered Amorphous Oxides, *J. of Display Technology*, 9 (9) (2013), pp. 729-734. *Cited: 20*
- 261) V. Figueiredo, J.V. Pinto, J. Deuermeier, R. Barros, E. Alves, R. Martins, and E. Fortunato p-Type Cu O Thin-Film Transistors Produced by Thermal Oxidation, *J. of Display Technology*, 9 (9) (2013), pp. 735-740. *Cited: 20*
- 262) R.D. Alves, LC Rodrigues, JR Andrade, M. Fernandes, JV Pinto, L. Pereira, A. Pawlicka, R. Martins, E. Fortunato, VD Bermudez, MM Silva, 1 Gelatin/Zn(CF₃SO₃)₂ Polymer Electrolytes for Electrochromic Devices, *Electroanalysis*, 25 (6) (2013), pp. 1483-1490. *Cited: 22*
- 263) I. Bernacka-Wojcik, P Lopes, Catarina Vaz, Ana B Veigas, P. Jerzy Wojcik, P Simoes, D Barata, E Fortunato, P Viana Baptista, H Águas, R Martins, Bio-microfluidic platform for gold nanoprobe based DNA detection-application to Mycobacterium tuberculosis. *Biosensors & bioelectronics*, 48 (2013), pp. 87-93. *Cited: 38*
- 264) R. Santos, J. Loureiro, A. Nogueira, E. Elangovan, JV Pinto, JP Veiga, T. Busani, E. Fortunato, R. Martins, I. Ferreira, Thermoelectric properties of V₂O₅ thin films deposited by thermal evaporation, *Applied Surface Science*, Vol. 282 (2013), pp. 590-594. *Cited: 64*
- 265) A. Araujo, R. Barros, T. Mateus, D. Gaspar, N. Neves, A. Vicente, S.A. Filonovich, P. Barquinha, E. Fortunato, A.M. Ferraria, A.M.B. do Rego, A. Bicho, H. Aguas, R. Martins, Role of a disperse carbon interlayer on the performances of tandem a-Si solar cells, *Science and Technology of Advanced Materials*, 14 (4) (2013), pp. 45009-45018. *Cited: 7*
- 266) A.M. Ramos, S. Pereira, MT Cidade, G Pereira, R Branquinho, L Pereira, R Martins, E Fortunato, Preparation and characterization of cellulose nanocomposite hydrogels as functional electrolytes, *Solid State Ionics* 242 (2013), pp26-32. *Cited: 16*
- 267) R. Martins, A Matter of Materials, *Pan European Networks, Science and Technology*, 07 (2013) pp134-135 (interview).
- 268) R. Martins, A. Ahnood, N. Correia, L. Pereira, R. Barros, P. Barquinha, R. Costa, I. Ferreira, A. Nathan, E. Fortunato, Recyclable, Flexible, Low-Power Oxide Electronics, *Advanced Functional Materials* 23 (17) (2013), pp. 2153-2161. *Cited: 116*
- 269) D. Gaspar, AC Pimentel, T. Mateus, JP Leitao, J. Soares, B.P. Falcao, A. Araujo, A. Vicente, S.A. Filonovich, H Aguas, R. Martins, I. Ferreira, Influence of the layer thickness in plasmonic gold nanoparticles produced by thermal evaporation, *Scientific Reports*, 3 (2013), Article Number: 1469. *Cited: 83*
- 270) I. Ferreira, AC Baptista, JP Leitao, J Soares, E Fortunato, R Martins, JP Borges, JP (Borges, Strongly Photosensitive and Fluorescent F8T2 Electrospun Fibers, *Macromolecular Materials and Engineering*, 298 (2) (2013), pp. 174-180. *Cited: 6*
- 271) A. Lajn, H von Wenckstern, M Grundmann, G Wagner, P Barquinha, E Fortunato, E (Fortunato, R Martins, Comparative study of transparent rectifying contacts on semiconducting oxide single crystals and amorphous thin films, *J. Appl. Phys.* 113 (4) (2013), art. No 044511. *Cited: 20*

- 272) R.D. Alves, L.C. Rodrigues, J.R. Andrade, A. Pawlicka, L. Pereira, R. Martins, E. Fortunato, M.M. Silva, Study and Characterization of a Novel Polymer Electrolyte Based on Agar Doped with Magnesium Triflate, *Molecular, Crystals and Liquid Crystals*, 570 (1) (2013), pp. 1-11. *Cited: 17*
- 273) J. Wang, E. Elamurugu, H. Li, S. Jiao, L. Zhao, R. Martins, E. Fortunato et al., "Effect of N and P codoping on ZnO properties," in *Advanced Materials Research* vol. 645, ed, 2013, pp. 64-67. *Cited: 5*
- 274) P. Bahubalindrani, V. G. Tavares, P. G. De Oliveira, P. Barquinha, R. Martins, and E. Fortunato, "High-gain amplifier with n-type transistors," in *2013 IEEE International Conference of Electron Devices and Solid-State Circuits, EDSSC 2013*, 2013
- 275) S. Golshahi, SM Rozati, AMB do Rego, J Wang, E Elangovan, R. Martins, E. Fortunato, Effect of substrate temperature on the properties of pyrolytically deposited nitrogen-doped zinc oxide thin films, *Materials Science and Engineering B*, 178 (1) (2013), pp 103-108. *Cited: 3*

Year 2012

- 276) Rodrigo Martins, Elvira Fortunato, Paul Siffert, *Materialforschung ist ein entscheidender Innovationsfaktor*, in *Proc. Endelberg Conference, Session 5 – Innovation and Education & Training*, 5-7th September 2012
- 277) R. Martins, *Materials Matters*, Pan European networks: Science and Technology, 5, December 2012, pp. 77-79 (interview)
- 278) N. Neves, R. Barros, E. Antunes, J. Calado, E. Fortunato, R. Martins, I. Ferreira, Aluminum doped zinc oxide sputtering targets obtained from nanostructured powders: Processing and application, *J. of the European Ceramic Society*, 32 (16) (2012), pp. 4381-4391. *Cited: 54*
- 279) S. Parthiban, V.; Gokulakrishnan, E. Elangovan, G. Goncalves, K. Ramamurthi, E. Fortunato, R. Martins, High mobility and visible-near infrared transparent titanium doped indium oxide thin films produced by spray pyrolysis, *Thin Solid Films*, 524 (2012), pp. 268-271. *Cited: 23*
- 280) B. Veigas, JM Jacob, MN Costa, DS Santos, M. Viveiros, J. Inacio, R. Martins, P. Barquinha, E. Fortunato, PV. Baptista, Gold on paper-paper platform for Au-nanoprobe TB detection, *Lab On Chip*, 12 (22) (2012), pp. 4802-4808. *Cited: 134*
- 281) Ganga Bahubalindrani, Vítor Grade Tavares, Pedro Barquinha, Cândido Duarte, Rodrigo Martins, Elvira Fortunato, Pedro Guedes de Oliveira, Basic analog circuits with a-GIZO thin-film transistors: Modeling and simulation, *2012 International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD)*, (2012), pp. 261-264. *Cited: 15*.
- 282) Sergej Alexandrovich Filonovich, Hugo Águas, Tito Busani, António Vicente, Andreia Araújo, Diana Gaspar, Marcia Vilarigues, Joaquim Leitão, Elvira Fortunato and Rodrigo Martins, Hydrogen plasma treatment of very thin p-type nanocrystalline Si films grown by RF-PECVD in the presence of B(CH₃)₃, *Sci. Technol. Adv. Mater.* 13 (2012) 045004 (8pp). *Cited: 12*
- 283) V. Gokulakrishnan, S. Parthiban, E. Elangovan, K Jeganathan, D Kanjilal, K Asokan, R Martins, E. Fortunato, K Ramamurthi, Investigation of O⁷⁺ swift heavy ion irradiation on molybdenum doped indium oxide thin films, *Radiation Physics and chemistry*, 81 (6) (2012), pp. 589-593. *Cited: 15*
- 284) Pawel Jerzy Wojcik, Ana Sofia Cruz, Lídia Santos, Luís Pereira, Rodrigo Martins and Elvira Fortunato, Microstructure Control of Dual-phase Inkjet Printed a-WO₃/TiO₂/WO_x Films for High Performance Electrochromic Applications, *Journal of Materials Chemistry*, 22, (2012), pp. 13268-13278. *Cited: 50*
- 285) R. Martins, V. Figueiredo, R. Barros, P. Barquinha, G. Gonçalves, L. Pereira, I. Ferreira, E. Fortunato, P-type oxide based thin film transistors produced at low temperatures, *Proceedings of SPIE Vol. 8263* (2012), Article: 8263631515-1.
- 286) L. Pereira, P. Barquinha, G. Gonçalves, E. Fortunato, R. Martins, Multicomponent dielectrics for oxide TFT, *Proceedings of SPIE Vol. 8263* (2012), Article Number: 8263631516-1
- 287) A. Gonçalves, S. Pereira, N. Correia, M. M. Silva, P. C. Barbosa, L. C. Rodrigues, I. Henriques, R. Martins and E. Fortunato, "Study of electrochromic devices with nanocomposites polymethacrylate hydroxyethylene resin-based electrolyte". *Polymers for Advanced Technology*, 23 (2012), pp. 791-795. *Cited: 13*
- 288) Elangovan Elamurugu, Parthiban Shanmugam, Gonçalo Gonçalves, Nuno Franco, Eduardo Alves, Rodrigo Martins and Elvira Fortunato, "The electronic transport mechanism in indium molybdenum oxide thin films RF sputtered at room temperature", *EPL*, 97 (2012) pp. 36002- p6. *Cited: 15*
- 289) Nuno Neves, Raquel X. Barros, Elsa M. Antunes, Isabel M. Ferreira, João M. Calado, Elvira M. Fortunato and Rodrigo F. Martins, "Sintering Behavior of Nano- and Micro-Sized ZnO Powder Targets

- for rf Magnetron Sputtering Applications". Journal of the American Ceramic Society 95 (1) (2012), pp. 204-210. *Cited: 28*
- 290) Javier Contreras, Luis Gomes, Sergej Filonovich, Nuno Correia, Elvira Fortunato, Rodrigo Martins, and Isabel Ferreira, "3D scanning characteristics of an amorphous silicon position sensitive detector array system". Optics Express, 20 (4), (2012), pp. 4583-4602. *Cited: 6*
- 291) S.V. Jagadeesh Chandra, E. Fortunato, R. Martins, Chel Jong Choi "Modulations in effective work function of Platinum gate electrode in metal oxide-semiconductor devices". Thin Solid Films, 520 (2012), pp. 4556-4558. *Cited: 9*
- 292) Elvira Fortunato, Pedro Barquinha and Rodrigo Martins, "Oxide semiconductor thin film transistors: a review of recent advances", Advanced Materials, 24, (22), (2012), pp 2945–2986. *Cited: 2333*

Year 2011

- 293) Javier Contreras, Marek Idzikowski, Sónia Pereira, Sergej A. Filonovich, Elvira Fortunato, Rodrigo Martins, and Isabel Ferreira, "Amorphous Silicon Position Sensitive Detector Array for Fast 3-D Object Profiling". IEEE Sensors journal, 12, (4), (2011), pp.812-820. *Cited: 9*
- 294) A. Sreedhar, MHP Reddy, S. Uthanna, R. Martins, E. Elangovan, JF Pierson, "Substrate Temperature Influenced Structural and Electrical Behaviour of RF Magnetron Sputtered Ag₂Cu₂O₃ Films", Acta Physica Polonica, 120 (6A) (2011), pp. A37-A39. *Cited: 3*
- 295) G. Gonçalves, V. Grasso, P. Barquinha, L. Pereira, E. Elamurugu, M. Brignone, R. Martins, V. Lambertini, E. Fortunato, Role of Room Temperature Sputtered High Conductive and High Transparent Indium Zinc Oxide Film Contacts on the Performance of Orange, Green, and Blue Organic Light Emitting Diodes. Plasma Processes and Polymers 8 (4) (2011), pp. 340-345. *Cited: 23*
- 296) KS Kumar, A. Divya, PS Reddy, S. Uthanna, R. Martins, E. Elangovan, "Structural and Optical Behaviour of Ni Doped CdS Nanoparticles Synthesized by Chemical Co-Precipitation Method", Acta Physica Polonica, 120 (6A) (2011), pp. A52-A54. *Cited: 11*
- 297) I. Ferreira, B. Bras, J.I. Martins, N. Correia, P. Barquinha, E. Fortunato, R. Martins, "Solid-state paper batteries for controlling paper transistors". Electrochimica Acta 56 (2011) 1099–1105. *Cited: 37*
- 298) Leonardo Bione Silva, Bruno Veigas, Gonçalo Doria, Pedro Costa, João Inácio, Rodrigo Martins, Elvira Fortunato, Pedro V. Baptista "Portable optoelectronic biosensing platform for identification of mycobacteria from the Mycobacterium tuberculosis complex". Biosensors and Bioelectronics 26 (2011) 2012–2017. *Cited: 35*
- 299) A.C. Baptista, J.I. Martins, E. Fortunato, R. Martins, J.P. Borges, I. Ferreira, "Thin and flexible bio-batteries made of electrospun cellulose-based membranes". Biosensors and Bioelectronics 26 (2011) 2742–2745. *Cited: 42*
- 300) J S Parthiban, E. Elangovan, K. Ramamurthi, D Kanjilal, K Asokan, R Martins and E Fortunato, "Effect of Li³⁺ heavy ion irradiation on the Mo doped In₂O₃ thin films prepared by spray pyrolysis technique". J. Phys. D: Appl. Phys. 44 (2011) 085404 (5pp). *Cited: 10*
- 301) M.G. Nolan, J.A. Hamilton, S. O'Brien, G. Bruno, L. Pereira, E. Fortunato, R. Martins, I.M. Povey, M.E. Pemble, "The characterisation of aerosol assisted CVD conducting, photocatalytic indium doped zinc oxide films". Journal of Photochemistry and Photobiology A: Chemistry 219 (2011), pp. 10–15. *Cited: 35*
- 302) V. Gokulakrishnan, S. Parthiban, E. Elangovan, K. Ramamurthi, K (Ramamurthi, K. Jeganathan, D. Kanjilal, K. Asokan, R. Martins, E. Fortunato, "Effects of O(7+) swift heavy ion irradiation on indium oxide thin films". Nuclear Instruments & Methods in Physics Res., section B, 269 (16) (2011), pp. 1836-1840. *Cited: 6*
- 303) R. Martins, I. Ferreira and E. Fortunato, "Electronics with and on paper". Physica Status Solidi- Rapid Research Letters, 5 (9) (2011), pp. 332-335. *Cited: 95*
- 304) E. Fortunato, R. Martins, "Where science fiction meets reality? With oxide semiconductors". Physica Status Solidi- Rapid Research Letters, 5 (9) (2011), pp. 336-339. *Cited: 56*
- 305) R. Branquinho, B. Veigas, J.V. Pinto, R. Martins, E. Fortunato, "Real-time monitoring of PCR amplification of proto-oncogene c-MYC using a Ta(2)O(5) electrolyte-insulator-semiconductor sensor". Biosensors & Bioelectronics, 28 (2011), pp. 44-49. *Cited: 20*
- 306) E. Chitanu, R. Barros, G. Ionita, R. Martins, E. Fortunato, "Rf magnetron Sputtering deposition of AZO Thin Films". Metalurgia International, 16 (2011), pp. 32-35. *Cited: 1*

- 307) E. Elangovan, KJ Saji, S. Parthiban, G. Goncalves, P. Barquinha, R. Martins, E. Fortunato, "Thin-Film Transistors Based on Indium Molybdenum Oxide Semiconductor Layers Sputtered at Room Temperature". *IEEE Electron Device Letters*, 32 (10) (2011), pp. 1391-1393. *Cited: 14*
- 308) R. Martins, A. Nathan, R. Barros, L. Pereira, P. Barquinha, N. Correia, R. Costa, A. Ahnood, I. Ferreira, E. Fortunato, "Complementary Metal Oxide Semiconductor Technology with and On Paper". *Advanced Materials*, 23 (2011), pp.4491–4496. *Cited: 207*
- 309) Hugo Águas, Sanjay K. Ram, Andreia Araujo, Diana Gaspar, Antonio Vicente, Sergej A. Filonovich, Elvira Fortunato, Rodrigo Martins and Isabel Ferreira, "Silicon thin film solar cells on commercial tiles". *Energy & Environmental Science*, 2011, 4 (11), (2011) 4620-4632. *Cited: 71*
- 310) PK Nayak, JV Pinto, G. Goncalves, R. Martins, E. Fortunato, "Environmental, Optical, and Electrical Stability Study of Solution-Processed Zinc-Tin-Oxide Thin-Film Transistors". *Journal of Display Technology*, 4 (2) (2011), pp. 640-643. *Cited: 28*
- 311) A. Olziersky, P. Barquinha, A. Vilà, C. Magana, E. Fortunato, J.R. Morante, R. Martins, "Role of Ga₂O₃–In₂O₃–ZnO channel composition on the electrical performance of thin-film transistors". *Materials Chemistry and Physics* 131(1) (2011), pp. 512-518. *Cited: 74*
- 312) S. O'Brien, M. Copuroglu, P. Tassie, MG Nolan, JA Hamilton, I Povey, L. Pereira, R. Martins, E. Fortunato, ME Pemble. "The effect of dopants on the morphology, microstructure and electrical properties of transparent zinc oxide films prepared by the sol-gel method". *Thin Solid Films* 520 (4) (2011), pp. 1174-1177. *Cited: 9*
- 313) R. Martins, B. Bras, I. Ferreira, L. Pereira, P. Barquinha, N. Correia, R. Costa, T. Busani, A. Goncalves, A. Pimentel, E. Fortunato, "Away from silicon era: the paper electronics", *Proceedings of SPIE Vol. 7940* (2011), Article Number: 79400P.
- 314) V. Figueiredo, E. Elangovan, R. Barros, JV Pinto, T. Busani, R. Martins, E. Fortunato, "p-Type Cu(x)O Films Deposited at Room Temperature for Thin-Film Transistors", *Journal of Display Technology*, 8 (1) (2011), pp. 41-47. *Cited: 32*

Year 2010

- 315) H. Águas, SA Filanovitch, I. Bernacka-Wojcik, E. Fortunato, R. Martins "Role of Trimethylboron to Silane Ratio on the Properties of p-Type Nanocrystalline Silicon Thin Film Deposited by Radio Frequency Plasma Enhanced Chemical Vapour Deposition". *J. of Nanoscience and Nanotechnology*, Vol. 10 (4) (2010) pp. 2547-2551. *Cited: 3*
- 316) J.Z. Wang, E. Elamurugu, N. Franco, E. Alves, AMB Rego, G. Gonçalves, R. Martins, E. Fortunato, "Influence of Deposition Pressure on N-doped ZnO Films by RF Magnetron Sputtering". *J. of Nanoscience and Nanotechnology*, Vol. 9 (4) (2010) pp. 2674-2678. *Cited: 6*
- 317) L. Pereira, H. Águas, L. Gomes, P. Barquinha, E. Fortunato, R. Martins, "Nanostructured Silicon Based Thin Film Transistors Processed in the Plasma Dark Region". *J. of Nanoscience and Nanotechnology*, Vol. 9 (4) (2010) pp. 2938-2943.
- 318) Iwona Bernacka-Wojcik, Rohan Senadeera, Pawel Jerzy Wojcik, Leonardo Bione Silva, Gonçalo Doriac, Pedro Baptista, Hugo Águas, Elvira Fortunato, Rodrigo Martins. "Inkjet printed and "doctor blade" TiO₂ photodetectors for DNA biosensors". *Biosensors and Bioelectronics* 25 (2010) pp. 1229–1234. *Cited: 59*
- 319) E. Fortunato, V. Figueiredo, P. Barquinha, E. Elamurugu, R. Barros, G. Goncalves, SHK Park, CS Hwang, R. Martins. "Thin-film transistors based on p-type Cu₂O thin films produced at room temperature". *Applied Phys. Lett.* 96 (19) (2010) p. 192102. *Cited: 177*
- 320) S. Shane O'Brien, Mark G. Nolan, Mehmet Çopuroglu, Jeff A. Hamilton, Ian Povey, Luis Pereira, Rodrigo Martins, Elvira Fortunato, Martyn Pemble, , "Zinc Oxide Thin films: Characterization and Potential Applications". *Thin Solid Films*, 518, (1) (2010), pp. 4515-4519. *Cited: 79*
- 321) Pedro Barquinha, Luis Pereira, Gonçalo Gonçalves, Rodrigo Martins, Elvira Fortunato, P-202L: Late-News Poster: Long-Term Stability of Oxide Semiconductor- Based TFTs, *SID Symposium Digest of Technical Papers*, Vol. 41 (2010), pp. 1376-1379. *Cited: 8*
- 322) E. Fortunato, R. Barros, P. Barquinha, V. Figueiredo, SHK Park, CS Hwang, R. Martins. "Transparent p-type SnO_x thin film transistors produced by reactive rf magnetron sputtering followed by low temperature annealing". *Appl. Phys. Lett.* 97 (5) (2010) p. 052105. *Cited: 259*

- 323) Javier Contreras, Daniel Costa, Sonia Pereira, Elvira Fortunato, Rodrigo Martins, Rafal Wierzbicki, Holger Heerlein and Isabel Ferreira, "Micro Cantilever Movement Detection with an Amorphous Silicon Array of Position Sensitive Detectors". *Sensors*, 10 (9) (2010), pp. 8173-8184. *Cited: 7*
- 324) S Parthiban, E Elangovan, K Ramamurthi, R Martins, E Fortunato, Investigations on high visible to near infrared transparent and high mobility Mo doped In₂O₃ thin films prepared by spray pyrolysis technique, *Solar En. Materials and Solar Cells*, Vol. 94 (2010), pp. 406-412. *Cited: 65*
- 325) I. Ferreira, B. Bras, N. Correia, P. Barquinha, E. Fortunato, R. Martins, "Self-Rechargeable Paper Thin-Film Batteries: Performance and Applications". *Journal of Display Technology*, 6 (8) (2010), pp. 332-335. *Cited: 51*
- 326) Pedro Barquinha, Luis Pereira, Gonçalo Gonçalves, Danjela Kuscer, Marija Kosec, Anna Vilà, Antonis Olziersky, Juan Ramon Morante, Rodrigo Martins, Elvira Fortunato "Low-temperature sputtered mixtures of high-κ and high bandgap dielectrics for GIZO TFTs". *Journal of the SID* 18 (10) (2010), pp. 762-772. *Cited: 50*.
- 327) Antonis Olziersky, Pedro Barquinha, Anna Vilà, Luís Pereira, Gonçalo Gonçalves, Elvira Fortunato, Rodrigo Martins, and Juan R. Morante. "Insight on the SU-8 resist as passivation layer for transparent Ga₂O₃-In₂O₃-ZnO thin-film transistors". *Journal of Applied Physics*, 108, (2010), pp. 064505-1 to 064505-7. *Cited: 90*
- 328) PK Nayak PK, T. Busani, E. Elamurugu, P. Barquinha, R. Martins, Y. Hong, E. Fortunato. "Zinc concentration dependence study of solution processed amorphous indium gallium zinc oxide thin film transistors using high-k dielectric". *Applied Physics Letters*, 97 (18), (2010), pp. 183504. *Cited: 70*
- 329) M. Lorenz, A. Lajn, H. Frenzel, H. v. Wenckstern, M. Grundmann, P. Barquinha, R. Martins, and E. Fortunato. "Low-temperature processed Schottky-gated field-effect transistors based on amorphous gallium-indium-zinc-oxide thin films". *Applied Physics Letters*, 97 (24), (2010), pp. 243506. *Cited: 56*
- 330) JZ Wang, E. Elangovan, N. Franco, A. Alves, A. Rego, R. Martins, E. Fortunato. "Influence of oxygen partial pressure on properties of N-doped ZnO films deposited by magnetron sputtering". *Transactions of Nonferrous Metals Society of China*, 20 (12) (2010) pp. 2326-2330. *Cited: 6*
- 331) R. Martins, L. Pereira, P. Barquinha, N. Correia, G. Goncalves, I. Ferreira, C. Dias, E. Fortunato, "Floating gate memory paper transistor", *Proceedings of SPIE Vol. 7603* (2010), Article Number: 760314. *Cited: 4*
- 332) S Parthiban, E Elangovan, K Ramamurthi, G Goncalves, R Martins, E Fortunato, Structural, optical and electrical properties of indium-molybdenum oxide thin films prepared by spray pyrolysis, *physica status solidi (a)*, Vol. 207 (2010), pp. 1554-1557. *Cited: 2*

Year 2009

- 333) S. Parthiban, V. Gokulakrishnan, K. Ramamurthi, E. Elangovan, R. Martins, E. Fortunato, R. Ganesan, "High near-infrared transparent molybdenum-doped indium oxide thin films for nanocrystalline silicon solar cell applications". *Solar Energy Materials & Solar Cells Vol 93* (2009) pp. 92-97. *Cited: 77*
- 334) JZ Wang, R. Martins, NP Barradas, E. Alves, T. Monteiro, M. Peres, E. Elamurugu and E. Fortunato, "Intrinsic p Type ZnO Films Deposited by rf Magnetron Sputtering". *J. of Nanoscience and Nanotechnology*, Vol. 9 (2) (2009) pp. 813-816. *Cited: 5*
- 335) E. Elangovan, G. Gonçalves, R. Martins, E. Fortunato, "RF sputtered wide work function indium molybdenum oxide thin films for solar cell applications". *Solar Energy*, 83 (2009) pp 726-731. *Cited: 29*
- 336) R. Martins, L. Pereira, P. Barquinha, I. Ferreira, N. Correia, E. Fortunato. Self-sustained n-Type Memory Transistor Devices Based on Natural Cellulose Paper Fibers, *Journal of Information Display*, 10 (4), 80-89 (2009)
- 337) E. Alves, N. Franco, N.P. Barradas, F. Munnik, T. Monteiro, M. Peres, J. Wang, R. Martins, E. Fortunato "Structural and optical properties of nitrogen doped ZnO films". *Vacuum*, 83, (10), (2009), pp. 1274-1278. *Cited: 14*
- 338) S.A. E. Filonovich, H. Águas, I. Bernacka-Wojcik, C. Gaspar, M. Vilarigues, L.B. Silva, E. Fortunato, R. Martins. "Highly conductive p-type nanocrystalline silicon films deposited by RF-PECVD using silane and trimethylboron mixtures at high pressure". *Vacuum*, 83, (10) (2009) pp. 1253-1256. *Cited: 37*
- 339) S. Parthiban, K. Ramamurthi, E. Elangovan, R. Martins, E. Fortunato, "Spray deposited molybdenum doped indium oxide thin films with high near infrared transparency and carrier mobility". *Appl. Physics Letters*, 94 (21) (2009), pp. 212101. *Cited: 36*

- 340) S. Parthiban, E. Elangovan, K. Ramamurthi R. Martins, E. Fortunato, "High near-infrared transparency and carrier mobility of Mo doped In₂O₃ thin films for optoelectronics applications". *J. Appl. Physics*, 106 (6) (2009), pp. 063716. *Cited: 20*
- 341) Gabriel Bernardo, Gonçalo Gonçalves, Pedro Barquinha, Quirina Ferreira, Graça Brotas, Luís Pereira, Ana Charas, Jorge Morgado, Rodrigo Martins, Elvira. "Polymer light-emitting diodes with amorphous indium-zinc oxide anodes deposited at room temperature". *Synthetic Metals*, 159 (11) (2009) pp 1112-1115 (2009). *Cited: 15*
- 342) ZL Pei, L. Pereira, G. Gonçalves, P. Barquinha, N. Franco, E. Alves, AM Rego, R. Martins, E. Fortunato, "Room-Temperature Cosputtered HfO₂-Al₂O₃ Multicomponent Gate Dielectrics" *Electrochemical and solid-state letters*, 12 (10) (2009) pp. G65-G68. *Cited: 20*
- 343) ME Lopes, HL Gomes, MCR Medeiros, P. Barquinha, L. Pereira, E. Fortunato, R. Martins, I. Ferreira, "Gate-bias stress in amorphous oxide semiconductors thin-film transistors" *Applied Physics Letters*, 95 (6) (2009) pp. 063502-063504. *Cited: 232*
- 344) E. Elangovan, R. Martins, E. Fortunato. "Indium molybdenum oxide thin films: A comparative study by two different RF sputtering systems". *Physica Status Solidi a*, 206 (9) (2009), pp. 2123-2127. *Cited: 6*
- 345) V. Figueiredo, E. Elangovan, G. Goncalves, N. Franco, E. Alves E, SHK Park, R. Martins, E. Fortunato. "Electrical, structural and optical characterization of copper oxide thin films as a function of post annealing temperature". *Physica Status Solidi a*, 206 (9) (2009), pp. 2143-2148. *Cited: 59*
- 346) L. Pereira, P. Barquinha, G. Goncalves, A. Vila A, A. Olziersky, J. Morante, E. Fortunato, R. Martins. "Sputtered multicomponent amorphous dielectrics for transparent electronics". *Physica Status Solidi a*, 206 (9) (2009), pp. 2149-2154. *Cited: 17*
- 347) P. Barquinha, L. Pereira, G. Goncalves, Martins, D. Kuscer, M. Kosec, R. Martins, E. Fortunato. "Performance and Stability of Low Temperature Transparent Thin-Film Transistors Using Amorphous Multicomponent Dielectrics". *Journal of Electrochemical Society*, 156 (11) (2009), pp. H824-H831. *Cited: 63*
- 348) R. Martins, L. Raniero, L. Pereira, D. Costa, H. Águas, S. Pereira, L. Silva, A. Gonçalves, I. Ferreira, E. Fortunato. "Nanostructured silicon and its application to solar cells, position sensors and thin film transistors". *Philosophical Magazine*, 89 (28) (2009), pp. 2699- 2721. *Cited: 56*
- 349) E. Fortunato, L. Pereira, P. Barquinha, I. Ferreira, R. Prabakaran, G. Gonçalves, A. Gonçalves, R. Martins. "Oxide Semiconductors: order within the disorder". *Philosophical Magazine*, 89 (28) (2009), pp. 2741 – 2758. *Cited: 29*
- 350) E. Fortunato, A. Gonçalves, A. Pimentel, P. Barquinha, G. Gonçalves, L. Pereira, I. Ferreira, R. Martins. "Zinc oxide, a multifunctional material: from material to device applications". *Applied Physics A*, 96 (1) (2009), pp. 197-205. *Cited: 153*
- 351) R. Martins, A. Madan. "From materials science to applications of amorphous, microcrystalline and nanocrystalline silicon and other semiconductors. Preface". *Philosophical Magazine*, 89 (28) (2009), pp. 2431-2434. *Cited: 4*
- 352) R. Martins, P. Barquinha, L. Pereira, N. Correia, G. Gonçalves, I. Ferreira, and E. Fortunato. "Selective floating gate non-volatile paper memory transistor". *Phys. Status Solidi RRL* 3 (2009), pp. 308–310. *Cited: 40*
- 353) S.M. Rozati, S. Moradi, S. Golshahi, R. Martins, E. Fortunato, "Electrical, structural and optical properties of fluorine-doped zinc oxide thin films: Effect of the solution aging time". *Thin Solid Films*, 518 (4) (2009) pp. 1279-1282. *Cited: 38*
- 354) S. Golshahi, S.M. Rozati, R. Martins, E. Fortunato, "P-type ZnO thin film deposited by spray pyrolysis technique: The effect of solution concentration". *Thin Solid Films*, 518 (4) (2009) pp. 1149-1152. *Cited: 79*
- 355) Rodrigo Martins, Luís Pereira, Pedro Barquinha, Nuno Correia, Gonçalo Gonçalves, Isabel Ferreira, Carlos Dias, N Correia, M Dionísio, M Silva, Elvira Fortunato, Self-sustained n-type memory transistor devices based on natural cellulose paper fibers, *Journal of Information Display*, Vol. 10 (2009), pp. 149-157. *Cited: 6*
- 356) G. Goncalves, P. Barquinha, L. Pereira, N. Franco, E. Alves, R. Martins, E. Fortunato. "High Mobility a-IGO Films Produced at Room Temperature and Their Application in TFTs". *Electrochemical and Solid State Letters*, 13 (1) (2009), pp. 1120-1122. *Cited: 44*
- 357) E. Fortunato, N. Correia, P. Barquinha, C. Costa, L. Pereira, G. Goncalves, R. Martins, "Paper Field Effect Transistor", *Proceedings of SPIE Vol. 7217* (2009) Article Number: 72170K.

- 358) R. Martins, L. Pereira, P. Barquinha, I. Ferreira, R. Prabakaran, G. Goncalves, A. Goncalves, E. Fortunato, "Zinc oxide and related compounds: order within the disorder" Proceedings of SPIE Vol. 7217 (2009), Article Number: 72170B.

Year 2008

- 359) P Barquinha, L Pereira, G Goncalves, R Martins, E Fortunato, Toward high-performance amorphous GIZO TFTs, Journal of the Electrochemical Society, Vol. 156 (2008), pp. H161. *Cited: 284*
- 360) R. Martins, P. Barquinha, A. Pimentel, L. Pereira, E. Fortunato, D. Kang, I. Song, C. Kim, J. Park and Y. Park. "Electron transport in single and multicomponent n-type oxide semiconductors" Thin Solid films, 516, (7, 15) (2008) pp. 1322-1325. *Cited: 31*
- 361) E. Elangovan, A. Marques, A.S. Viana, R. Martins and E. Fortunato. "Some studies on highly transparent wide band gap indium molybdenum oxide thin films rf sputtered at room temperature". Thin Solid films, 516, (7, 15) (2008) pp. 1359-1364. *Cited: 13*
- 362) G. Gonçalves, P. Barquinha, L. Raniero, R. Martins and E. Fortunato. "Crystallization of amorphous indium zinc oxide thin films produced by radio-frequency magnetron sputtering". Thin Solid films, 516, (7, 15) (2008) pp. 1374-1376. *Cited: 44*
- 363) L. Pereira, P. Barquinha, E. Fortunato, R. Martins, D. Kang, C.J. Kim, H. Lim, I. Song and Y. Park. "High k dielectrics for low temperature electronics". Thin Solid films, 516, (7, 15) (2008) pp. 1544-1548. *Cited: 59*
- 364) E. Fortunato, P. Barquinha, G. Gonçalves, L. Pereira, R. Martins, "High mobility and low threshold voltage transparent thin film transistors based on amorphous indium zinc oxide semiconductors". Solid-State Electronics, 52, 3 (2008) pp. 443-448. *Cited: 94*
- 365) Jinzhong Wang Elangovan Elamurugu, Nuno Pessoa Barradas, Eduardo Alves, Ana Rego, Gonçalo Gonçalves, Rodrigo Martins and Elvira Fortunato, "Co-doping of aluminium and gallium with nitrogen in ZnO films deposited by RF magnetron sputtering". J. Phys.: Condens. Matter 20 (2008) pp. 075220-075224. *Cited: 11*
- 366) H. Águas, N. Popovici, L. Pereira, O. Conde, W. R. Branford, L. F. Cohen, E. Fortunato, and R. Martins "Spectroscopic ellipsometry study of Co-doped TiO₂". Phys. stat. sol. (a) 205, No. 4, (2008), pp. 880–883 (2008) / DOI 10.1002/pssa.200777843. *Cited: 12*
- 367) Pedro Barquinha, Anna M. Vilà, Gonçalo Gonçalves, Luís Pereira, Rodrigo Martins, Joan R. Morante, and Elvira Fortunato "Gallium–Indium–Zinc-Oxide-Based Thin-Film Transistors: Influence of the Source/Drain Material". IEEE Transactions on Electron Devices, vol. 55, NO. 4 (2008), pp. 954-960. *Cited: 208*
- 368) R. Prabakaran, M. Peres, T. Monteiro, E. Fortunato, R. Martins, I. Ferreira. "The effects of ZnO coating on the photoluminescence properties of porous silicon for the advanced optoelectronic devices" Journal of Non-Crystalline Solids, 354, 19-2 (2008), pp 2181-2185. *Cited: 26*
- 369) L. Pereira, H. Águas, M. Beckers, R.M.S. Martins, E. Fortunato, R. Martins. "Metal contamination detection in nickel induced crystallized silicon by spectroscopic ellipsometry". Journal of Non-Crystalline Solids, 354, 19-25 (2008), pp 2319-2323.
- 370) L. Pereira, P. Barquinha, E. Fortunato, R. Martins. "Low temperature high k dielectric on poly-Si TFTs". Journal of Non-Crystalline Solids, 354, 19-25, (2008), pp 2534-2537. *Cited: 12*
- 371) R. Martins, P. Baptista, L. Silva, L. Raniero, G. Doria, R. Franco, E. Fortunato. "Identification of unamplified genomic DNA sequences using gold nanoparticle probes and a novel thin film photodetector". Journal of Non-Crystalline Solids 354, 19-25 (2008) pp. 2580–2584. *Cited: 8*
- 372) R. Prabakaran, L. Silva, E. Fortunato, R. Martins, I. Ferreira "Investigation of hydrocarbon coated porous silicon using PECVD technique to detect CO₂ gas". Journal of Non-Crystalline Solids, 354, 19-25 (2008), pp 2610-2614. *Cited: 4*
- 373) R. Prabakaran, H. Águas, E. Fortunato, R. Martins, I. Ferreira, "n-PS/a-Si:H heterojunction for device application". Journal of Non-Crystalline Solids, 354, 19-25, (2008), pp 2632-2636. *Cited: 7*
- 374) E. Elangovan, R. Martins, E. Fortunato "Effect of annealing on the properties of RF sputtered indium molybdenum oxide thin films". Journal of Non-Crystalline Solids, 354, 19-25, (2008), pp 2831-2838. *Cited: 1*
- 375) R. Prabakaran, E. Fortunato, R. Martins, I. Ferreira, "Fabrication and characterization of hybrid solar cells based on copper phthalocyanine/porous silicon". Journal of Non-Crystalline Solids, 354, 19-25, (2008), pp 2892-2896. *Cited: 30*

- 376) H Águas, RJC Silva, M Viegas, L Pereira, E Fortunato, R Martins, Study of environmental degradation of silver surface, *physica status solidi c*, Vol 5 (2008), pp. 1215-1218. *Cited: 17*
- 377) V. Figueiredo, E. Elangovan, G. Gonçalves, P. Barquinha, L. Pereira, N. Franco, E. Alves, R. Martins, E. Fortunato, "Effect of post-annealing on the properties of copper oxide thin films obtained from the oxidation of evaporated metallic copper". *Applied Surface Science*, 254, (2008), pp 3949-3954. *Cited: 237*
- 378) R. Prabakaran, H. Aguas, L. Pereira, E. Elangovan, E. Fortunato, R. Martins and I. Ferreira, "Optical and Microstructural Investigations of Porous Silicon Coated with a-Si:H using PECVD Technique". *Materials Science Forum Vols. 587-588* (2008) pp 308-312.
- 379) E. Fortunato, Pedro Barquinha, Gonçalo Gonçalves, Luís Pereira, and R. Martins, "New Amorphous Oxide Semiconductor for Thin Film Transistors (TFTs)". *Materials Science Forum Vols. 587-588* (2008) pp 348-352. *Cited: 2*
- 380) E. Fortunato, Luís Pereira, Pedro Barquinha, AMB Rego, Gonçalo Gonçalves, A. Vila, J. Morante, and R. Martins, "High mobility indium free amorphous oxide thin film transistors". *Applied Physics Letters*, Vol. 992, 22 (2008), pp. 222103. *Cited: 240*
- 381) S. Parthiban, K. Ramamurthi, E. Elangovan, R. Martins, E. Fortunato, R. Ganesan R, "High-mobility molybdenum doped indium oxide thin films prepared by spray pyrolysis technique". *Materials Letters*, Vol. 62, 17-18 (2008), pp. 3217-3219. *Cited: 18*
- 382) P. Barquinha, L. Pereira, G. Gonçalves, R. Martins, and E. Fortunato, "The Effect of Deposition Conditions and Annealing on the Performance of High-Mobility GIZO TFTs". *Electrochem. Solid-State Lett.* 11 (2008), H248-H251. *Cited: 122*
- 383) L.B. Silva, P. Baptista, L. Raniero, G. Doria, R. Martins, E. Fortunato, "Characterization of optoelectronic platform using an amorphous/nanocrystalline silicon biosensor for the specific identification of nucleic acid sequences based on gold nanoparticle probes". *Sensors & Actuators: B. Chemical*, 132 (2) (2008), p.508-511. *Cited: 14*
- 384) E. Fortunato, N. Correia, P. Barquinha, L. Pereira, G. Gonçalves, R. Martins, "High-Performance Flexible Hybrid Field-Effect Transistors Based on Cellulose Fiber Paper". *IEEE Electron Device Letters*, 29, (9) (2008) pp. 988-990. *Cited: 267*
- 385) Jinzhong Wang, Elangovan Elamurugu, Vincent Sallet, François Jomard, Alain Lussou, Ana M. Botelho do Rego, Pedro Barquinha, Gonçalo Gonçalves, Rodrigo Martins and Elvira Fortunato, "Effect of annealing on the properties of N-doped ZnO films deposited by RF magnetron sputtering". *Applied Surface Science* 254 (2008) pp. 7178–7182. *Cited: 38*
- 386) E. Elangovan, A. Marques, A. Pimentel, R. Martins, E. Fortunato, "Effect of annealing on molybdenum doped indium oxide thin films RF sputtered at room temperature". *Vacuum*, 82 (12) (2008) pp.1489-1494. *Cited: 9*
- 387) Hai-Ning Cui, V. Teixeira, Li-Jian Meng, R. Martins, E. Fortunato, "Influence of oxygen/argon pressure ratio on the morphology, optical and electrical properties of ITO thin films deposited at room temperature". *Vacuum*, 82 (12) (2008) pp.1507-1511. *Cited: 62*
- 388) P. Barquinha, A. Vilà, G. Gonçalves, L. Pereira, R. Martins, J. Morante, E. Fortunato, "The role of source and drain material in the performance of GIZO based thin-film transistors". *Physica Stat. Solidi a*, 205 (8) (2008), pp. 1905-1909. *Cited: 38*
- 389) M Fernandes, Y Vygranenko, A Fantoni, R Martins, M Vieira, Spectral response characterization of a-Si: H-based MIS-type photosensors, *physica status solidi c*, Vol. 5 (2008), pp. 3410-3413. *Cited: 5*.
- 390) E. Fortunato, L. Raniero, L. Silva, A. Gonçalves, A. Pimentel, P. Barquinha, H. Águas, L. Pereira, G. Gonçalves, I. Ferreira, E. Elangovan, R. Martins, "Highly stable transparent and conducting gallium-doped zinc oxide thin films for photovoltaic applications". *Solar Energy Materials & Solar Cells* Vol 92(2008) pp 1605-1610. *Cited: 188*
- 391) R. Martins, P. Barquinha, L. Pereira, N. Correia, G. Gonçalves, I. Ferreira, E. Fortunato, "Write-erase and read paper memory transistor". *Applied Physics Letters*, 93 (2008) pp. 203501-203504. *Cited: 129*
- 392) Jinzhong Wang Elangovan Elamurugu, Nuno Pessoa Barradas, Eduardo Alves, Ana Rego, Gonçalo Gonçalves, Rodrigo Martins and Elvira Fortunato, "Influence of different carrier gases on the properties of ZnO films grown by MOCVD". *Boletín de la Sociedad Española de Cerámica Y Vidrio* Vol. 47 (4) (2008) pp. 242-244. *Cited: 5*

Year 2007

- 393) E. Fortunato, P. Barquinha, A. Pimentel, L. Pereira, G. Gonçalves and R. Martins. "Amorphous IZO TFTs with saturation mobilities exceeding $100 \text{ cm}^2\text{V}^{-1}\text{s}^{-1}$ ", *Phys. stat. sol. RRL* 1 (1) (2007) R34-R36. *Cited: 195*
- 394) R. Martins, P. Baptista, L. Raniero, G. Doria, L. Silva, R. Franco, E. Fortunato, "Amorphous/nanocrystalline silicon biosensor for the specific identification of unamplified nucleic acid sequences using gold nanoparticle probes". *Appl. Phys. Letters* 90 (2007) pp. 02903-02905. *Cited: 48*
- 395) R. Martins, P. Barquinha, I. Ferreira, L. Pereira, G. Gonçalves, E. Fortunato, "Role of order and disorder on the electronic performances of oxide semiconductors thin film transistors". *Journ. Applied Physics* 101 (4), 044505 (2007), pp. 044505-12. *Cited: 238*
- 396) R. Martins, P. Barquinha, L. Pereira, I. Ferreira, E. Fortunato, "Role of order and disorder in covalent semiconductors and ionic oxides used to produce thin film transistors". *Applied Physics A* 89 (1) (2007), 37-42. *Cited: 46*
- 397) Jinzhong Wang, Vincent Sallet, François Jomard, Ana M. Botelho do Rego, Elangovan Elamurugu, Rodrigo Martins, "Influence of the reactive N_2 gas flow on the properties of rf-sputtered ZnO thin films". *Thin Solid Films* 515 (2007) pp. 8780–8784. *Cited: 39*
- 398) Jinzhong Wang, Vincent Sallet, François Jomard, Ana M. Botelho do Rego, Elangovan Elamurugu, Rodrigo Martins, "Influence of substrate temperature on N-doped ZnO films deposited by RF magnetron sputtering". *Thin Solid Films* 515 (2007) 8785–8788. *Cited: 46*
- 399) R. Prabakaran, T. Monteiro, M. Peres, A.S. Viana, A.F. da Cunha, H. Águas, A. Gonçalves, E. Fortunato, R. Martins and I. Ferreira. "Optical and structural analysis of porous silicon coated with GZO films using rf magnetron sputtering". *Thin Solid Films* 515 (2007) 8664–8669. *Cited: 32*
- 400) E. Elangovan, A. Marques, F.M. Braz Fernandes, R. Martins and E. Fortunato. "Preliminary studies on molybdenum-doped indium oxide thin films deposited by radio-frequency magnetron sputtering at room temperature". *Thin Solid films* (2007), 515 (13) (2007) pp. 5512-5518. *Cited: 18*
- 401) P. Barquinha, G. Gonçalves, L. Pereira, R. Martins and E. Fortunato. "Effect of annealing temperature on the properties of IZO films and IZO based transparent TFTs". *Thin Solid films*, 515 (13) (2007) pp. 8450-8454. *Cited: 95*
- 402) G. Gonçalves, E. Elangovan, P. Barquinha, L. Pereira, R. Martins and E. Fortunato. "Influence of post-annealing temperature on the properties exhibited by ITO, IZO and GZO thin films". *Thin Solid films*, 515 (13) (2007) pp. 8562-8566. *Cited: 159*
- 403) E. Elangovan, R. Martins and E. Fortunato. "Effect of base and oxygen partial pressures on the electrical and optical properties of indium molybdenum oxide thin films". *Thin Solid films*, 515 (13) (2007) pp. 8549-8552. *Cited: 11*
- 404) H. Águas, S. Pereira, D. Costa, P. Barquinha, L. Pereira, E. Fortunato and R. Martins. "3-dimensional polymorphous silicon based metal-insulator-semiconductor position sensitive detectors". *Thin Solid films*, 515 (19) (2007) pp. 7530-75. *Cited: 5*
- 405) L. Pereira, P. Barquinha, E. Fortunato, R. Martins, Corrigendum to "Nickel assisted metal induced crystallization of silicon: Effect of native silicon oxide layer" [TSF 511–512 (2006) 275–279]. *Thin Solid Films*, Volume 516, (1) 1 (2007), pp-104-105.
- 406) L. Raniero, I. Ferreira, E. Fortunato and R. Martins "Differences between amorphous and nanostructured silicon films and their application in solar cell". *High Temperature Material Processes Volume: 11 Issue 4* (2007), pp. 575-583. *Cited: 4*
- 407) H. Aguas, L. Pereira, D. Costa, L. Raniero, E. Fortunato, R. Martins, "Role of the oxide layer on the performances of a-Si: H schottky structures applied to PDS fabrication", *Materials Research Society Symposium Proceedings*, Vol. 910 (2007), pp. 415-420.
- 408) L. Pereira, H. Aguas, M. Beckers, RMS Martins, E. Fortunato, R. Martins, "Characterization of nickel induced crystallized silicon by spectroscopic ellipsometry", *Materials Research Society Symposium Proceedings*, Vol. 910 (2007), pp. 529-534.
- 409) E. Fortunato, P. Barquinha, L. Pereira, G. Goncalves, R. Martins, "Advanced materials for the next generation of thin film transistors", *IDMC'07 Proceedings of International display Manufacturing Conference*, (2007), pp. 371-373.
- 410) LB Silva, P. Baptista, L. Raniero, G. Doria, R. Franco, R. Martins, E. Fortunato, "Novel optoelectronic platform using an amorphous/nanocrystalline silicon biosensor for the specific identification of

unamplified nucleic acid sequences based on gold nanoparticle probes”, IEEE, Transducers '07 & Eurosensors XXI, Digest of Tech papers, Vols 1 and 2 (2007), pp. U472-U473. *Cited: 4*

Year 2006

- 411) Elvira Fortunato, Alexandra Gonçalves, António Torres Marques, Ana Pimentel, Pedro Barquinha, Hugo Águas, Luís Pereira, Leandro Raniero, Gonçalo Gonçalves, Isabel Ferreira, R. Martins, “Multifunctional Thin Film Zinc Oxide Semiconductors: Application to Electronic Devices”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 3-7. *Cited: 6*
- 412) R. Martins, Daniel Costa, Hugo Águas, Fernanda Soares, António Torres Marques, Isabel Ferreira, P.M.R. Borges, Sergio Pereira, Leandro Raniero, Elvira Fortunato “Insights on Amorphous Silicon Nip and MIS 3D Position Sensitive Detectors”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 13-17. *Cited: 2*
- 413) Shibin Zhang, Z. Hu, Leandro Raniero, X. Liao, Isabel Ferreira, Elvira Fortunato, Paula M. Vilarinho, Luís Pereira, R. Martins “The Study of High Temperature Annealing of a-SiC:H Films”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 18-22
- 414) Luís Pereira, Pedro Barquinha, Elvira Fortunato, R. Martins “Poly-Si Thin Film Transistors: Effect of Metal Thickness on Silicon Crystallization”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 28-32
- 415) Luís Pereira, Pedro Barquinha, Elvira Fortunato, Rodrigo Martins, Electrical performances of low temperature annealed hafnium oxide deposited at room temperature, Materials Science Forum, Vol. 514 (2006), pp. 58-62. *Cited: 2*
- 416) Gonçalo Gonçalves, Elvira Fortunato, J.I. Martins, R. Martins “Effect of Oxidant/ Monomer Ratio on the Electrical Properties of Polypyrrole in Tantalum Capacitors”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 43-47. *Cited: 2*
- 417) Luís Pereira, Pedro Barquinha, Elvira Fortunato, R. Martins “Performances of Low Temperature Annealed Hafnium Oxide Deposited at Room Temperature”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 58-62
- 418) Leandro Raniero, Alexandra Gonçalves, Ana Pimentel, Shibin Zhang, Isabel Ferreira, Paula M. Vilarinho, Elvira Fortunato, R. Martins “Role of Hydrogen Plasma on Electrical and Optical Properties of Indium Zinc Transparent Conductive Oxide”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 63-67. *Cited: 1*
- 419) Pedro Barquinha, Elvira Fortunato, Alexandra Gonçalves, Ana Pimentel, António Torres Marques, Luís Pereira, R. Martins “A Study on the Electrical Properties of ZnO Based Transparent TFTs”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 68-72. *Cited: 7*
- 420) Alexandra Gonçalves, Gonçalo Gonçalves, Elvira Fortunato, António Torres Marques, Ana Pimentel, R. Martins, Maria Manuela Silva, Michael J. Smith, João Bela, João P. Borges “Study of Electrochromic Devices Incorporating a Polymer Gel Electrolyte Component”. Materials Science Forum (Advanced Materials Forum III) 514-516, (2006) pp. 83-87. *Cited: 2*
- 421) V. Santos, J.P. Borges, C. M. S. Ranito, E. Pires, H. Araújo, A. Marques, L. Tomás, E. Fortunato, R. Martins, Y. Nunes “Novel Multilayer Coatings on Polyethylene for Acetabular Devices”, Materials Science Forum (Advanced Materials Forum III) Vols. 514-516 (2006) pp 868-871.
- 422) E. Fortunato, A. Pimentel, A. Gonçalves, A. Marques and R. Martins, “High mobility amorphous/nanocrystalline indium zinc oxide deposited at room temperature”. Thin Solid Films, Volume 502, Issues 1-2, (2006) pp. 104-107. *Cited: 90*
- 423) P. Barquinha, E. Fortunato, A. Gonçalves, A. Pimentel, A. Marques, L. Pereira and R. Martins, “Influence of time, light and temperature on the electrical properties of zinc oxide TFTs”. Superlattices and Microstructures, 39, (2006) pp. 319-327. *Cited: 39*
- 424) Jinzhong Wang, Vincent Sallet, Gaëlle Amiri, Jean-François Rommelluere, Alain Lusson, E. Rzepka, John E Lewis, Pierre Galtier, Elvira Fortunato, Rodrigo Martins and Ouri Gorochoy, “Influence of the ex-situ and in-situ annealed self-buffer layer on ZnO film”. Phys. Stat. Sol. (c) 3, No. 4, (2006) pp. 1010–1013.
- 425) L. Pereira, H. Águas, M. Beckers, R.M.S. Martins, E. Fortunato and R. Martins “Spectroscopic ellipsometry study of nickel induced crystallization of a-Si”. Journal of Non-Crystalline Solids, Vol.352, issue1-9 (2006), pp. 1204-1209. *Cited: 9*

- 426) I. Ferreira, E. Fortunato, P. Vilarinho, A.S. Viana, A.R. Ramos, E. Alves and R. Martins "Hydrogenated silicon carbon nitride films obtained by HWCVD, PA-HWCVD and PECVD techniques". *J. Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1361-1366. *Cited: 50*
- 427) S. Zhang, L. Pereira, Z. Hu, L. Raniero, E. Fortunato, I. Ferreira and R. Martins "Characterization of nanocrystalline silicon carbide films". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1410-1415. *Cited: 7*
- 428) G. Gonçalves, A. Pimentel, E. Fortunato, R. Martins, E.L. Queiroz, R.F. Bianchi and R.M. Faria "UV and ozone influence on the conductivity of ZnO thin films". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1444-1447. *Cited: 40*
- 429) A. Pimentel, A. Gonçalves, A. Marques, R. Martins and E. Fortunato "Role of the thickness on the electrical and optical performances of undoped polycrystalline zinc oxide films used as UV detectors". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1448-1452. *Cited: 10*
- 430) R. Martins, P. Almeida, P. Barquinha, L. Pereira, A. Pimentel, I. Ferreira and E. Fortunato "Electron transport and optical characteristics in amorphous indium zinc oxide films". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1471-1474. *Cited: 90*
- 431) L. Pereira, L. Raniero, P. Barquinha, E. Fortunato and R. Martins "Impedance study of the electrical properties of poly-Si thin film transistors". *J. Non-Crystalline Solids*, Vol.352, (2006), pp. 1737-1740. *Cited: 3*
- 432) P. Barquinha, A. Pimentel, A. Marques, L. Pereira, R. Martins and E. Fortunato "Influence of the semiconductor thickness on the electrical properties of transparent TFTs based on indium zinc oxide". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1749-1752. *Cited: 250*
- 433) P. Barquinha, A. Pimentel, A. Marques, L. Pereira, R. Martins and E. Fortunato "Effect of UV and visible light radiation on the electrical performances of transparent TFTs based on amorphous indium zinc oxide". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1756-1760. *Cited: 104*
- 434) H. Águas, L. Pereira, L. Raniero, D. Costa, E. Fortunato and R. Martins "Investigation of a-Si:H 1D MIS position sensitive detectors for application in 3D sensors". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1787-1791. *Cited: 5*
- 435) J. Contreras, C. Baptista, I. Ferreira, D. Costa, S. Pereira, H. Águas, E. Fortunato, R. Martins "Amorphous silicon position sensitive detectors applied to micropositioning". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1792-1796. *Cited: 16*
- 436) M. Fernandes, M. Vieira and R. Martins "The laser scanned photodiode: Theoretical and electrical models of the image sensor". *J. Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1801-1804. *Cited: 5*
- 437) L. Raniero, E. Fortunato, I. Ferreira and R. Martins "Study of nanostructured/ amorphous silicon solar cell by impedance spectroscopy technique". *J. Non-Cryst. Sol.* Vol. 352, (2006), pp. 1880-1883. *Cited: 33*
- 438) Z. Hu, X. Liao, H. Diao, Y. Cai, S. Zhang, E. Fortunato and R. Martins "Hydrogenated p-type nanocrystalline silicon in amorphous silicon solar cells". *J. Non-Crystalline Solids*, Vol.352, (2006), pp. 1900-1903. *Cited: 52*
- 439) L. Raniero, I. Ferreira, L. Pereira, H. Águas, E. Fortunato and R. Martins "Study of nanostructured silicon by hydrogen evolution and its application in p-i-n solar cells". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1945-1948. *Cited: 22*
- 440) Y. Xu, Z. Hu, H. Diao, Y. Cai, S. Zhang, X. Zeng, H. Hao, X. Liao, E. Fortunato and R. Martins "Heterojunction solar cells with n-type nanocrystalline silicon emitters on p-type c-Si wafers". *Journal of Non-Crystalline Solids*, Vol.352, issue1-9 (2006), pp. 1972-1975. *Cited: 52*
- 441) R. Martins, V. Chu, E. Fortunato, JP Conde, I. Ferreira, "Proceedings of the Twenty First International Conference on Amorphous and Nanocrystalline Semiconductors" - Science and Technology - Calouste Gulbenkian Foundation, Lisbon, Portugal - September 4-9, 2005 Preface". *Journal of non-Crystalline Solids*, Vol. 352 (9-20) (2006), pp. VII. *Cited: 1*
- 442) N. Martins, P. Canhola, M. Quintela, I. Ferreira, L. Raniero, E. Fortunato and R. Martins. "Performances of an in-line PECVD system used to produce amorphous and nanocrystalline silicon solar cells". *Thin Solid Films*, Vol. 511-512 (2006), pp. 238-242. *Cited: 7*
- 443) L. Pereira, R.M.S. Martins, N. Schell, E. Fortunato and R. Martins, "Nickel-assisted metal-induced crystallization of silicon: Effect of native silicon oxide layer". *Thin Solid Films*, Vol. 511-512 (2006), pp. 275-279.

- 444) L. Raniero, I. Ferreira, A. Pimentel, A. Gonçalves, P. Canhola, E. Fortunato and R. Martins. "Role of hydrogen plasma on electrical and optical properties of ZGO, ITO and IZO transparent and conductive coatings". *Thin Solid Films*, Vol. 511-512 (2006), pp. 295-298. *Cited: 104*
- 445) I. Ferreira, L. Raniero, E. Fortunato and R. Martins, "Electrical properties of amorphous and nanocrystalline hydrogenated silicon films obtained by impedance spectroscopy". *Thin Solid Films*, Vol. 511-512 (2006), pp. 390-393. *Cited: 13*
- 446) L. Pereira, H. Águas, E. Fortunato and R. Martins. "Nanostructure characterization of high k materials by spectroscopic ellipsometry". *Applied Surface Science*, Vol. 253 (1) (2006), pp. 39-343. *Cited: 24*
- 447) S. Zhang, X. Liao, L. Raniero, E. Fortunato, Y. Xu, G. Kong, H. Águas, I. Ferreira and R. Martins. "Silicon thin films prepared in the transition region and their use in solar cells". *Solar Energy Materials and Solar Cells*, Vol. 90 (18-19) (2006) pp. 3001-3008. *Cited: 25*
- 448) JI Martins, SC Costa, M. Bazzouai, G. Goncalves, E. Fortunato, R. Martins. "Electrodeposition of polypyrrole on aluminium in aqueous tartaric solution". *Electrochimica Acta* Vol. 51 (26) (2006) pp. 5802-5810. *Cited: 45*
- 449) JI Martins, SC Costa, M. Bazzouai, G. Goncalves, E. Fortunato, R. Martins. "Conditions to prepare PPy/Al₂O₃/Al used as a solid-state capacitor from aqueous malic solutions". *Journal of Power Sources* 160 (2) (2006) pp. 1471-1479. *Cited: 17*
- 450) Jinzhong Wang, Vincent Sallet, Gaëlle Amiri, Jean-François Rommelluere, Alain Lusson, John E Lewis, Pierre Galtier, E. Fortunato, R. Martins and Ouri Gorochov "Influence of the self-buffer layer on ZnO film grown by atmospheric metal organic chemical vapor deposition". *Thin Solid Films* 515 (4) (2006), pp. 1527-1531. *Cited: 2*
- 451) L. Pereira, P. Barquinha, E. Fortunato and R. Martins. "Low temperature processed hafnium oxide: Structural and electrical properties". *Materials Science in Semiconductor Processing* 9 (6) (2006) pp. 1125-1132. *Cited: 29*
- 452) A. Pimentel, A. Goncalves, A. Marques, R. Martins, E. Fortunato, "Zinc oxide thin films used as an ozone sensor at room temperature", *Materials Research Society Symposium Proceedings* Vol. 915 (2006), pp. 243-248.

Year 2005

- 453) H. Águas, L. Pereira, D. Costa, E. Fortunato, R. Martins. "Super linear position sensitive detectors using MIS structures". *Optical Materials*, 27 (2005), pp. 1088-1092. *Cited: 15*
- 454) E. Fortunato, P.M.C. Barquinha, A.C.M.B.G. Pimentel, A.M.F. Gonçalves, A.J.S. Marques, L.M.N. Pereira, R. Martins. "Fully transparent ZnO thin film transistor produced at room temperature". *Advanced Materials*, 17, 5 (2005) pp. 590-594. *Cited: 998*
- 455) R. Martins, R. Igreja, I. Ferreira, A. Marques, A. Pimentel, A. Gonçalves, E. Fortunato. "Room temperature dc and ac electrical behaviour of undoped ZnO films under UV light". *Materials Science and Engineering B*, 118, 1-3 (2005), pp. 135-140. *Cited: 25*
- 456) L. Pereira, P. Barquinha, E. Fortunato, R. Martins. "Influence of the Oxygen/Argon ratio on the properties of sputtered hafnium oxide". *J. Mat. Science and Eng. B*, 118, 1-3 (2005), pp. 210-213. *Cited: 70*
- 457) H. Águas, L. Pereira, D. Costa, E. Fortunato, R. Martins. "Linearity and sensitivity of MIS Position Sensitive Detectors Using MIS structures". *J. of Materials Science*, 40 (6), (2005), pp. 1377-1381.
- 458) L. Pereira, H. Águas, E. Fortunato, R. Martins. "Metal Induced Crystallization: gold versus aluminium". *Journal of Materials Science*, 40 (6), (2005), pp. 1387-1391. *Cited: 9*
- 459) S. Zang, L. Raniero, E. Fortunato, X. Liao, Z. Hu, I. Ferreira, H. Águas, A.R. Ramos, E. Alves, R. Martins. "Characterization of silicon carbide thin films and their use in colour sensors". *Solar Energy Materials and Solar Cells*, 87 (1-4), (2005), pp. 343-348. *Cited: 5*
- 460) L. Raniero, N. Martins, P. Canhola, S. Zhang, S. Pereira, I. Ferreira, E. Fortunato, R. Martins. "Influence of the layer thickness and hydrogen dilution on electrical properties of large area amorphous silicon p-i-n solar cell". *Solar Energy Materials and Solar Cells*, 87 (1-4), (2005), pp. 349-355. *Cited: 14*
- 461) R. Martins, P. Barquinha, A. Pimentel, L. Pereira, and E. Fortunato. "Transport in high mobility amorphous wide band gap indium zinc oxide films". *Phys. stat. sol. a* Vol. 202, (2005), pp. R95– R97. *Cited: 142*

- 462) L. Pereira, P. Barquinha, E. Fortunato, R. Martins. "Influence of metal induced crystallization parameters on the performance of polycrystalline silicon thin film transistors". *Thin Sol. Films* 487 (1-2) (2005) pp. 102-106. *Cited: 20*
- 463) L. Raniero, S. Zhang, H. Águas, I. Ferreira, R. Igreja, E. Fortunato and R. Martins. "Role of Buffer Layer on the Performances of Amorphous Silicon Solar Cells with Incorporated Nanoparticles Produced by plasma enhancement chemical vapor deposition at 27.12 MHz". *Thin Solid Films*, 4487 (1-2) (2005) pp. 170-173. *Cited: 26*
- 464) E. Fortunato, P. Barquinha, A. Pimentel, A. Gonçalves, A. Marques, L. Pereira, R. Martins. "Recent advances in ZnO transparent thin film transistors". *Thin Solid Films*, 4487 (1-2) (2005) pp. 205-211. *Cited: 456*
- 465) A. Pimentel, E. Fortunato, A. Gonçalves, A. Marques, H. Águas, L. Pereira, I. Ferreira, R. Martins. "Polycrystalline intrinsic zinc oxide to be used in transparent electronic devices". *Thin Solid Films*, 487 (1-2) (2005), pp. 212-215. *Cited: 64*
- 466) S. Zhang, L. Raniero, E. Fortunato, I. Ferreira, H. Águas, R. Martins, "Amorphous silicon-based PINIP structure for color sensor". *Thin Solid Films*, 487 (1-2) (2005) pp. 268-270. *Cited: 6*
- 467) P. Canhola, N. Martins, L. Raniero, S. Pereira, E. Fortunato, I. Ferreira, R. Martins "Role of annealing environment on the performances of large area ITO films produced by rf magnetron sputtering". *Thin Solid Films*, 487 (1-2) (2005) pp. 271-276. *Cited: 57*
- 468) E. Fortunato, L. Pereira, H. Águas, I. Ferreira, R. Martins "Flexible a-Si:H Position Sensitive Detectors". *Proc. IEEE*, 93 (7), (2005) pp. 1281-1286. *Cited: 33*
- 469) L. Pereira, M. Beckers, RMS Martins, E. Fortunato, R. Martins, "Optimization of the metal/silicon ratio on nickel assisted crystallization of amorphous silicon", *Materials Research Society Symposium Proceedings*, Vol. 869 (2005), pp. 45-50.
- 470) L Pereira, D Costa, E Fortunato, R Martins, Linearity and sensitivity of MIS position sensitive detectors, *Journal of Materials Science*, Vol. 40 (2005), pp. 1377-1381. *Cited: 16*
- 471) S. Zhang, L. Raniero, E. Fortunato, L. Pereira, H. Aguas, I. Ferreira, R. Martins, "Amorphous silicon based p-i-i-n structure for color sensor", *Materials Research Society Symposium Proceedings*, Vol. 862 (2005), pp. 679-683.
- 472) H. Aguas, L. Pereira, L. Raniero, E. Fortunato, R. Martins, "Effect of the load resistance in the linearity and sensitivity of MIS position sensitive detectors", *Materials Research Society Symposium Proceedings*, Vol. 862 (2005), pp. 691-696.
- 473) E. Fortunato, P. Barquinha, A. Pimentel, A. Goncalves, A. Marques, L. Pereira, R. Martins, "Zinc oxide thin-film transistors", *Book Series* (eds N. Nickel and E. Terukov): *NATO Science series, series II: Mathematics, Physics and Chemistry*, Vol. 194 (2005), pp. 225-238.
- 474) L. Raniero, I. Ferreira, H. Aguas, S. Zhang, E. Fortunato, R. Martins, "Study of a-SiC: H buffer layer on nc-Si/a-Si: H solar cells deposited by PECVD technique", *Proceedings of Thirty-First IEEE Photovoltaic Specialists Conference - 2005 Book Series: IEEE Photovoltaic Specialists Conference*, (2005), pp. 1548-1551. *Cited: 1*

Year 2004

- 475) E. Fortunato, A. Gonçalves, A. Marques, A. Viana, H. Águas, L. Pereira, I. Ferreira, P. Vilarinho, R. Martins. "New developments in gallium doped zinc oxide deposited on polymeric substrates by rf magnetron sputtering". *Surface and Coatings Technology*, 180-181(2004) pp. 20-25. *Cited: 32*
- 476) E. Fortunato, V. Assunção, A. Gonçalves, A. Marques, H. Águas, L. Pereira, I. Ferreira, R. Martins. "High quality conductive gallium doped zinc oxide films deposited at room temperature". *Thin Solid Films*, 451-452 (2004) 443-447. *Cited: 128*
- 477) H. Águas, L. Raniero, L. Pereira, E. Fortunato, R. Martins. "Effect of discharge frequency on the properties and growth rate of polymorphous silicon". *Thin Solid Films*, 451-452 (2004) 264-268. *Cited: 8*
- 478) L. Pereira, H. Águas, R.M. Martins, F.B. Fernandes, E. Fortunato, R. Martins. "Polycrystalline silicon obtained by metal induced crystallization using different metals". *Thin Solid Films*, 451-452 (2004) 334-339. *Cited: 45*
- 479) H. Águas, A. Goulet, L. Pereira, E. Fortunato, R. Martins. "Effect of tunnelling oxide films thickness and density on the performance of MIS photodiodes". *Thin Solid Films*, 451-452 (2004) 361-365. *Cited: 3*

- 480) I. Ferreira, E. Fortunato, R. Martins. "Properties of Si:H nanocrystalline undoped and doped films produced by HWP-CVD technique". *Thin Solid Films*, 451-452 (2004) 366-369.
- 481) H. Cui, V. Teixeira, A. Monteiro, E. Fortunato, R. Martins, E. Bertran. "Physical properties of sputtered ITO and WO₃ thin films". *Materials Science Forum*, 455-456 (2004) pp. 7-11. *Cited: 3*
- 482) E. Fortunato, V. Assunção, A. Marques, A. Gonçalves, H. Águas, L. Pereira, I. Ferreira, F. Fernandes, R. J. Silva, R. Martins. "ZnO:Ga thin films produced by rf sputtering at room temperature: effect of the power density". *Materials Science Forum*, 455-456 (2004) pp. 12-15. *Cited: 6*
- 483) Elvira Fortunato, Pedro Barquinha, Ana Pimentel, Luís Pereira, Rodrigo Martins, Fast and Invisible ZnO based Thin Film Transistors, *Appl. Phys. Lett.* Vol. 85 (2004) pp. 2451. *Cited: 4*
- 484) L. Pereira, H. Águas, R. Igreja, R. Miguel Martins, N. Nedev, L. Raneiro, E. Fortunato, R. Martins. "Sputtering preparation of silicon nitride thin films for applications as gate dielectric". *Materials Science Forum*, 455-456 (2004) pp. 69-72.
- 485) H. Águas, L. Pereira, L. Raniero, E. Fortunato, R. Martins. "MIS Photodiodes of pm-Si deposited at high growth rates by 27.12 MHz PECVD discharge". *Mat. Science Forum*, 455-456 (2004) pp. 73-76.
- 486) S. Zhang, Y. Xu, X. Liao, R. Martins, E. Fortunato, X. Zeng, Z. Hu, G. Kong. "Characterization of polymorphous silicon thin films and solar cells". *Mat. Science Forum*, 455-456 (2004) pp. 77-80. *Cited: 1*
- 487) M. Fernandes, M. Vieira, R. Martins, "Dynamic characterization of large area image sensing structures based on A-Si:C". *Materials Science Forum*, 455-456 (2004) pp. 86-90.
- 488) H. Águas, L. Pereira, I. Ferreira, A.R. Ramos, A.S. Viana, J. Andreu, P. Vilarinho, E. Fortunato, R. Martins. "Effect of annealing on Gold rectifying contacts in amorphous silicon". *Materials Science Forum*, 455-456 (2004) pp. 96-99. *Cited: 3*
- 489) R. Martins, H. Águas, I. Ferreira, E. Fortunato, L. Raniero, P. Cabarrocas "Composition, structure and optical characteristics pm-Si films deposited by PECVD at 27.12 MHz". *Materials Science Forum*, 455-456 (2004) pp. 100-103. *Cited: 1*
- 490) L. Raniero, H. Águas, L. Pereira, E. Fortunato, I. Ferreira, R. Martins. "Batch Processing Method to Deposit a-Si:H Films by PECVD". *Materials Science Forum*, 455-456 (2004) pp. 104-107. *Cited: 3*
- 491) N. Nedev, G. Beshkov, E. Fortunato, S. S. Georgiev, T. Ivanov, L. Raniero, S. Zhang, R. Martins, "Influence of the rapid thermal annealing on the properties of thin a-Si films". *Materials Science Forum*, 455-456 (2004) pp. 108-111.
- 492) L. Pereira, H. Águas, L. Raniero, R. M. S. Martins, E. Fortunato, R. Martins, "Role of Substrate on the growth process of polycrystalline silicon thin films by low-pressure chemical vapour deposition". *Materials Science Forum*, 455-456 (2004) pp. 112-115.
- 493) A. Silva, L. Raniero, E. Ferreira, H. Águas, L. Pereira, E. Fortunato, R. Martins, "Silicon etching in CF₄/O₂ and SF₆ atmospheres". *Materials Science Forum*, 455-456 (2004) pp. 120-123. *Cited: 2*
- 494) S. Mei, J. Yang, J.M. Ferreira, R. Martins, "Aqueous Tape Casting of Low-k Cordierite Substrate: The influence of glass Content". *Materials Science Forum*, 455-456 (2004) pp. 168-171. *Cited: 1*
- 495) L. Raniero, R. Martins, H. Águas, S. Zang, I. Ferreira, L. Pereira, E. Fortunato and L. Boufendi, "Growth of Polymorphous Silicon films Deposited by PECVD at 13.56 MHz". *Materials Science Forum*, 455-456 (2004) pp. 532-535. *Cited: 1*
- 496) I. Ferreira, E. Fortunato, R. Martins, "Ethanol Vapour detector based in porous a-Si:H films produced by HW-CVD technique". *Sensors and Actuators B*, 100, issue 1-2 (2004) pp. 236-239.
- 497) L. Raniero, L. Pereira, S. Zang, I. Ferreira, H. Águas, E. Fortunato, R. Martins, "Characterization of the density os states of polymorphous silicon films produced at 13.56 MHz and 27.12 MHz using CPM and SCL techniques". *J. Non-Cristaline Solids*, 338-340 (2004) pp. 206-210. *Cited: 12*
- 498) L. Pereira, H. Águas, R. Miguel Martins, E. Fortunato, R. Martins, "Polycrystalline silicon obtained by gold metal induced crystallization". *J. Non-Crist. Solids*, 338-340 (2004) pp. 178-182. *Cited: 22*
- 499) H. Águas, L. Raniero, L. Pereira, A.F. Viana, E. Fortunato, R. Martins. "Role of the rf frequency on the structure and composition of polymorphous silicon". *J. Non-Cristaline Solids*, 338-340 (2004) pp. 183-187. *Cited: 2*
- 500) S. Zhang, L. Raniero, E. Fortunato, L. Pereira, N. Martins, P. Canhola, I. Ferreira, N. Nedev, H. Águas, R. Martins, "The characterization of silicon carbide thin films prepared by VHF PECVD technology". *J. Non-Crist. Solids*, 338-340 (2004) pp. 530-533. *Cited: 26*
- 501) S. Zhang, X. Liao, Y. Xu, R. Martins, E. Fortunato, G. Kong. "The diphasic nc-Si/a-Si:H thin film with improved medium-range order". *J. Non-Crist. Solids*, 338-340 (2004) pp. 188-191. *Cited: 19*

- 502) E. Fortunato, A. Pimentel, L. Pereira, A. Gonçalves, G. Lavareda, H. Águas, I. Ferreira, C.N. Carvalho, R. Martins. "High field effect mobility zinc oxide thin film transistors produced at room temperature". *J. Non-Crist. Solids*, 338-340 (2004) pp. 806-809. *Cited: 170*
- 503) H. Águas, L. Pereira, I. Ferreira, A.R. Ramos, A.S. Viana, J. Andreu, P. Vilarinho, E. Fortunato, R. Martins, E. Fortunato. "Effect of an interfacial oxide layer in the annealing behaviour of Au/a-Si:H MIS photodiodes". *J. Non-Crist. Solids*, 338-340 (2004) pp. 810-813. *Cited: 2*
- 504) L. Pereira, A. Marques, H. Águas, N. Nedev, S. Giorgiev, R. Igreja, E. Fortunato, R. Martins. "Performances of hafnium oxide produced by radio frequency sputtering for gate dielectric applications". *Mat. Science and Engineering B-Solid*, 1-3 (2004) pp. 89-93. *Cited: 51*
- 505) H. Águas, L. Pereira, RJC Silva, E. Fortunato, R. Martins. "Effect of the tunneling oxide growth by H₂O₂ on the performance of MIS photodiodes". *Mat. Sc. and Eng. B-Solid*, 1-3 (2004) pp. 256-259.
- 506) R. Martins, E. Fortunato, P. Nunes, I. Ferreira, A. Marques, M. Bender, N. Katsarakis, V. Cimalla, and G. Kiriakidis. "Zinc Oxide as Ozone Sensor", *J. Appl. Phys.*, 96, 3 (2004) pp. 1398-1408. *Cited: 229*
- 507) M. Fernandes, M. Vieira, I. Rodrigues, R. Martins. "Large area image sensing structures based on a-SiC: a dynamic characterization". *Sensors and Actuators A*, 113, (3) (2004), pp. 360-364. *Cited: 21*
- 508) M. Fernandes, M. Vieira R. Martins. "Novel Structure for Large Area Image Sensing". *Sensors and Actuators A*, 15, (2-3) (2004) pp. 357-361. *Cited: 3*
- 509) E. Fortunato, L. Pereira, H. Águas, I. Ferreira, R. Martins. "Flexible position sensitive photodetectors based on a-Si:H heterostructures". *Sensors and Actuators A: Physical*, 116, 1 (2004), pp. 119-124. *Cited: 9*
- 510) I. Ferreira, R. Igreja, E. Fortunato, R. Martins. "Porous a/anc-Si:H films produced by HW-CVD as ethanol detector and primary fuel cell". *Sensors and Actuators B*, 103, 1-2 (2004), pp. 344-349. *Cited: 16*
- 511) I. Ferreira, E. Fortunato, R. Martins, "Ethanol vapour detector based in porous a-Si: H films produced by HW-CVD technique". *Sensors and Actuators B*, 100, 1-2 (2004), pp. 236-239. *Cited: 5*
- 512) E. Fortunato, P. Barquinha, A. Pimentel, A. Gonçalves, A. Marques, R. Martins and L. Pereira. "Wide band gap high mobility ZnO thin film transistors produced at room temperature". *Applied Physics Letters*, 85,13 (2004) pp. 2541-2543. *Cited: 1263*
- 513) Hermann Grimmeiss, Rodrigo Martins, José Martinez Duart. "Excellence in European Universities". *Materials Today*, December 2004, pp. 56-60.
- 514) L. Raniero, N. Martins, P. Canhola, S. Pereira, I. Ferreira, E. Fortunato, R. Martins. "Spectral response of large area amorphous silicon solar cells". *Journal of High Temperature Materials Process (An international Quarterly of High Technology Plasma Processes)*, Vol. 8, issue 2 (2004), pp. 293-300. *Cited: 1*
- 515) P. Barquinha, L. Pereira, H. Águas, E. Fortunato, R. Martins. "Influence of the deposition conditions on the properties of titanium oxide produced by rf magnetron sputtering". *Mat. Science and Semic. Processing*, Vol. 7, issue 4-6 (2004), pp. 243-247. *Cited: 20*
- 516) E. Fortunato, A. Goncalves, CN de Carvalho, A. Pimentel, G. Lavareda, A. Marques, R. Martins, "Enhancement of the electrical properties of ITO deposited on polymeric substrates by using a ZnO buffer layer", *Materials Research Society Symp. Proceedings Vol. 814* (2004), pp. 231-236.
- 517) E. Fortunato, P. Barquinha, A. Pimentel, A. Goncalves, L. Pereira, A. Marques, R. Martins, "Next generation of thin film transistors based on zinc oxide", *Materials Research Society Symposium Proceedings Vol. 811* (2004), pp. 347-352.
- 518) E. Fortunato, A. Pimentel, A. Goncalves, A. Marques, R. Martins, "High mobility nanocrystalline indium zinc oxide deposited at room temperature", *Materials Research Society Symposium Proceedings Vol. 811* (2004), pp. 437-442.

Year 2003

- 519) V. Assunção, E. Fortunato, A. Marques, R. Martins. "Influence of the deposition pressure on the properties of transparent and conductive ZnO:Ga thin film produced by rf magnetron sputtering at room temperature". *Thin Solid Films*, 427 (2003) pp. 401-406. *Cited: 377*
- 520) I. Ferreira, E. Fortunato, R. Martins. "From porous to compact films by changing the onset of HW-CVD process". *Thin Solid Films*, 427 (2003) pp. 225-230. *Cited: 6*
- 521) I. Ferreira, M.E.V. Costa, E. Fortunato, R. Martins. "Combining HW-CVD and PECVD techniques to produce a/c-Si:H films". *Thin Solid Films*, 427 (2003) pp. 231-235. *Cited: 3*

- 522) H. Águas, P. Roca i Cabarrocas, S. Lebib, V. Silva, E. Fortunato, R. Martins. "Polymorphous silicon deposited in large area reactor at 13 MHz and 27 MHz". *Thin Solid Films*, 427 (2003) pp. 6-10. *Cited: 12*
- 523) H. Águas, A. Gonçalves, L. Pereira, R. Silva, E. Fortunato, R. Martins. "Spectroscopic Ellipsometry study of amorphous silicon anodically oxidised". *Thin Solid Films*, 427 (2003) pp. 345-349. *Cited: 13*
- 524) M. Bender, E. Fortunato, P. Nunes, I. Ferreira, A. Marques, R. Martins, N. Katsarakis, V. Cimalla, G. Kiriakidis. "Highly sensitive ZnO ozone detector at room temperature". *Japanese Journal of Applied Physics Letters*, 42, nº 4B (2003) pp. L435-L437. *Cited: 62*
- 525) H. Águas, V. Silva, E. Fortunato, S. Lebib, P. Roca i Cabarrocas, I. Ferreira, L. Guimarães, R. Martins, "Large Area Deposition of Polymorphous Silicon by PECVD at 27.12 MHz and 13.56 MHz". *Japanese Journal of Applied Physics*, 42 (2003) 4935-39. *Cited: 43*
- 526) V. Assunção, E. Fortunato, A. Marques, A. Gonçalves, I. Ferreira, H. Águas, R. Martins. "New challenges on gallium doped zinc oxide films prepared by rf magnetron sputtering". *Thin Solid Films*, 442 (2003) 102-106. *Cited: 114*
- 527) E. Fortunato, A. Gonçalves, V. Assunção, A. Marques, H. Águas, L. Pereira, I. Ferreira, R. Martins. "Growth of ZnO:Ga thin films at room temperature on polymeric substrates: thickness dependence. *Thin Solid Films*, 442 (2003) 121-126. *Cited: 126*
- 528) E. Fortunato, M.H. Godinho, H. Santos, A. Marques, V. Assunção, L. Pereira, H. Águas, I. Ferreira, R. Martins. "Surface modification of a new flexible substrate based on hydroxypropylcellulose for optoelectronic applications". *Thin Solid Films*, 442 (2003) 127-131. *Cited: 19*
- 529) R. Martins, H. Águas, I. Ferreira, E. Fortunato S. Lebib, P. Roca i Cabarrocas, L. Guimarães, "Polymorphous silicon films deposited at 27.12 MHz". *Adv. Materials CVD*, 9 (6) (2003) pp.333-337. *Cited: 8*
- 530) V. Musat V, R. Monteiro, R. Martins, "Thermal decomposition of a sol-gel precursor for c-axis oriented Al-doped ZnO thin films". *Revue Romaine de Chimie*, 48 (12) (2003), pp.967-974.
- 531) E. Fortunato, A. Goncalves, A. Marques, V. Assunção, I. Ferreira, H. Aguas, L. Pereira, R. Martins, "Gallium zinc oxide coated polymeric substrates for optoelectronic applications", *Materials Research Society Symposium Proceedings Vol. 769* (2003), pp. 291-296.
- 532) E. Fortunato, V. Assuncao, A. Marques, I. Ferreira, H. Aguas, L. Pereira, R. Martins, "Characterization of transparent and conductive ZnO : Ga thin films produced by rf sputtering at room temperature" *Materials Research Society Symposium Proceedings Vol. 763* (2003), pp. 225-230.
- 533) H. Aguas, L. Pereira, A. Goulet, R. Silva, E. Fortunato, R. Martins, "Correlation between the tunnelling oxide and I-V curves of MIS photodiodes", *Materials Research Society Symposium Proceedings Vol. 762* (2003), pp. 217-222.
- 534) H. Aguas, L. Raniero, L. Pereira, E. Fortunato, PRI Cabarrocas, R. Martins, "Polymorphous silicon films produced in large area reactors by PECVD at 27.12 MHz and 13.56 MHz", *Materials Research Society Symposium Proceedings Vol. 762* (2003), pp. 589-594.

Year 2002

- 535) I. Ferreira, E. Fortunato and R. Martins. "Hot-wire plasma assisted chemical vapor deposition: A deposition technique to obtain silicon thin films". *Journal of Applied Physics*, Vol. 91, (3), (2002) pp. 1644-1649. *Cited: 3*
- 536) R. Martins, H. Águas, V. Silva, I. Ferreira, A. Cabrita and E. Fortunato. "Silicon nanostructure thin film materials". *Vacuum*, 64 (2002) pp. 219-226. *Cited: 2*
- 537) E. Fortunato, P. Nunes, D. Costa, D. Brida, I. Ferreira, R. Martins. "Characterization of aluminium doped zinc oxide thin films deposited on polymeric substrates". *Vacuum*, 64 (2002) pp. 233-236. *Cited: 67*
- 538) I. Ferreira, A. Cabrita, F. Braz Fernandes, E. Fortunato, R. Martins. "Morphology and structure of nanocrystalline p-doped silicon films produced by hot wire technique". *Vacuum*, 64 (2002) pp. 237-243. *Cited: 9*
- 539) I. Ferreira, A. Cabrita, E. Fortunato and R. Martins. "Composition and structure of silicon-carbide alloys obtained by hot wire and hot wire plasma assisted techniques." *Vacuum*, 64 (2002) pp. 261-266. *Cited: 16*
- 540) P. Nunes, E. Fortunato, P. Tonello, F. Braz Fernandes, P. Vilarinho, R. Martins. "Effect of different dopant element on the properties of ZnO thin films". *Vacuum*, 64 (2002) pp. 281-285. *Cited: 453*

- 541) P. Nunes, D. Costa, E. Fortunato, R. Martins. "Performances presented by zinc oxide thin films deposited by r.f. magnetron sputtering". *Vacuum*, 64 (2002) pp. 293-297. *Cited: 140*
- 542) H. Águas, R. Martins, and E. Fortunato. "Influence of a dc grid on silane rf plasma properties". *Vacuum*, 64 (2002) pp. 387-392. *Cited: 4*
- 543) Sen Mei, Juan Yang, Regina Monteiro, Rodrigo Martins and José Maria F. Ferreira, "Synthesis, Characterization and Processing of Cordierite-Glass Particles Modified by Coating with an Alumina Precursor". *J. of American Ceramics Society*, 85 (2002) pp. 55-60. *Cited: 5*
- 544) V. Teixeira, H.N. Cui, L.J. Meng, E. Fortunato and R. Martins. "Amorphous ITO Films prepared by dc sputtering for electrochromic applications". *Thin Solid Films*, 420-421 (2002) pp. 70-75. *Cited: 112*
- 545) H. Águas, E. Fortunato, V. Silva, L. Pereira and R. Martins. "High quality a-Si:H films for MIS device applications". *Thin Solid Films*, 403-404 (2002) pp. 26-29. *Cited: 10*
- 546) E. Fortunato, P. Nunes, A. Marques, D. Costa, H. Águas, I. Ferreira, M.E.V. Costa, M.H. Godinho, P.L. Almeida, J.P. Borges, R. Martins, P. Vilarinho. "Transparent conductive ZnO:Al thin film deposited on polymer substrates by r.f. magnetron sputtering". *Surface and Coating Technology*, 151-152 (2002) pp. 247-251. *Cited: 74*
- 547) P.L. Almeida, M.H. Godinho, M.T. Cidade, P. Nunes, A. Marques, R. Martins, E. Fortunato and J.L. Figueirinhas. "Composite systems for flexible display applications from cellulose derivatives". *Synthetic Metals*, 127 (2002) pp. 111-114. *Cited: 11*
- 548) Francisco M. Braz Fernandes, Rui Martins, M. Teresa Nogueira, Rui J. Silva, Patricia Nunes, Daniel Costa, Isabel Ferreira and Rodrigo Martins. "Structural Characterisation of NiTi Thin Film Shape Memory Alloys". *Sensors and Actuators A*, Vol. 99, (2002), pp. 53-56. *Cited: 16*
- 549) H. Águas, E. Fortunato and R. Martins. "Role of the i-layer surface properties on the performance of a-Si:H barrier Schottky diodes". *Sensors and Actuators A*, Vol. 99, 1-2 (2002) pp 220-223. *Cited: 2*
- 550) I. Ferreira, E. Fortunato, L. Pereira, M.E. Costa, R. Martins. "The properties of a-Si:H films deposited on mylar substrates by hot-wire plasma assisted technique". *Journal of Non-Crystalline Solids*, 299-302 (2002) pp. 30-35.
- 551) D. Brida, E. Fortunato, I. Ferreira, H. Águas R. Martins. "New insights on large area flexible position sensitive detectors". *Journal of Non-Crystalline Solids*, 299-302 (2002) pp. 1272-1276. *Cited: 46*
- 552) A. Cabrita, H. Águas, I. Ferreira, E. Fortunato, D. Brida, L. Pereira, J. Figueiredo, V. Silva and R. Martins. "Performances of a-Si_{1-x}C_{1-x}H Schottky barrier and p.i.n diodes used as position sensitive detectors". *J. Non-Crystalline Solids*, 299-302 (2002) pp. 1277-1282. *Cited: 9*
- 553) R. Martins, E. Fortunato, J. Figueiredo, F. Soares, D. Brida, V. Silva, A. Cabrita. "32 linear array position sensitive detector based on pin a-Si:H micro devices". *Journal of Non-Crystalline Solids*, 299-302 (2002) pp. 1283-1288. *Cited: 9*
- 554) L. Pereira, D. Brida, E. Fortunato, I. Ferreira, H. Águas, V. Silva, H. Águas, M.F.M. Costa, V. Teixeira, R. Martins. "a-Si:H interface optimisation for thin film position sensitive detectors produced on polymeric substrates". *Journal of Non-Crystalline Solids*, 299-302 (2002) pp. 1289-1294. *Cited: 16*
- 555) A. L. Kholkin, R. Martins H. Águas, I. Ferreira, V. Silva, O. A. Smirnova, M. E. V. Costa, P. M. Vilarinho, E. Fortunato and J.L. Baptista. "Metal Ferroelectric thin film devices". *Journal of Non-Crystalline Solids*, 299-302 (2002) pp. 1311-1315. *Cited: 10*
- 556) R. Martins, I. Ferreira, H. Águas, V. Silva, E. Fortunato and L. Guimarães. "Engineering of a-Si:H device stability by suitable design of the interfaces". *Solar Energy Materials and Solar Cells*, 73, (2002) pp. 39-49. *Cited: 8*
- 557) A. Fantoni, M. Vieira, R. Martins. "Influence of the intrinsic layer characteristics on a-Si:H P-I-N solar cell performance analysed by means of a computer simulation". *Solar Energy Materials and Solar Cells*, 73, (2002) 151-162. *Cited: 40*
- 558) Sen Mei, Juan Yang, José Maria F. Ferreira, Rodrigo Martins. "Optimisation of parameters for aqueous tape-casting of cordierite-based glass ceramics by Taguchi method". *Materials Science & Engineering A*, 334 (2002) pp. 11-18. *Cited: 26*
- 559) E. Fortunato, P. Nunes, A. Marques, D. Costa, H. Águas, I. Ferreira, M.E.V. Costa, M.H. Godinho, P.L. Almeida, J.P. Borges e R. Martins. "Influence of the strain on the electrical resistance of zinc oxide thin films deposited on polymer substrates". *Adv. Eng. Materials*, Vol. 4, (2002) pp. 610-612. *Cited: 39*
- 560) E. Fortunato, D. Brida, L. Pereira, H. Águas, V. Silva, I. Ferreira, M.F.M. Martins Costa, V. Teixeira and R. Martins. "Dependence of the strains and residual mechanical stresses on the performances

- presented by a-Si:H thin film position sensors". *Adv. Eng. Materials*, Vol. 4, (2002) pp. 612-616. *Cited: 8*
- 561) M. Bender, E. Gagaoudakis, E. Douloufakis, E. Natsakou, N. Katsarakis, V. Cimalla, G. Kiriakidis, E. Fortunato, P. Nunes, A. Marques, R. Martins, E. Fortunato. "Production and characterization of Zinc oxide thin films for room temperature ozone sensing". *Thin Solid Films*, 418 (2002) pp. 61-68. *Cited: 120*
- 562) H. Seiroco, M. Vicente, J. Ferreira, F.B. Fernandes, A. P. Marvão, J.I. Martins, E. Fortunato, R. Martins. New Adhesion Process based in lead free solder applied in electronic power devices. *Key Engineering Materials*, 230-232 (2002) pp. 92-95.
- 563) A. M. Lopes, P. Nunes, P. Vilarinho, R. Monteiro, E. Fortunato, R. Martins. "Study of the sensing mechanism of SnO₂ thin film gas sensors using Hall effect measurements". *Key Engineering Materials*, 230-232 (2002) pp. 357-360. *Cited: 1*
- 564) P. Nunes, E. Fortunato, R. Martins, P. Vilarinho. "Properties presented by ZnO thin Films deposited by Magnetron Sputtering and Spray Pyrolysis". *Key Eng. Materials*, 230-232 (2002) pp. 424-431. *Cited: 2*
- 565) A.L. Kholkin, S. Iakovlev, , E. Fortunato and R. Martins, I. Ferreira, V. Shvartsman and J.L. Baptista. "Optical and photoelectric properties of PZT films for microelectronic applications". *Key Engineering Materials*, 230-232 (2002) pp. 563-566. *Cited: 3*
- 566) E. Fortunato, P. Nunes, A. Marques, D. Costa, H. Águas, I. Ferreira, M. E. V. Costa and R. Martins. "Highly conductive/transparent ZnO:Al thin film deposited at room temperature by r.f. magnetron sputtering". *Key Engineering Materials*, 230-232 (2002) pp. 571-574. *Cited: 5*
- 567) A. Cabrita, L. Pereira, D. Brida, V. Silva, I. Ferreira, E. Fortunato and R. Martins. "Role of the density of states in the colour selection of the collection spectrum of amorphous silicon based Schottky photodiodes". *Key Engineering Materials*, 230-232 (2002) pp. 559-562.
- 568) Hugo Águas, R. Martins, E. Fortunato. "The influence of the Plasma Regime on the Structural, Optical and Transport Properties of a-Si:H Thin Films". *Key Eng. Mat.* 230-232 (2002) pp. 583-586.
- 569) H. Águas, E. Fortunato, L. Pereira, V. Silva and R. Martins. "Role of the i Layer Thickness on the Performance of a-Si:H Schottky Barrier Diodes". *Key Eng. Materials*, 230-232 (2002) pp. 587-590.
- 570) I. Ferreira, P. Vilarinho, F. Fernandes, E. Fortunato and R. Martins. "influence of hydrogen gas dilution on the properties of silicon doped thin films prepared by hot wire plasma assisted technique". *Key Engineering Materials*, 230-232 (2002) pp. 591-594. *Cited: 1*
- 571) Patricia Nunes, Francisco M. Braz Fernandes, Rui J.C. Silva, Elvira Fortunato, R. Martins. "Structural characterisation of zinc oxide thin films produced by spray pyrolysis". *Key Engineering Materials*, 230-232 (2002) pp. 599-602.
- 572) Rodrigo Martins, Isabel Ferreira and Elvira Fortunato. "Growth model of gas species produced by hot-wire and hot-wire plasma assisted techniques". *Key Eng. Mat.*, 230-232 (2002) pp. 603-606.

Year 2001

- 573) H. Águas, R. Martins, E Fortunato. "Role of ion bombardment on the properties of a-Si:H films". *Vacuum*, 60 (2001) pp. 247-254. *Cited: 13*
- 574) R. Martins, I. Ferreira, A. Cabrita, H. Águas, V. Silva, E. Fortunato. "New steps to improve the a-Si:H device stability by design of the interfaces". *Adv. Eng. Materials*, Vol.3, (2001) pp. 170-173.
- 575) R. Martins, P. Teodoro, F. Soares, I. Ferreira, N. Guimarães, E. Fortunato, J. Borges, G. José, A. Groth, L. Schultze, D. Berndt, F. Reichel and F. Stam. "Application of amorphous silicon thin film position sensitive detector to optical rulers". *Adv. Engineering Materials*, Vol. 3 nº3 (2001) pp. 174-177. *Cited: 6*
- 576) R. Martins, H. Águas, I. Ferreira, V. Silva, A. Cabrita, E. Fortunato. "Role of ion bombardment and plasma impedance on the performances presented by undoped a-Si:H films". *Thin Solid Films*, 383, (2001) pp. 165-168. *Cited: 12*
- 577) I. Baía, B. Fernandes, P. Nunes, M. Quintela, R. Martins. "Influence of the process parameters on structural and electrical properties of r.f. magnetron sputtering ITO films". *Thin Solid Films*, Vol. 383 (2001) pp.244-247. *Cited: 48*
- 578) P. Nunes, E. Fortunato, R. Martins. "Influence of the post treatment on the properties of ZnO thin films". *Thin Solid Films*, Vol. 383 (2001) pp 277-280. *Cited: 225*

- 579) H. Águas, Y. Nunes, E. Fortunato, P. Gordo, M. Maneira, R. Martins. "Correlation between a-Si:H surface oxidation process and the performances of MIS structures". *Thin Solid Films*, Vol. 383 (2001) pp. 185-188. *Cited: 7*
- 580) E. Fortunato, D. Brida, I. Ferreira, H. Águas, P. Nunes, R. Martins. "Production and characterization of large area flexible thin film position sensitive detectors". *Thin Solid Films*, Vol. 383 (2001) pp. 310-313. *Cited: 22*
- 581) H. Águas, A. Marques, R. Martins, E. Fortunato. "Fast and Cheap Method to Qualitatively Measure the Thickness and Uniformity of ZrO₂ Thin Films". *Mat. Science in Semiconductor Processing* 4 (2001) pp. 319-321. *Cited: 6*
- 582) R. Martins, H. Águas, A. Cabrita, P. Tonello, V. Silva, I. Ferreira, E. Fortunato and L. Guimarães. "New nanostructured silicon films grown by PECVD technique under controlled powder formation conditions". *Solar Energy*, Vol. 69, nº1-6 (2001) pp.263-269. *Cited: 6*
- 583) R. Martins, H. Águas, I. Ferreira, E. Fortunato and L. Guimarães. "Towards the improvement of the stability of a-Si:H pin devices". *Solar Energy*, Vol. 69, nº 1-6 (2001), pp. 257-262. *Cited: 6*
- 584) I. Ferreira, F. Braz Fernandes, P. Vilarinho, E. Fortunato, and R. Martins. "Nanocrystalline p-type silicon films produced by hot wire plasma assisted technique". *Materials Science & Engineering C*, Vol. 15 (2001) pp. 137-140. *Cited: 4*
- 585) I. Ferreira, A Cabrita, F Braz Fernandes, E Fortunato, R Martins. "Role of the gas pressure and hydrogen dilution on the properties of large area nanocrystalline p-type silicon films produced by hot wire plasma assisted technique". *Materials Science & Engineering C*, Vol. 15 (2001) pp. 141-144. *Cited: 4*
- 586) Hugo Águas, R. Martins, Yuri Nunes, M. Maneira and E. Fortunato. "Influence of the Plasma Regime on the Structural, Optical, Electrical and Morphological Properties of a-Si:H Thin Films". *Materials Science Forum*, Vol. 382 (2001) pp. 11-20. *Cited: 3*
- 587) R. Martins, H. Águas, V. Silva, I. Ferreira, A. Cabrita and E. Fortunato. "Silicon Films produced by PECVD under powder formation conditions". *Materials Science Forum*, 382 (2001) pp. 21-28. *Cited: 1*
- 588) P. Nunes, E. Fortunato, R. Martins. "Influence of the annealing conditions on the properties of ZnO thin films". *Int. J. Inorganic Materials*, Vol. 3 (2001) pp. 1125-1128. *Cited: 93*
- 589) P. Nunes, E. Fortunato, A. Lopes, R. Martins. "Influence of the deposition conditions on the gas sensitivity of zinc oxide thin films deposited by spray pyrolysis". *Int. J. of Inorganic Materials*, Vol. 3 (2001) pp. 1129-1131. *Cited: 66*
- 590) P. Nunes, E. Fortunato, P. Vilarinho, R. Martins. "Effect of different dopants on the properties of ZnO thin films". *Int. J. Inorganic Materials*, Vol. 3 (2001) pp. 1211-1213. *Cited: 24*
- 591) A. Lopes, E. Fortunato, P. Nunes, P. Vilarinho, R. Martins. "Correlation between the microscopic and macroscopic characteristics of SnO₂ thin film gas sensors". *Int. J. of Inorganic Materials*, Vol. 3 (2001) pp. 1349-1351. *Cited: 8*
- 592) I. Ferreira, M.E.V. Costa, L. Pereira, E. Fortunato, R. Martins, A.R. Ramos, M.F. Silva. "Silicon carbide alloys produced by hot wire, hot wire plasma assisted and plasma enhanced CVD techniques". *Applied Surface Science*, Vol. 184, 1-4 (2001) pp. 8-19. *Cited: 20*
- 593) I. Ferreira, V. Silva, H. Águas, E. Fortunato, R. Martins. "Mass spectroscopy diagnostic during the deposition of a-Si:C:H and a-C:H films produced by hot wire plasma assisted techniques". *Applied Surface Science*, Vol. 184, 1-4 (2001) pp. 60-65. *Cited: 8*
- 594) R. Martins, V. Silva, H. Águas, A. Cabrita, I. Ferreira, E. Fortunato. "Correlation between the carbon content and hydrogen contents with the gas species and the plasma impedance of silicon carbide films produced by PECVD technique". *Applied Surface Science*, 184, 1-4 (2001) pp. 101-106. *Cited: 2*
- 595) A. Cabrita, L. Pereira, D. Brida, A. Lopes, A. Marques, I. Ferreira, E. Fortunato and R. Martins. "Silicon carbide photodiodes: Schottky and pinip structures". *Applied Surface Science*, Vol. 184, 1-4 (2001) pp.437-442. *Cited: 4*
- 596) A. Cabrita, J. Figueiredo, L. Pereira, H. Águas, V. Silva, D. Brida, I. Ferreira, E. Fortunato, R. Martins. "Thin film position sensitive detectors based on pin amorphous silicon carbide structures". *Applied Surface Science*, Vol. 184, 1-4 (2001) pp. 443-447. *Cited: 11*
- 597) P. Nunes, E. Fortunato, A. Vilarinho, R. Martins, "Properties presented by tin oxide thin films deposited by spray pyrolysis", *Polycrystalline semiconductors IV Materials, Technologies and large area electronics*, Book Series: Solid State Phenomena, Vol. 80-81 (2001), pp. 139-143. *Cited: 2*

- 598) P. Nunes, E. Fortunato, A. Vilarinho, R. Martins, "Effect of deposition conditions upon gas sensitivity of zinc oxide thin films deposited by spray pyrolysis", Polycrystalline semiconductors IV Materials, Technologies and large area electronics, Book Series: Solid State Phenomena, Vol. 80-81 (2001), pp. 151-154.
- 599) I. Ferreira, R. Martins, A. Cabrita; FB Fernandes, E. Fortunato, "Large-area polycrystalline p-type silicon films produced by the hot wire technique", Polycrystalline semiconductors IV Materials, Technologies and large area electronics, Book Series: Sol. St. Phenomena, Vol. 80-81 (2001), pp. 47-52.

Year 2000

- 600) R. Martins, V. Silva, I. Ferreira, A. Domingues and E. Fortunato. "Role of the gas temperature and power to gas flow ratio on powder formation and properties of films grown by PECVD technique". Materials Science & Engineering B, Vol. 69-70, (2000), pp. 272-277. *Cited: 6*
- 601) R. Martins, V. Silva, I. Ferreira, A. Domingues and E. Fortunato. "Role of the gas temperature and power to gas flow ratio on powder and voids formation in films grown by PECVD technique". Vacuum, Vol. 56, (2000), pp. 25-30. *Cited: 22*
- 602) H. Águas, R. Martins, E. Fortunato. "Plasma diagnostics of a PECVD system using different r.f. electrode configurations". Vacuum, Vol. 56, (2000), pp. 31-37. *Cited: 10*
- 603) J. Ferreira, B. Fernandes, C. Gonçalves, P. Nunes, E. Fortunato, R. Martins, J.I. Martins, A.P. Marvão. "Morphological and structural characteristics presented by the Cu-Sn-Cu metallurgical system used in electronic joints". Materials Science & Engineering A, Vol. 288, (2000), pp. 248-252. *Cited: 7*
- 604) R. Martins, J. Ferreira, C. Gonçalves, P. Nunes, E. Fortunato, A.P. Marvão, J.I. Martins. "Role of soldering parameters on the electrical performances presented by Cu-Sn-Cu joints used in power diodes". Mat. Science & Engineering A, Vol. 288, (2000), pp. 275-279. *Cited: 1*
- 605) H. Águas, V. Silva, I. Ferreira, E. Fortunato and R. Martins. "Study of the effect of different plasma-enhanced chemical vapour deposition reactor configurations on the properties of hydrogenated amorphous silicon thin films". Phil. Mag. B, Vol. 80, nº4 (2000), pp. 475-486. *Cited: 10*
- 606) E. Fortunato, P. Teodoro, V. Silva, I. Ferreira, Y. Nunes, N. Guimarães, F. Soares, F. Giuliani, G. Popovic, W. Brener and R. Martins. "Performances of an optical ruler based on one-dimensional hydrogenated amorphous Si position-sensitive detectors produced using different metal contacts". Phil. Mag. B, Vol. 80, nº4 (2000), pp. 765-774. *Cited: 5*
- 607) R. Martins, I. Ferreira, A. Cabrita, E. Fortunato. "Improvement of a-Si:H device stability and performances by proper design of the interfaces". Journal of Non-Crystalline Solids, Vol. 266-269, (2000) pp. 1094-1098. *Cited: 9*
- 608) E. Fortunato, I. Ferreira, F. Giuliani, P. Wurmsdobler, R. Martins. "New ultra-light flexible large area thin film position sensitive detector based on amorphous silicon". Journal of Non-Crystalline Solids, Vol. 266-269, (2000) pp. 1213-1217. *Cited: 21*
- 609) J. Ferreira, H. Seiroco, F. Braz Fernandes, R. Martins, E. Fortunato, A.P. Marvão, J.I. Martins. "Production of low cost contacts and joins for large area devices by electrodeposition of Cu and Sn". Applied Surface Science, Vol. 168 (2000) pp. 292-295. *Cited: 6*
- 610) Elvira Fortunato, Isabel Ferreira, Franco Giuliani and Rodrigo Martins, "Flexible large area thin film position sensitive detectors". Sensors and Actuators A: Physical, Vol. 86 (3) (2000) pp. 182-186. *Cited: 18*
- 611) R. Martins, H. Águas, V. Silva, I. Ferreira, A. Cabrita, E. Fortunato, "Silicon films produced by PECVD under powder formation conditions", Plasma Processing and Dusty Particles, Materials Science Forum, Vol. 382 (2000), pp. 21-28.
- 612) H. Águas, H R. Martins, Y. Nunes, M. Maneira, E. Fortunato, "Influence of the plasma regime on the structural, optical, electrical and morphological properties of a-Si: H thin films" Plasma Processing and Dusty Particles, Materials Science Forum, Vol. 382 (2000), pp. 11-20.
- 613) Andreia M Lopes, Patricia Nunes, Paula Vilarinho, Regina Monteiro, Elvira Fortunato, Rodrigo Martins, Influence of the electrical and structural properties of tin oxide on the performances of combustible gas sensors, Functional Materials, Vol. 13 (2000), pp. 477-482. *Cited: 1*
- 614) Elvira Fortunato, Isabel Ferreira, Franco Giuliani, Rodrigo Martins, A New Ultra-Light Flexible Large Area Thin Film PSD Based on Amorphous Silicon, Functional Materials, Vol. 13 (2000), pp. 421-427. *Cited: 2*

Year 1999

- 615) R. Martins, I. Ferreira B. Fernandes and E. Fortunato. "Performances of a-Si:H films produced by hot wire plasma assisted technique". *Vacuum* Vol. 52, (1999), pp. 203-208. *Cited: 5*
- 616) C. Gonçalves, J. Ferreira, E. Fortunato, I. Ferreira R. Martins A.P. Marvão, J.I. Martins, T. Harder, R. Oppelt. "New metallurgical systems for electronic soldering applications". *Sensors & Actuators A*, Vol. 74, (1999), pp. 70-76. *Cited: 8*
- 617) R. Martins and E. Fortunato. "Role of the resistive layer on the performances of 2D a-Si:H thin film position sensitive detectors". *Thin Solid Films*, Vol. 337, (1999), pp. 158-162. *Cited: 19*
- 618) I. Baía, M. Quintela, L. Mendes, P. Nunes and R. Martins. "Performances exhibited by large area ITO layers produced by r.f. magnetron sputtering". *Thin Solid Films*, Vol. 337, (1999), pp. 171-175. *Cited: 108*
- 619) P. Nunes, B. Fernandes, E. Fortunato, P. Vilarinho, R. Martins. "Performances presented by zinc oxide thin films deposited by spray pyrolysis". *Thin Solid Films*, Vol. 337, (1999), pp. 176-179. *Cited: 241*
- 620) A. Fantoni, M. Vieira, R. Martins. "Simulation of Hydrogenated amorphous and microcrystalline Silicon optoelectronic devices", *Mathematics and Computers in Simulation*, Vol. 49, (1999), pp. 381-401. *Cited: 70*
- 621) I. Ferreira, H. Águas, L. Mendes, R. Martins. "Role of the Hot wire filament temperature on the structure and morphology of nanocrystalline silicon p-doped films". *Applied Surface Science*, Vol. 144-145, (1999), pp. 690-696. *Cited: 10*
- 622) A. Fantoni, M. Vieira, R. Martins. "Transport Properties in Microcrystalline silicon solar cells under AM1.5 illumination analysed by two-dimensional numerical simulation". *Solid State Electronics*, Vol. 43, (1999), pp. 1709-1714. *Cited: 6*
- 623) A. Fantoni, M. Vieira, R. Martins. "Transport properties of μ c-Si:H analysed by means of numerical simulation". *Thin Solid Films*, Vol. 337, (1999), pp. 109-112. *Cited: 1*
- 624) E. Fortunato, F. Soares, P. Teodoro, N. Guimarães, M. Mendes, H. Águas, V. Silva, R. Martins. "Characteristics of a linear array of a-Si:H thin film position sensitive detector". *Thin Solid Films*, Vol. 337, (1999), pp. 222-225. *Cited: 12*
- 625) L. Grigore, A. Meghea, O. Grigore, R. Martins. "Thermodynamic Properties of Ternary Aqueous Electrolyte Solutions". *Physics and Chemistry of Liquids*, Vol. 37, (1999), pp. 409-428.
- 626) E. Fortunato, A. Malik, R. Martins. "Amorphous silicon thin films applied to photochemical sensors". *Vacuum* Vol. 52, (1999), pp. 41-44. *Cited: 3*
- 627) P. Nunes, A. Malik, B. Fernandes, E. Fortunato, P. Vilarinho, R. Martins. "Influence of the doping and annealing atmosphere on Zinc Oxide thin films deposited by spray pyrolysis". *Vacuum*, Vol. 52, (1999), pp. 45-49. *Cited: 103*
- 628) I. Ferreira, B. Fernandes and R. Martins. "Nanocrystalline silicon carbon doped films prepared by hot wire technique". *Vacuum* Vol. 52, (1999), pp. 147-152. *Cited: 9*

Year 1998

- 629) A. Malik, A. Sêco, E. Fortunato, R. Martins. "New UV-Enhanced Solar Blind Optical Sensors based on Monocrystalline Zinc Sulphide". *Sensors & Actuators A*, Vol. 67, (1998), pp. 68-71. *Cited: 4*
- 630) E. Fortunato, R. Martins. "New Materials for Large-Area Position-Sensitive Detectors". *Sensors & Actuators A*, Vol. 68, (1998), pp. 244-248. *Cited: 10*
- 631) A. Malik, A. Sêco, E. Fortunato, R. Martins. "Selective Optical Sensors from 0.25 to 1.1 μ m based on Metal Oxide-Semiconductor Heterojunctions". *Sensors & Actuators A*, Vol. 68, (1998), pp. 333-337. *Cited: 28*
- 632) A. Malik, R. Martins. "Silicon active optical sensors: from functional photodetectors to smart sensors". *Sensors & Actuators A*, Vol. 68, (1998), pp. 359-364. *Cited: 2*
- 633) A. Malik, A. Sêco, E. Fortunato, R. Martins, B. Shabashkevich and S. Piroshenko. "A New High Ultraviolet Sensitivity FTO-GaP Schottky Photodiode Fabricated by Spray Pyrolysis". *Semiconductor Science and Technology*, Vol. 13, (1998), pp. 102-107. *Cited: 19*
- 634) E. Fortunato, A. Malik, R. Martins. "Photochemical sensors based on amorphous silicon thin films". *Sensors & Actuators B*, Vol. 46, (1998), pp. 202-207. *Cited: 5*

- 635) I. Ferreira, J. Carvalho, R. Martins. "Undoped and doped crystalline silicon films obtained by Nd-YAG laser". *Thin Solid Films*, Vol. 317, (1998), pp. 140-143. *Cited: 10*
- 636) R. Martins, A. Maçarico, I. Ferreira, R. Nunes, A. Bicho, E. Fortunato. "Investigation of the amorphous to microcrystalline phase transition of thin film silicon produced by PECVD". *Thin Solid Films*, Vol. 317, (1998), pp. 144-148. *Cited: 17*
- 637) E. Fortunato, F. Soares, G. Lavareda, R. Martins. "Thin films applied to integrated optical position-sensitive detectors". *Thin Solid Films*, Vol. 317, (1998), pp. 421-424. *Cited: 4*
- 638) R. Martins, I. Ferreira, B. Fernandes, E. Fortunato. "Role of the deposition conditions on the properties presented by nanocrystallite silicon films produced by hot wire". *J. of Non-Crystalline Solids*, Vol. 227-230, (1998), pp. 901-905. *Cited: 15*
- 639) A. Malik, A. Sêco, E. Fortunato, R. Martins. "Microcrystalline Thin Metal Oxide Films for Optoelectronic Applications". *J. of Non-Crystalline Solids*, Vol. 227-230, (1998), pp. 1092-1095. *Cited: 22*
- 640) E. Fortunato, A. Malik, R. Martins. "Thin Oxide Interface Layers in a-Si:H MIS Structures". *J. of Non-Crystalline Solids*, Vol. 227-230, (1998), pp. 1230-1234. *Cited: 7*
- 641) E. Fortunato, A. Malik, A. Sêco, I. Ferreira, R. Martins. "Amorphous Silicon Sensors: From Photo to Chemical Detection". *J. of Non-Crystalline Solids*, Vol. 227-230, (1998), pp.1349-1353. *Cited: 7*

Year 1997

- 642) R. Martins, A. Maçarico, I. Ferreira, R. Nunes, A. Bicho, E. Fortunato. "Highly conductive and highly transparent n-type microcrystalline silicon thin films". *Thin Solid Films* Vol. 303, (1997), pp. 47-52. *Cited: 35*
- 643) A. Fantoni, M. Vieira, J. Cruz, R. Martins. "Modelling a μ c-Si:H p.i.n device under non-uniform illumination". *Thin Solid Films*, Vol. 296, (1997), pp. 110-113.
- 644) R. Martins, A. Bicho, G. Lavareda and E. Fortunato. "Dependence of Amorphous Silicon Solar Cell Performances on the Lateral Drift Current". *Solar Energy Materials and Solar Cells* Vol. 45, (1997), pp. 1-15. *Cited: 5*
- 645) M. Topic, F. Smole, J. Furlan, E. Fortunato and R. Martins. "Analysis of front contact heterojunction in a-Si:H one dimensional position sensitive detectors". *Rev. Sc. Instruments*, Vol. 68 (2) (1997) pp.1377-1381. *Cited: 1*
- 646) R. Martins, A. Maçarico, M. Vieira, I. Ferreira and E. Fortunato. "Structure, composition and electro-optical properties of n-type amorphous and microcrystalline silicon thin films". *Philosophical Magazine B*, Vol. 76, 3, (1997), pp. 249-258. *Cited: 5*
- 647) R. Martins, A. Maçarico, I. Ferreira, J. Fidalgo and E. Fortunato. "Role of the deposition parameters in the uniformity of films produced by plasma-enhanced chemical vapour deposition technique". *Philosophical Magazine B*, Vol. 76, 3, (1997), pp. 259-272. *Cited: 6*
- 648) A. Malik and R Martins. "UV Enhanced and solar blind photodetectors based on large-band-gap materials". *Materials Science Forum*, Vol. 258-263, pp. 1425-1430 (1997). *Cited: 1*

Year 1996

- 649) M. Vieira, A. Fantoni, S. Koynov, J. Cruz, A. Maçarico, R. Martins. "Amorphous and microcrystalline silicon p-i-n optical speed sensors based on the flying spot technique". *J. of Non-Cryst. Solids*, Vol. 198-200, (1996), pp. 1193-1197. *Cited: 2*
- 650) R. Martins, E. Fortunato. "Static and Dynamic Resolution of 1D Thin Film Position Sensitive Detector". *J. of Non-Cryst. Solids*, Vol. 198-200, (1996), pp. 1202-1206. *Cited: 6*
- 651) A. Maçarico, M. Vieira, A. Fantoni, P. Louro, A. Sêco, R. Martins, C. Hollenstein. "On the a-Si:H films growth: role of the powder formation". *J. of Non-Cryst. Solids*, Vol. 198-200, (1996), pp. 1207-1211. *Cited: 5*
- 652) E. Fortunato, F. Soares, G. Lavareda, R. Martins. "A Linear Array Thin Film Position Sensitive Detector for 3D Measurements". *J. of Non-Cryst. Solids*, Vol. 198-200, (1996), pp. 1212-1216. *Cited: 3*
- 653) R. Martins and E. Fortunato. "Static Behaviour of Thin-Film Position-Sensitive Detectors based on p-i-n a-Si:H Devices". *Sensors & Actuators A* Vol. 51, (1996). pp. 143-151.
- 654) R. Martins and E. Fortunato. "Lateral Effects in Amorphous Silicon Photodiodes". *Optical Materials* Vol. 5, (1996), pp. 137-144. *Cited: 2*

- 655) E. Fortunato, G. Lavareda, F. Soares and R. Martins. "Performances Presented by Large Area Thin Film Position Sensitive Detectors Based on Amorphous Silicon". *Thin Solid Films* Vol. 272, (1996), pp. 148-156. *Cited: 3*
- 656) R. Martins, M. Vieira, I. Ferreira, E. Fortunato and L. Guimarães. "Transport Properties of Doped Silicon Oxycarbide Microcrystalline Films Produced by Spatial Separation Techniques". *Solar Energy Materials and Solar Cells* Vol. 41-42, (1996), pp. 493-517. *Cited: 75*
- 657) E. Fortunato and R. Martins. "Role of the collecting resistive layer on the static characteristics of 1D a-Si:H thin film position sensitive detector". *Rev. Scientific Instruments*, Vol. 67 (8), (1996), pp. 2702-2707. *Cited: 17*
- 658) C. Courteille, C.H. Hollenstein, J-L. Dorier, P. Gay, W. Schwarzenbach, A.A. Howling, E. Bertran, G. Viera, R. Martins and A. Maçarico. "Particle agglomeration study in rf silane plasmas: in-situ study by polarization-sensitive laser light scattering". *J. App. Physics* Vol. 80, (1996), pp. 2069-2078. *Cited: 128*
- 659) R. Martins and E. Fortunato. "Interpretation of the Static and Dynamic Characteristics of 1-D Thin Film Position Sensitive Detectors Based on a-Si:H p-i-n Diodes". *IEEE Transactions on Electron Devices* Vol. 43 (12), (1996), pp. 2143-2152. *Cited: 8*
- 660) A. Fantoni, M. Vieira, J. Cruz, R. Schwarz and R. Martins. "A two-dimensional numerical simulation of a non-uniformly illuminated amorphous silicon solar cell". *J. of App. Phys. D*, Vol. 29, (1996), pp. 3154-3159. *Cited: 24*

Year 1995

- 661) E. Fortunato, G. Lavareda, R. Martins, F. Soares and L. Fernandes. "Large Area 1D Thin Film Position Sensitive Detector with high Detection Resolution". *Sensors & Actuators A* Vol. 51, (1995), pp. 135-142. *Cited: 68*
- 662) R. Martins, M. Vieira, I. Ferreira, E. Fortunato. "Role of Oxygen Partial Pressure on the Properties of Doped Silicon Oxycarbide Microcrystalline Layers Produced by Spatial Separation Techniques". *J. Vac. Scientific Technol.*, Vol. A13 n.4, (1995), pp. 2199-2209. *Cited: 8*
- 663) Li-jiang Meng, A. Maçarico and R. Martins. "Study of Annealed Indium Tin Oxide Films Prepared by rf Reactive Magnetron Sputtering". *Vacuum*, Vol. 46 n.7, (1995), pp. 673-680. *Cited: 101*
- 664) R. Martins and E. Fortunato. "Dark Current-Voltage Characteristics of Transverse Asymmetric Hydrogenated Amorphous Silicon Diodes". *J. App. Physics*, Vol. 78 n.5, (1995), pp. 3481-3487. *Cited: 30*
- 665) R. Martins and E. Fortunato. "Lateral Photoeffect in Large Area One-Dimensional Thin Film Position Sensitive Detectors based in a-Si:H p.i.n Devices". *Rev. Sc. Instruments*, Vol. 66 (4), (1995), pp. 2927-2934. *Cited: 56*
- 666) R. Martins, G. Lavareda, E. Fortunato, F. Soares, L. Fernandes and L. Ferreira. "A Linear Array Position Sensitive Detector Based on Amorphous Silicon". *Rev. Sc. Instruments*, Vol. 66, (1995), pp. 5317-5321. *Cited: 2*
- 667) Rodrigo Martins, Elvira Fortunato, Simulation of the lateral photo effect in large-area 1D a-Si: H pin thin-film position-sensitive detectors, *Optoelectronic Integrated Circuit Materials, Physics, and Devices (Conf.)*, Vol. 2397 (1995), pp. 745-756.
- 668) Elvira Fortunato, Guilherme Lavareda, Rodrigo Martins, Fernando Soares, Luis Fernandes, High-detection resolution presented by large-area thin-film position-sensitive detectors *Optoelectronic Integrated Circuit Materials, Physics, and Devices (Conf.)*, Vol. 2397 (1995), pp. 259-270. *Cited: 11*
- 669) Elvira Fortunato, Rodrigo Martins, Thin film position sensitive detectors based on a-Si: H devices, *Solid State Phenomena*, Vol. 44 (1995), pp. 883-930. *Cited: 19*
- 670) Rodrigo Martins, Isabel Ferreira, Elvira Fortunato, Wide band gap microcrystalline silicon thin films, *Solid state phenomena*, Vol. 44 (1995), pp. 299-346. *Cited: 58*

Year 1994

- 671) E. Fortunato, G. Lavareda, M. Vieira and R. Martins. "Thin Film Position Sensitive Detector Based on Amorphous Silicon p-i-n Diode". *Rev. Scientific Instruments*, Vol. 65(12), (1994), pp.3784-3786. *Cited: 55*
- 672) R. Martins and I. Ferreira. "Engineering of the Energy Coupling in PECVD System used to produce large area a-Si:H coatings". *Vacuum*, Vol. 45 n.10/11, (1994), pp. 1107-1108. *Cited: 6*

- 673) M. Vieira, E. Fortunato, C.N. Carvalho, G. Lavareda and R. Martins. "Influence of the Photodegradation on the μc and Microstructure of PIN a-Si:H Devices". Vacuum, Vol. 45 n.10/11, (1994), pp. 1109-1111.
- 674) M. Vieira, E. Fortunato, G. Lavareda, C.N. Carvalho and R. Martins. "Light and Temperature Effect on PIN a-Si:H Device Performance". Vacuum, Vol. 45 n.10/11, (1994), pp. 1147-1149.
- 675) E. Fortunato, G. Lavareda, M. Vieira, R. Martins and L. Ferreira. "Application of Thin Film Technology to Optical Sensors". Vacuum, Vol. 45 n.10/11, (1994), pp. 1151-1154. *Cited: 1*

Year 1993

- 676) R. Martins, A. Fantoni and M. Vieira. "Tailoring Defects on Amorphous Silicon PIN Devices". J. of Non-Cryst. Solids, Vol. 164-166, (1993), pp.671-674.
- 677) E. Fortunato, M. Vieira, G. Lavareda, L. Ferreira and R. Martins. "Material Properties, Project Design and Performances of Single and Dual-axis a-Si:H Large Area Position Sensitive Detectors". J. of Non-Cryst. Solids, Vol. 164-166, (1993), pp. 797-800. *Cited: 36*

Year 1991

- 678) J.M.M. de Nijs, C. Carvalho, M. Santos and R. Martins. "A Thin SiO Layer as a Remedy for the Indium Reduction at the In₂O₃/ μc -Si:C:H Interface". Applied Surface Science, Vol. 52, (1991), pp. 339-342. *Cited: 14*
- 679) M. Vieira, R. Martins, E. Fortunato, M. Santos, A. Maçarico, N. Carvalho and L. Guimarães. "Role of Carbon Incorporation on Structural and Transport Properties of a/ μc -Si:C:H Films". Portugal Physica, Vol. 20, (1989/1991), pp. 21-29.
- 680) S. Soalheira, R. Martins, C. Carvalho, I. Baía and L. Guimarães. "Optoelectronic Properties Presented by Doped and Undoped Amorphous Silicon Films". Portugal Physica, Vol. 20 (1991), pp. 31-37.
- 681) G. Willeke and R. Martins. "On the Structural, Optical, and Electronic Properties of Microcrystalline Si:O:C:H Thin Films Prepared in Two-Consecutive-Decomposition-Deposition-Chamber System". Phil. Mag. B, Vol. 63, Nº 1, (1991), pp. 79-86. *Cited: 13*
- 682) M. Vieira, R. Martins, E. Fortunato, F. Soares and L. Guimarães. "a-Si:H Ambipolar Diffusion Length and Effective Lifetime Measured by Flying Spot (FST) and Spectral Photovoltage (SPT) Techniques". J. of Non-Cryst. Solids, Vol. 137-138, (1991), pp. 479-482. *Cited: 11*
- 683) R. Martins, I. Ferreira, N. Carvalho and L. Guimarães. "Engineering of Plasma Deposition Systems Used for Producing Large Area a-Si:H Devices". J. of Non-Cryst. Solids, Vol. 137-138, (1991), pp. 757-760. *Cited: 19*

Year 1990

- 684) EAT Dirani, I Pereyra, AM Andrade, MAG Soler, R Martins, Effect of the deposition parameters on the electro optical properties and morphology of microcrystalline hydrogenated silicon alloys, IEEE Conference on Photovoltaic Specialists (1990), pp. 1588-1590

Year 1989

- 685) L. Guimarães, R. Martins, M. Santos, A. Maçarico, N. Carvalho, E. Fortunato and M. Vieira. "Hydrogenated thin film Silicon Semiconductors Produced by a Two Consecutive Decomposition and Deposition Chamber System". Vacuum Tech. Applic. & Ion Phys., Vol. 39, Nº 7/8, (1989), pp. 789-790. *Cited: 2*
- 686) M. Lavado, R. Martins, I. Ferreira, G. Lavareda, E. Fortunato, M. Vieira and L. Guimarães. "Electron Paramagnetic Resonance of Defects in Doped Microcrystalline Silicon". Vacuum Tech. Applic. & Ion Phys., Vol. 39, Nº 7/8, (1989). pp. 791-794. *Cited: 1*
- 687) E. Fortunato, R. Martins, I. Ferreira, M. Santos, A. Maçarico and L. Guimarães. "Tunneling in Vertical μc -Si/a-Si_xCyOz:H/ μc -Si Heterostructures". J. of Non-Cryst. Solids, Vol. 115, (1989), pp. 120-122. *Cited: 19*

- 688) R. Martins, G. Willeke, E. Fortunato, I. Ferreira, M. Vieira, M. Santos, A. Maçarico and L. Guimarães. "Transport in $\mu\text{-Si}:\text{C}:\text{O}:\text{H}$ Films Prepared by a TCDDC System". *Journal of Non-Cryst. Solids*, Vol. 114, (1989), pp. 486-488. *Cited: 15*
- 689) J. Bregman, J. Gordon and Yoram Shapira; E. Fortunato, R. Martins and L. Guimarães. "Substrate Effect on the Electrical Properties of a-Si:H Thin Films and its Modification by Diffusion-Blocking Interlayers". *J. Vacuum Science and Technology A*, Vol. 7 (4), (1989), pp. 2628-2631. *Cited: 2*

Year 1987

- 690) R. Martins, N. Carvalho, E. Fortunato, A. Maçarico, M. Santos, I. Baía, M. Vieira and L. Guimarães. "Effects of U.V. Light on the Transport Properties of a-Si:H Films During Their Growth". *J. of Non-Cryst. Solids*, Vol. 97-98, (1987), pp. 1399-1402. *Cited: 10*

Year 1985

- 691) M.S. Sanematsu, I. Pereyra, A.M. Andrade and R. Martins. "Highly uniform large area a-Si:H films". *Solar Cells*, Vol. 14, (1985), pp. 281-287. *Cited: 2*

Year 1983

- 692) R. Martins, A.G. Dias and L. Guimarães. "The Effect of Static Electric and Magnetic Fields on the Optoelectronic Properties of Amorphous Hydrogenated Silicon Films Produced by r.f. Glow Discharge". *Portugal Physica*, Vol. 14, (1983) pp. 81-94. *Cited: 3*
- 693) R. Martins, A.G. Dias and L. Guimarães. "The Interpretation of the Electric and Optical Properties of a-Si:H Films Produced by r.f. Glow Discharge through Dark Conductivity, Photoconductivity and Pulse Controlled Capacitance/ Voltage Measurements". *J. of Non-Cryst. Solids*, Vol. 57, (1983), pp. 9-22. *Cited: 6*

Year 1982

- 694) R. Martins. "Growth Rate of Amorphous Hydrogenated Silicon Alloys Produced Under Crossed Static Electric and Magnetic Fields". *Thin Solid Films*, Vol. 90, (1982), pp. 26-34.
- 695) A.G. Dias, L. Guimarães and R. Martins. "The Effect of Static Electric and Magnetic Fields on the Optical Properties of Amorphous Hydrogenated Silicon Films Produced by r.f. Glow Discharge". *Thin Solid Films*, Vol. 89, (1982), pp. 307-313.

Year 1981

- 696) L. Guimarães, R. Martins and A.G. Dias. "Photoresponse Time and Density of Localized States in the Mobility Gap of a-Si:H Alloys Prepared by r.f. Glow Discharge". *Journal de Physique, Colloque C4, Supplement au N°10, Tome 42*, (1981), pp. 609-612. *Cited: 1*

Year 1979

- 697) D.I. Jones, W.E. Spear, P.G. Le Comber, S. Li and R. Martins. "Electronic Transport and Photoconductivity in Phosphorous-Doped Amorphous Germanium". *Phil. Mag. B*, Vol. 39, N° 2, (1979), pp. 147-158. *Cited: 35*

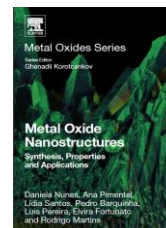
Books, Editor and Chapters published

Books

1. R. Martins, H. Águas, E. Fortunato, *Energia Fotovoltaica: Materiais e Aplicações*, Volumes I and II, Nova FCT Editorial, 2020.
2. D. Nunes, A. Pimentel, L. Santos, P. Barquinha, L. Pereira, E. Fortunato, R. Martins *Metal Oxide nanostructures: Synthesis, properties and applications*, Elsevier, ISBN 9780128115121

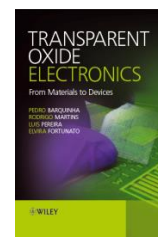


3. Pedro Barquinha, Rodrigo Martins, Luis Pereira, Elvira Fortunato, *Transparent Semiconductors: From Materials to Devices*. West Sussex: Wiley & Sons (March 2012), ISBN 9780470683736.
4. R. Martins, “Técnicas de Instrumentação”, formato pdf, em CD (Universidade Nova de Lisboa) (2004)
5. R. Martins. “Antenas Plásticas”, ed. U. Luanda, pp. 1-84 (1975).



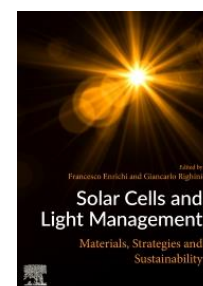
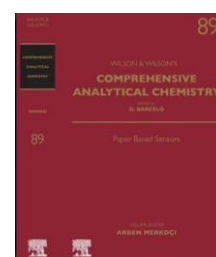
Editor

1. E. Fortunato, J. Jang, P. Barquinha, A. Nathan, and R. Martins, Editors of the Special issue on the 8th International Thin Film Transistor Conference (ITC 2012), forward message, J. of Display Technology, 9 (9) (2013), pp. 687
2. R. Martins, A. Madan (ed) From materials science to applications of amorphous, microcrystalline and nanocrystalline silicon and other semiconductors W. E. Spear Commemoration Issue, Philosophical Magazine Vol. 89 (28-30), 2009.
3. R. Martins, V. Chu, E. Fortunato, J. Conde, I. Ferreira, (ed) Proc. 21st ICANS, Elsevier, 2006.
4. E. Fortunato, I. Ferreira, R. Martins, “Zinc oxide UV light and Ozone Sensors”, in Encyclop. Sensors, in Am. Scientific publish., ed. by Craig A. Grimes, Elisabeth C. Dickey and Michael V. Pishkoa and forwarded by Professor Rudolph A. Marcus, nobel prize laureate in Chemistry. Vol.10 (2006), pp. 501-515.
5. R. Martins, E. Fortunato, I. Ferreira e C. Dias, (eds) II Advance Mat. Science Forum, Trans Tech Pub., (2004).
6. L. Guimarães and R. Martins, (eds) Book of Proceedings of the 10th International Conference of the International Energy Forum, May 2004, ISBN 972-8893-000-0, (2004).
7. R. Martins, I. Ferreira, E. Fortunato and G. Kroesen, (eds) “Plasma Processing and Dusty Particles”, Materials Science Forum. Trans Tech Publications, volume 382 (2001).
8. L. Calgano, A. Hallén, R. Martins and W. Skorupa, (eds) “Amorphous and Crystalline Silicon Carbide: Materials and Applications”, EMRS Symposia Proceedings 112, Elsevier (2001).

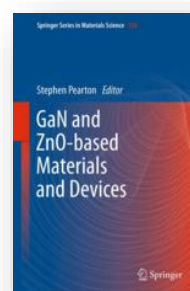
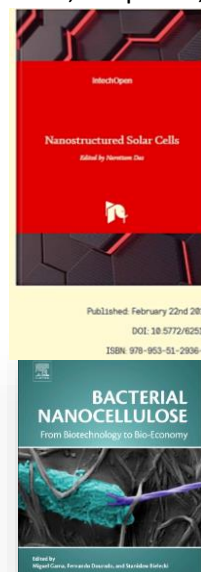


Book Chapters and contributions to special issue series

1. Ana Carolina Marques, Tomás Pinheiro, Gabriela V. Martins, Ana Rita Cardoso, Rodrigo Martins, Maria Goreti Sales and Elvira Fortunato, Non-enzymatic lab-on-paper devices for biosensing applications, in “Paper Based Sensors, Volume 89 - 1st Edition”, ISBN: 9780444643452, edited by Arben Merckoci, chapter 7 (2020).
2. Manuel J. Mendes, Olalla Sanchez-Sobrado, Sirazul Haque, Tiago Mateus, Hugo Águas, Elvira Fortunato and Rodrigo Martins, Wave-optical front structures on silicon and perovskite thin-film solar cells, in “Solar Cells and Light Management”, ISBN 978-0-08-102762-2, edited by Giancarlo C. Righini and Francesco Enrichi, chapter 9 (2020) pp. 315-354, <https://doi.org/10.1016/B978-0-08-102762-2.00009-4>.



3. António T. Vicente, Andreia Araújo, Diana Gaspar, Lídia Santos, Ana C. Marques, Manuel J. Mendes, Luís Pereira, Elvira Fortunato and Rodrigo Martins, Optoelectronics and Bio Devices on Paper Powered by Solar Cells, in Nanostructured Solar Cells, ISBN 978-953-51-2936-3, edited by Narottam Das, chapter 3, (2017) pp. 33-65, <http://dx.doi.org/10.5772/66695> (>1000 downloads up to 2019).
4. Rita Branquinho, Ana Santa, Emanuel Carlos, Daniela Salgueiro, Pedro Barquinha, Rodrigo Martins and Elvira Fortunato, "Solution Combustion Synthesis: Applications in Oxide Electronics", in "Developments in Combustion Technology", edited by Konstantinos G. Kyprianidis and Jan Skvaril, Chapter 15 [DOI: 10.5772/64761](https://doi.org/10.5772/64761), INTECH, pp 397-417, 2016
5. Elvira Fortunato, Diana Gaspar, Paulo Duarte, Luís Pereira, Hugo Águas, António Vicente, Fernando Dourado, Miguel Gama, Rodrigo Martins, in Optoelectronic Devices from BacterialNanoCellulose, in Bacterial Nanocellulose, from Biotechnology to Bioeconomy, edited by M. Gama, F. Dourado and F. Bieleki, Chapter 11, pp. 179-197, 2016.
6. Paul Grey, Luís Pereira, Sónia Pereira, Pedro Barquinha, Inês Cunha, Rodrigo Martins, Elvira Fortunato, Technological Innovation for Cyber-Physical Systems, Volume 470 of IFIP Advances in Information and Communication Technology, Electrochemical Transistor Based on Tungsten Oxide with Optoelectronic Properties, pp 542-550, 2016.
7. Pawel Jerzy Wojcik, Luis Pereira, Rodrigo Martins and Elvira Fortunato, Metal Oxide Nanoparticle Engineering for Printed Electrochemical Applications, 2015, pp. 1-29, in Handbook of Nanoelectrochemistry, Springer International Publishing Switzerland 2015, [DOI 10.1007/978-3-319-15207-3_31-1](https://doi.org/10.1007/978-3-319-15207-3_31-1).
8. L. Santos, J. P. Neto, A. Crespo, P. Baião, P. Barquinha, L. Pereira, R. Martins and E. Fortunato, Electrodeposition of WO₃ Nanoparticles for Sensing Applications, em Nanotechnology and Nanomaterials, "Electroplating of Nanostructures", ed. Mahmood Aliofkhazraei, INTECH 2015, [ISBN 978-953-51-2213-5](https://doi.org/10.5772/64761).
9. P. Barquinha, R. Martins and E. Fortunato, "N-type Oxide Semiconductor Thin-Film Transistors" in "Advances in GaN and ZnO-based Thin Film, Bulk and Nanostructured Materials and Devices", ed. by S. Pearton, Springer Series in Materials Science, Vol. 156 (2012), pp 435-473, [ISBN 978-3-642-23520-7](https://doi.org/10.1002/9780470710609.ch6)
10. E. Fortunato, P. Barquinha, G. Gonçalves, L. Pereira, R. Martins in: Oxide semiconductors: from materials to devices, Transparent Electronics: from synthesis to applications, Edts: A. Facchetti and T. J. Marks, Wiley, 2010, [DOI: 10.1002/9780470710609.ch6](https://doi.org/10.1002/9780470710609.ch6)
11. E. Fortunato, P. Barquinha, A. Pimentel, A. Goncalves, A. Marques, L. Pereira, R. Martins. "Thin Film Transistor based on ZnO". In Zinc Oxide - A Material for Micro- and Optoelectronic Applications, NATO ARW edited by N. Nickel and E. Terukov, Springer (2004/2005).
12. E. Fortunato, I. Ferreira, R. Martins, "Zinc oxide Thin Films Applied to UV light and Ozone Sensors", in Encyclopedia of Sensors, in American Scientific publishers, edited by C.A. Grimes, E.C. Dickey and M.V. Pishko and forwarded by Professor Rudolph A. Marcus, nobel prize laureate in Chemistry Vol.10 (2006), pp. 501-515.
13. E. Fortunato, L. Pereira, H. Águas, I. Ferreira, R. Martins. "Flexible a-Si:H Position Sensitive Detectors", in special issue on Flexible, Electronics Technology, edited by Arokia Nathan and Babu Chalama, Proc. IEEE, 93 (7), (2005) pp. 1281-1286.



14. E. Fortunato, P. Barquinha, A. Pimentel, A. Goncalves, A. Marques, L. Pereira, R. Martins. "Zinc Oxide Thin Film Transistors". In NATO ARW on Zinc Oxide - A Material for Micro and Optoelectronic Applications, edited by N. Nickel and E. Terukov, Springer publishers (2005), chapter 20, pp. 225-238.
15. R. Martins, I. Ferreira, E. Fortunato e L. Guimarães. "Materiais e Dispositivos Fotovoltaicos". "Os Materiais dos Anos 2000", eds P.J. Ferreira e M.A. Fortes, IST press pp. 305-316 (2003).
16. H. Águas, L. Pereira, I. Ferreira, E. Fortunato, R. Martins. "High dense a-Si:H films deposited in a modified triode PECVD system", in Physics and Application of disordered Materials, edited by Popescu Mihai, pp.365-372, (2002).
17. L. Pereira, H. Águas, R. Miguel Martins, F. Braz Fernandes, E. Fortunato, R. Martins, "Role of process and annealing conditions on the electro-optical performances of undoped and n-doped polysilicon grown by LPCVD", in Physics and Application of disordered Materials, edited by Popescu Mihai, pp.373-380 (2002).
18. L. Pereira, A. Cabrita, H. Águas, E. Fortunato, I. Ferreira, R. Martins. "Temperature dependence of the density of states in amorphous silicon films" in Physics and Application of disordered Materials, edited by Popescu Mihai, pp.381-386 (2002).
19. P. Nunes, E. Fortunato, P. Vilarinho, R. Martins. "Properties presented by tin oxide thin films deposited by spray pyrolysis". "Polycrystalline Semiconductors VI-Materials, Technologies and large area electronics", eds O. Bonnaud, T. Mohammed-Brahim, H.P. Strunk, J.H. Werner, in Solid State Phenomena, Scitech Publ., Uettikon am See, Switzerland, Volumes 80-81, pp. 139-144 (2001).
20. P. Nunes, E. Fortunato, P. Vilarinho, R. Martins. "Effect of deposition conditions on gas sensitivity of zinc oxide thin films deposited by spray pyrolysis". "Polycrystalline Semiconductors VI-Materials, Technologies and large area electronics", eds O. Bonnaud, T. Mohammed-Brahim, H.P. Strunk, J.H. Werner, in Solid State Phenomena, Scitech Publ., Uettikon am See, Switzerland, Volumes 80-81, pp. 151-154 (2001).
21. I. Ferreira, R. Martins, A. Cabrita, F. Braz Fernandes and E. Fortunato. "Large area polycrystalline p-type silicon films produced by hot wire technique". "Polycrystalline Semiconductors VI-Materials, Technologies and large area electronics", eds O. Bonnaud, T. Mohammed-Brahim, H.P. Strunk, J.H. Werner, in Solid State Phenomena, Scitech Publ., Uettikon am See, Switzerland, Volumes 80-81, pp. 47-52 (2001).
22. R. Martins and E. Fortunato. "Thin film position sensitive detectors: from 1D to 3D applications". "The Technology and Applications of Amorphous Silicon", ed. by R. Street, Spring Verlagen, pp. 342-403 (2000).
23. E. Fortunato and R. Martins. "Schottky a-Si:H Devices". "Properties of amorphous silicon and its alloys", ed. J.L. Sears, EMIS DATA review series, pp. 273-283 (1998).
24. R. Martins, I. Ferreira and E. Fortunato. "Wide Band Gap Microcrystalline Silicon Thin Films". "Hydrogenated Amorphous Silicon", in Solid State Phenomena, vol. 44-46, ed. G.E. Murch, H. Neber-Aeschbacher and F.H. Wöhlbier, Scitec Publications Ltd, pp. 299-346 (1995).
25. E. Fortunato and R. Martins. "Thin Film Position Sensitive Detectors based on a-Si:H Devices". "Hydrogenated Amorphous Silicon" in Solid State Phenomena, vol. 44-46 ed. G.E. Murch, H. Neber-Aeschbacher and F.H. Wöhlbier, Scitec Publications Ltd, pp. 883-930 (1995).
26. A. M. Andrade, M. S. Sanematsu, F. J. Fonseca, C. A. Andrade, I. Pereyra, R. Martins and E. Fortunato. "Amorphous Silicon Thin Film Field Effect Transistors". "Thin Films and Small Particles", CIF series, Vol. 11, ed. M. Cardona and J. Giraldo, World Scientific, London, pp. 269-274 (1988).
27. L. Guimarães and R. Martins. "Electro-optical properties of a-Si:H/ μ c-Si:H and a-Si:C:H/c-Si:HC:H undoped and doped films produced by a TCDDC system". Photovoltaic Power Generation, Vol. 3, ed. Kluwer Academic Publishers, pp. 131-136 (1987).

28. R. Martins, A.G. Dias and L. Guimarães. "Influence of Electric and Magnetic d.c. Fields on the Electronic Transport Properties of a-Si:H Alloys Produced by r.f. Glow Discharge". Applied Physics Phenomena, ed. by A.I.P., Vol. 73, pp. 36-41 (1981).

Granted/filled trade marks and patents

I hold 67 conceived patents (12 are trade mark register) and have 15 pending patents as listed below.

Patents Conceived

1. Rodrigo Ferrão De Paiva Martins, Pedro Miguel Candido Barquinha, Elvira Maria Correia Fortunato, Tobias CRAMER, Beatrice Fraboni, Sensitive field effect device and manufacturing method thereof, PCT, (register PCT/IT2017/000050), 14/11/2016.
2. R. Martins E. Fortunato, P. Baptista, "Detection and quantification system of biological matter constituted by one or more optical sensors and one or more light sources, associated process and respective uses: EU (PPE 40002/09). Owner: FCT-UNL.
 - 2.1 Spain (register 2365079), reference PTE-ES 43934/11;
 - 2.2 UK, (register 2059810), reference PTE-GB 43935/11;
 - 2.3 France, (register 2059810), reference PTE-FR 43936/11;
 - 2.4 Germany, (reference 602007013915), reference PTE-DE 43937/11;
 - 2.5 Ireland, (register 2059810), reference PTE-IE 43938/11;
 - 2.6 Portugal (register 2059810), reference PTE 43949/11;
 - 2.7 EUA (register 12/440,297), reference PTI-US 40003/09;
 - 2.8 South Africa, (register 2009/1216), reference PTI-ZA 40004/09;
 - 2.9 PCT, (register PCT/IB2009/005018), reference PPI 37342/07;
 - 2.10 Europe, (register 07826303.5), reference PPE 40002/09.
3. R. Martins and E. Fortunato, "Electronic Semiconductor devices based on copper nickel and Gallium-Tin-Zinc-Copper-Titanium p and n-type oxides, their applications and corresponding fabrication manufacturing Processes. Owner: FCT-UNL.
 - 3.1 Austrália, (reference 2007346358), reference PTI-AU 40653/09;
 - 3.2 Canada, (register 2,677,312), reference PTI-CA 40654/09;
 - 3.3 USA, (register 12/525,703), reference PTI-US 40656/09;
 - 3.4 Europe, (register 07709270.8), reference PPE 40657/09;
 - 3.5 Germany, (register 2115770), reference 2019/3897;
 - 3.6 UK, (register 2115770), reference 2019/3898;
 - 3.7 Brasil, (register 0721193-7), reference PTI-BR 40652/09;
 - 3.8 PCT, (register PCT/PT2007/000008), reference PPI 36095/07;
 - 3.9 Japan, (register 2009-549027), reference PTI-JP 40655/09.
4. E. Fortunato, R. Martins, "Use of cellulose and bio-organic based paper simultaneously as physical support and dielectric component in field effect electronic and optoelectronic based devices". Owner: FCT-UNL.
 - 4.1 Portugal, (register 103998), reference PAT 40050/09;
 - 4.2 Mexico, (register 2010/010225), reference PTI-MX 42405/10;
 - 4.3 Russia (register 2010142240), reference PTI-RU 42410/10;
 - 4.4 Japan, (register 2011-500308), reference PTI-JP 42413/10;
 - 4.5 Australia, (register 2009239685), reference PTI-AU 42415/10.
5. R. Martins, E. Fortunato, Electrochromic Thin Film Transistors with lateral or vertical structure using functionalized or non-functionalized substrates and method of manufacturing the same. Owner: FCT-UNL.
 - 5.1 Portugal, (register 104482), reference PAT 40425/09;
 - 5.2 Europe, (register 09768419.5), reference PPE 44505/11;
 - 5.3 South Africa, (register 2011/06848), reference PTI-ZA 44507/11;
 - 5.4 USA, (register 13/262,834), reference PTI-US 44509/11;

- 5.5** China, (register 200980159628.3), reference PTI-CN 44510/11;
- 5.6** India, (register 7388/CHENP/2011), reference PTI-IN 44508/11;
- 5.7** Brasil, (register 0925039-5), reference PTI-BR 44506/11;
- 5.8** Germany, (register 2416390), reference PTE-DE 52763/15;
- 5.9** Switzerland, (register 2416390), reference PTE-CH 52767/15;
- 5.10** UK, (register 2416390), reference PTE-GB 52766/15;
- 5.11** France, (register 2416390), reference PTE-FR 52764/15;
- 5.12** Ireland, (register 2416390), reference PTE-IE 52765/15;
- 5.13** PCT, (register PCT/IB2009/054425), reference 'PPI 40992/09.
- 6.** E. Fortunato, R. Martins, L. Pereira, P. Barquinha and N. Correia, Process of Creation and use of paper based on natural cellulosic fibers, synthetic fibers or mixed fibers as physical support and storing medium for electrical and ionic charges in self-sustaining field effect transistors with memory using active semiconductor oxides. Owner: FCT-UNL.
- 6.1** Portugal, (register 103999), reference PAT 40051/09;
- 6.2** Mexico, (register 2010/010223), reference PTI-MX 42418/10;
- 6.3** Russia, (register 2010142240), reference PTI-RU 42422/10;
- 6.4** Japan, (register 2011-500311), reference PTI-JP 42425/10;
- 6.5** Australia, (register 2009227670), reference PTI-AU 42427/10.
- 6.6** Korea, (register 2010-7021041), reference PTI-KR-42426/10
- 6.7** Europe, (register 09722972.8), reference PPE 42416/10;
- 6.8** Brasil, (register 0910257-4), reference PTI-BR 42419/10;
- 6.9** Canada, (register 2,718,880), reference PTI-CA 42421/10;
- 6.10** India, (register 6586/CHENP/2010), reference PTI-IN 42423/10;
- 6.11** Germany, (register 2282359), reference 60286;
- 6.12** France, (register 2282359), reference 60287;
- 6.13** UK, (register 2282359), reference 60288;
- 6.14** Finland, (register 2282359), reference 60289;
- 6.15** Sweden, (register 2282359), reference 60290;
- 6.16** Denmark, (register 2282359), reference 60291;
- 6.17** Spain, (register 2282359), reference 60292;
- 6.18** PCT, (register PCT/IB2009/005053), reference 'PPI 40052/09;
- 6.19** China, (register 200980109924.2), reference PTI-CN 42424/10;
- 6.20** Hong Kong, (register 11105876.5), reference 'PTI-HK 43829/11.
- 7.** R. Martins, E. Fortunato, L. Pereira, P. Barquinha, D. Kuscer, M. Kosec, J. Holc, S. Drnovšek. Amorphous multicomponent dielectric based on the mixture of high band gap and k dielectrics, respective devices and manufacture. Owners: FCT-UNL, Portugal; Joseph Stefan Institute, Slovenia and IREC/Spain
- 7.1** USA, (register 13/388,917), reference PTI-US 44979/11;
- 7.2** Europe, (register 10752640.2), reference PPE 44978/11;
- 7.3** Germany, (register 2462611), reference 2019/40885;
- 7.4** France, (register 2462611), reference 2019/40887;
- 7.5** UK, (register 2462611), reference 2019/40888;
- 7.6** Poland, (register 2462611), reference 2019/40889;
- 7.7** Portugal, (register 2462611), reference 2019/40890;
- 7.8** Portugal, (register 104709), reference PPP 40675/09.
- 7.9** PCT, (register PCT/PT2010/000037), reference PPI 42360/10.
- 7.10** PCT, (register PCT/IB2011/051487), reference PPI 43349/11;
- 7.11** Europe, (register 11724031.7), reference PPE 46359/12;
- 7.12** EUA, (register 13/640,214), reference PTI-US 46369/12.
- 8.** D. Kang, I. Song, E. Fortunato, R. Martins, international patent "Thin Film Transistor and Method of Manufacturing the Same". Owner: Samsung.
- 8.1** USA, reference (nº 2557-000845US) US 2008/0277663 A1;

- 8.2** Korea, (register:103936), reference KR2008277663
- 9.** Song Hee Park, Sun Hwang, Won Byun, M.C. Fortunato, Rodrigo F.P. Martins, Ana Barros, Nuno Correia, Pedro Barquinha, Vitor Figueiredo, Semiconductor device and Method of Manufacturing the same. Owner ETRI/Korea and FCT-UNL.
- 9.1** Korea, reference Pn100240ET
- 10.** E. Fortunato, R. Martins, R. Barros, P. Barquinha, V. Figueiredo, Sang-Hee Ko Park, Chi-Sun Hwang, Process of creation and use of copper oxide with embedded metal copper cations, tin oxide with embedded metal tin cations, copper tin oxide alloys with embedded copper tin metal alloys and nikel oxide embedded with Ni and tin metal cations as p-type oxides for electronics applications such as thin film transistors and complementary metal oxide semiconductor devices. Owners. ETRI/Korea, FCT-UNL.
- 10.1** Korea, reference PTI-KR4233/2010;
- 11.** E. Fortunato; C. Costa, I. Ferreira, R. Martins, I. Henriques, Electrochromic Device and method for producing the same, USA reference, 8,773,747, data da concessão: 08/07/2014 Owner: FCT-UNL and Ydreams.
- 12.** E. Fortunato; C. Costa, I. Ferreira, R. Martins, I. Henriques, Processing of electric and/or Electronic Components on Cellulosic Materials Substrates. PTI-US US 20110149529 A1. Owner: FCT-UNL and YDREAMS.
- 12.1** European Utility Patent 2,235,741.
- 13.** R. Martins, E. Fortunato. Trade mark Paper – e: Green electronics for the future. Owner: FCT-UNL.
- 13.1** Portugal, reference MNA 40659/09;
- 13.2** UE, Norway, Switzerland, China, Australia, Russia, Japan, reference EUA EST 40961/09;
- 13.3** India, reference EST 40962/09;
- 13.4** Canada, reference EST 40965/09;
- 13.5** Mexico, reference EST 40966-7/09;
- 14.** R. Martins, E. Fortunato, “Fabrication Process of Covalent Semiconductor/- Ionic Oxide Semiconductor Heterojunctions and their applications in the Optoelectronics”. Owner: FCT-UNL.
- 14.1** Portugal (register 103670), reference PAT 40111/09.
- 15.** R. Martins, E. Fortunato, I. Ferreira, A. Tagliaferro, “Development of a method to operate Tuneable Colour Sensors in order to achieve the maximum accuracy in detecting the colour of a light beam”, Owner: FCT-UNL. Portugal, (register 103936), reference PAT 41249/09.
- 16.** R. Martins, E. Fortunato, “Solid State Time Meters and corresponding control system and Fabrication Process”.
- 16.1** Portugal, (register 103671), reference PAT 40301/09. Owner: FCT-UNL
- 17.** Método de preparação duma tinta eletroquímica para impressão por jato de tinta sem sinterização e respetiva tinta, PT1044634, 16-06-2009, concedida em 2011. Inventores: C. Costa, G.K.R Senadeera. E. Fortunato IDS Henriques.
- 18.** T. Pardal, A. Machado, M.N. Ponte, D. Gomes, R. Martins, Electrochemical reduction of carbon dioxide in aqueous ionic liquid containing electrolytes, PT/23.02.16/PTA, ref. 16726983.6-1108. Owner: Omnidea, Lda.
- 19.** R. Martins, E. Fortunato, “Procedure for the use of natural cellulosic material, synthetic material or mixed natural and synthetic material, simultaneously as physical and dielectric support in self-sustainable field effect electronic and optoelectronic devices.” Owner: FCT-UNL
- 19.1** Portugal, (register 103998), reference 'PAT 40050/09;
- 19.2** PCT, (register PCT/IB2009/000565), reference PPI 40053/09;
- 19.3** Europe, (register 09734350.3), reference PPE 42404/10;
- 19.4** EUA, (register 12/933,661), reference PTI-US 42408/10;
- 19.5** China, (register 200980109925.7), reference PTI-CN 42412/10;
- 19.6** Hong-Kong, (register 11106318.9), reference PTI-HK 43978/11;

- 19.7** Canada, (register 2,718,919), reference PTI-CA 42409/10;
- 19.8** Russia, (register 2010142240), reference PTI-RU 42410/10;
- 19.9** Australia, (register 2009239685), reference PTI-AU 42415/10;
- 19.10** Japan, (register 2011-500308), reference PTI-JP 42413/10;
- 19.11** Mexico, (register MX/a/2010/010225), reference PTI-MX 42405/10;
- 19.12** Korea, (register 10-2010-7021040), reference PTI-KR 42414/10.
- 20.** R. Martins, E. Fortunato, P. J. Wojcik, “Mesoscopic optoelectronic devices comprising arrays of semiconductor pillars deposited from a suspension and production method thereof.” Owner: FCT-UNL
- 20.1** PCT, (register PCT/PT2010/000057), reference PPI 42526/10;
- 20.2** EUA, (register 13/992,660), reference PTI-US 47656/13.
- 21.** R. Martins, E. Fortunato, I. Ferreira, J. P. Borges, A. Baptista, B. Brás, “Energy generation and/or storage device based on fibres and thin films”. Owner: FCT-UNL
- 21.1** PCT, (register PCT/IB2009/054423), reference PPI 40993/09;
- 21.2** Europe, (register 09764043.7), reference 'PPE 45085/12;
- 21.3** EUA, (register 13/499,223), reference 'PTI-US 45089/12;
- 21.4** Brasil, (register 1120120071360), reference 'PTI-BR 45087/12;
- 21.5** South Africa, (register 2012/02497), reference 'PTI-ZA 45088/12.
- 22.** I. Ferreira, H. Águas, L. Gomes, M. Rodrigues, E. Fortunato, R. Martins, V. Teixeira, “PHOTOVOLTAIC CERAMIC COATINGS, IN PARTICULAR TILES, TILES, AND MOSAICS, AND ITS MANUFACTURING PROCESS”. Owner: ADENE; REVIGRES; Revestimentos de Grés; Lda; J. Coelho da Silva; Dominó; CTCV; DE VIRIS; INETI; CENIMAT; Univ. Minho.
- 22.1** PCT; (register PCT/PT2010/000063), reference PPI 41758/10.

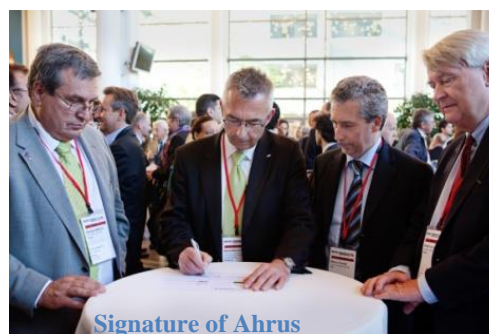
Patents Pending

- 1.** Beatrice Fraboni, Tobias Cramer, Rodrigo Martins, Pedro Barquinha, Elvira Fortunato, Ionization sensitive field effect device and manufacturing method thereof, PCT40046, Italy, PCT/IT2017/000050, Portugal, 14-11-2016, Owners: Alma Mater Studiorum – Università di Bologna; FCT-UNL.
- 1.1** USA, register 16/349830;
- 1.2** Japan, register 2019-524958;
- 1.3** Korea, register 2019-7015250;
- 1.4** India, register 201917021092;
- 1.5** China, register 2017800701677;
- 1.6** European Patent Office, register 17719015.4.
- 2.** R. Martins E. Fortunato, P. Baptista, “Detection and quantification system of biological matter constituted by one or more optical sensors and one or more light sources, associated process and respective uses: EU (PPE 40002/09). Owner: FCT-UNL.
- 2.1** Brasil, (register 0716635-4), reference PTI-BR 40005/09.
- 3.** E. Fortunato, R. Martins, “Use of cellulose and bio-organic based paper simultaneously as physical support and dielectric component in field effect electronic and optoelectronic based devices”. Owner: FCT-UNL.
- 3.1** Brasil, reference PTI-BR 44506/11;
- 3.2** India, reference PTI-IN 44508/11.
- 4.** E. Fortunato, R. Martins, L. Pereira, P. Barquinha and N. Correia, Process of Creation and use of paper based on natural cellulosic fibers, synthetic fibers or mixed fibers as physical support and storing medium for electrical and ionic charges in self-sustaining field effect transistors with memory using active semiconductor oxides. Owner: FCT-UNL.
- 4.1** USA, reference, PTI-US 42420/10;

5. R. Martins, E. Fortunato, L. Pereira, P. Barquinha, D. Kuscer, M. Kosec, J. Holc, S. Drnovšek. Amorphous multicomponent dielectric based on the mixture of high band gap and k dielectrics, respective devices and manufacture. Owners: FCT-UNL, Portugal; Joseph Stefan Institute, Slovenia and IREC/Spain
5.1 Brasil, reference PTI-BR 44980/11;
6. E. Fortunato, R. Martins, R. Barros, P. Barquinha, V. Figueiredo, Sang-Hee Ko Park, Chi-Sun Hwang, P-type oxide alloys based on Copper Oxides, tin Oxides, Tin-Copper alloy oxides and metal alloy thereof and Nickel oxide, with embedded metal thereof, fabrication Process and use thereof. Owners: FCT-UNL and ETRI/Korea.
6.1 Brasil, reference PTI-BR 46370/12.
7. E. Fortunato; C. Costa, I. Ferreira, R. Martins, I. Henriques, "Functionalization of the paper simultaneously as substrate electrochromic material, electrolyte material and counter electrode for the creation of self-sustainable electrochromic and energy store devices. PAT 1303/2010, pending. Owners: FCT/UNL (Portugal); YDreams (Portugal)
8. R. Martins, P. Wocik, E. Fortunato, "Method for efficiency improvement of mesoscopic optoelectronic devices as solar cells and photo sensors using 3D arrays micropillars deposited from suspension via inkjet printing. Owner: FCT-UNL
8.1 Europe, reference PPE 47663/13;
8.2 USA, reference PTI-US 47656/13.
9. R. Martins, E. Fortunato, "Procedure for the use of natural cellulosic material, synthetic material or mixed natural and synthetic material, simultaneously as physical and dielectric support in self-sustainable field effect electronic and optoelectronic devices. Owner: FCT-UNL
9.1 Brasil, reference PTI-BR 42407/10;
9.2 India, reference PTI-IN 42411/10.
10. E. Fortunato; C. Costa, I. Ferreira, R. Martins, I. Henriques, Processing of electric and/or Electronic Components on Cellulosic Materials Substrates. PTI-US US 20110149529 A1. Owner: FCT-UNL and YDREAMS.
10.1 USA, register 12/865,349, reference PTI-US.
11. R. Martins, E. Fortunato, P. J. Wojcik, "Mesoscopic optoelectronic devices comprising arrays of semiconductor pillars deposited from a suspension and production method thereof." Owner: FCT-UNL
11.1 Europe, (register 10805541.9), reference PPE 47663/13;
12. Song Hee Park, Sun Hwang, Won Byun, M.C. Fortunato, Rodrigo F.P. Martins, Ana Barros, Nuno Correia, Pedro Barquinha, Vitor Figueiredo, Semiconductor device and Method of Manufacturing the same. Owner ETRI/Korea and FCT-UNL.
12.1 USA, reference 201100253997A1.

Expert Opinion

- On 2016 was invited to belong to expert evaluation EU group to evaluate the proposals concerning the Future Emerging Technology (FET). Moreover, it has been also called to evaluated start grant proposals submitted to the European Research Council (ERC).
- On 2015, was evaluators and reporter for the evaluation of Graphene Flagship proposals submitted in the frame ERA net programme.



- On 2013 was invited to belong to the expert group in advanced materials and Technologies of the National Science and Technology Foundation of Portugal.
- On 2012, during the Denmark presidency of EU, it was responsible to sign the Arhus declaration (Declaration at the Industrial Technologies 2012) involving the main representatives from Academia in the field of Materials (E-MRs and FEMS) and from industry (Mat Val).
- On the working group on “Strategy and Road mapping for Industrial Technologies to Address Grant Challenges”, Brussels, European Commission, November 2011 to 20th January 2012; 19 June, Aarhus; 10th September, Brussels 2012; on the working group of the Nanofutures platform, integrating the panel “Inventive session on nano-micro manufacturing”, July 2011 to 15 February 2012, Roma, Italy; Materials Roadmap working group (energy) of the European Commission (2012-2014); member of the materials set plan for EC (since 2011).

Organisation of International and World Conferences

- ✓ Chair of the 1st Asia Advanced Materials Summit, Marriot Shangai Parkview Hotel, 8-10 March, sponsored by the Chinese Association for Science and Technology, together with Professor Yon Gang, President of the Asia Pacific Academy of Materials.
- ✓ Member of the International Scientific Committee of [20th International Metallurgy and Materials Congress, IMMC2020](#), 12-14 November 2020, Istanbul, Turkey.
- ✓ Member of the International Advisory Board of the [20th International Union of Materials Research Societies, International Conferences in Asia, IUMRS-ICA](#), Perth, Convention and Exhibition Centre, Western Australia, 22-26 September 2019
- ✓ Member of the organizing committee of the Science and Innovation Congress Switzerland – Portugal 2019, 2-3 May, Lisbon (<https://swissportugalscience.net/>), where it will act also as chair-session
- ✓ R. Martins co-organizer of C-1 Nobel Laureate Prof. SUZUKI special symposium (Carbon related Materials) (3rd Bilateral MRS-J / E-MRS symposium), 15th International Conference on Advanced materials, IUMRS-ICAM 2017, Kyoto, 27th August to 1 september 2017, Japan.
- ✓ R. Martins, Chair of Symposium Y, in Paper electronics: from materials to applications, E-MRS spring meeting, 22-26 May; E-MRS Spring meeting, 22 May 2017.
- ✓ R. Martins, Chair of the Workshop, Europe in Motion; E-MRS spring meeting, 22-26 May; E-MRS Spring meeting, 22 May 2017
- ✓ Andreas Kein, R. Martins and Yuzo Shigesato, chairs of Symposium N, Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium), E-MRS spring Meeting, Lille, France, May 2-6, 2016.
- ✓ R. Martins, Andrzej Mycielski, Peter Wellmann, conference chairs of the 2015 E-MRS Fall Meeting and Exhibit, Warsaw University of Technology, Poland, 15-18 September 2015.
- ✓ R. Martins, Chair of the 'Advanced Materials at the cutting edge of innovation' session of the LETS conference (Leading Enabling Technologies for Societal challenges), Bologna, Italy, 29 September, 1 October 2014, organised by Italy presidency of EU.
- ✓ R. Martins, A. Correia de Campos, P. Siffert, J. Amoroux, J. Massué, STOA workshop, CO2: a Future Chemical Fuel, CO2: a Future Chemical Fuel" workshop, March 22, 2011, Brussels (European Parliament; Room ASP 3E-2) / Belgium.
- ✓ P. Bressler, T. Gregorkiewicz, R. Martins, A. Mycielski, J. Perriere, EMRS 2011 Fall, Sept. 19 - 23, 2011, Warsaw, Poland.
- ✓ G. Kiriakidis, H. Hosono, C.-G. Granqvist, R. Martins, J. F. Wager TCM 2010, 17 - 21 Oct 2010, Crete, Greece.

- ✓ I. Boyd, T. Lippert, G. Marletta, R. Martins, E-MRS 2010 Spring Meeting, June 7-11 2010, Congress Center, Strasbourg.
- ✓ R. Martins, P. Siffert, M. Kleiber, First World Materials Summit on Materials research: Key meeting energy needs and climate changes”, Lisbon Portugal, 3-5 Oct 2007, organized by MRS/EMF/ISE, in the frame of UE Portuguese Presidency.
- ✓ A. Slaoui, R. Martins, P. Glasow, L. Zhou, EMRS-IUMRS-ICEM 2006 May 29,- June 2, 2006, Acropolis, Nice, France.
- ✓ R. Martins, E. Fortunato. I. Ferreira, V. Chu, J. Conde, ICANS21, 4-9 September, Lisbon, Portugal 2005.
- ✓ A. Slaoui, D. Barbier, G. Crean, R. Martins, H.- Habbermeier, EMRS 2005 Spring Meet, May 31- June 3, 2005, Strasbourg.

Organisation of International Symposia, Schools, Workshops and Brainstorm with Policy Makers

- Science petitions in favour of science as the ones launched by [EURASC in favour Horizon Europe program](#) (2019); promotion actions in favour of [science in Europe](#), (2019), and against bureaucratization of Science; promoting science debates involving mass media; [position papers regarding Academies independence](#) (2019);
- Supporting police makers in promoting actions towards great European audiences, such the presentation of P. Rubig for the AMSE conference, 24th July 2019, titled: Coating Technologies for the Energy Sector;
- As chair of the Committee of Global Leadership and Service Award (GLSA) of the International Union of Materials Research Society, IUMRS, organization of the 3rd GLSA, 30th May 2019 in Nice (Congress & Exhibition Centre Acropolis), France, during the E-MRS/ICAM conference, with the participation of P. Droell, DGR Research and Innovation, where the awards were Commissioner Carlos Moedas and Professor Robert Chang (USA), the Founder of IUMRS.
- F. Falzetti, R. Martins as members of Steering Committee of Alliance for Materials (A4M), organizing in the European Parliament with the support of APRE and STOA, [Scientific and Technological Option Assessment](#), via the co-chair P. Rubig) the workshop: The Materials R&D&I role for the future European Growth - from H2020 to FP09, 17th October 2017, Brussels, EP.
- As chair of the Committee of Global Leadership and Service Award (GLSA) of the International Union of Materials Research Society, IUMRS, organization of the 2nd GLSA, 17th November, 2016, in cooperation with the STOA Panel, and the MEPs Paul Rübige (EPP), Carlos Zorrinho (S&D), José Inácio, Faria (ALDE), Carlos Coelho (EPP) and Marisa Matias (GUE), where the awards were Prof. M. Graça Carvalho (Europe); Professor Sukekatsu Ushioda, former president of the National Institute of Materials Science, Japan; Professor Wan Gang, Minister of Science and Technology of China.
- As chair of the Committee of Global Leadership and Service Award (GLSA) of the International Union of Materials Research Society, IUMRS, organization of the 1st Global Leadership and Service Award (GLSA), Brussels, 23rd February **2015**, at THON Hotel, Brussels under the patronage of MEP Carlos Zorrinho, Group of the Progressive Alliance of Socialists and Democrats, and Member of Committee on Industry, Research and Energy – ITRE), where the awards were: Professor Doctor Mihail Roco, the founding Chair of the National Science and Technology Council's subcommittee on Nanoscale Science, Engineering and Technology of USA National Science Foundation; Mr. Christos Tokamanis, head of Unit "Advanced Materials and Nano Technologies" – Directorate "Key Enabling Technologies, Research & Innovation", European Commission, for the outstanding services to the European Union community in supporting an effective and efficient nanotechnology policy integrating the needs of innovation with societal impact and responsible governance; Professor Doctor Paul Siffert, founder and First President of the "European Materials Research, Society" (E-MRS); General Secretary of the "European Materials Forum" (EMF) and of the "European Materials Research Society" (E-MRS), Czochralski Gold Medal, and for 30 years of dedicated services to European and Global Materials Community.
- Rodrigo Martins and Ehrenfried Zschech, chairs of European Materials weekend, Warsaw, 19-20 September 2015.

- P. Siffert and R. Martins (E-MRS), workshop organized in the EP (Room ASP 5G3, European Parliament, Brussels), with the support of STOA (P. Rubig, C. Campos and also with the contribution of Rolf Linkohr, the STOA founder): European Innovation, Ecosystem for generating value, 10 on April 2013.
- P. Siffert, R. Martins et al, IV World Materials Summit, Council of Europe, Strasburg, 14-15 October 2013
- R. Martins, P. Siffert et al., Workshop on Materials and Innovation: Crossroads of the Future Challenges, Warsaw, 18-19 September 2013, satellite event of E-MRS Fall meeting.
- V. Dusastre, Nature Materials, R. Martins, FCT-UNL; F. Priolo, Dept. Physics & Astronomy, Univ. Catania; F. Pulizzi, Nature Materials: E-MRS and Nature Materials workshop: Frontiers in Materials: Spintronics, 13 May, Strasbourg 2012.
- A. Correia de Campos (MEP), R. Martins (E-MRS); E. Zschech (FEMS), M. Falcetti (EUMAT), M. Kleiber (EMF), STOA workshop on Materials Challenges for 2020, 10th July, European Parliament, Brussels, 2012.
- M. Da Graça Carvalho (MP-EP), R. Martins (E-MRS); E. Zschech (FEMS), M. Falzetti (EUMAT), M. Kleiber (EMF), ETRI breakfast debate on Materials within Horizon 2020 agenda, 31st May, European Parliament, Brussels, 2012.
- R. Martins, C. Granqvist, M. Hirano and G. Kiriakidis, Transparent Flexible Electronics: from materials to devices, Symposium B, EMRS, fall meeting, Warsaw Poland, 15-19 September 2008.
- R. Martins, P. Siffert, M. Kleiber, 1st World Materials Summit on Materials research: Key meeting energy needs and climate changes”, Lisbon Portugal, 3-5 October 2007, organized by MRS/EMF/ISE, within the frame of UE Portuguese Presidency.
- R. Martins, L. van Dyck ISE (Initiative for Science in Europe) meeting, Lisbon, 15-16 January 2007.
- G. Marletta, O. Oliveira, R. Martins, 3rd B-MRS, Symp. C “Supramolecular Materials and Devices, Iguaçú, Oct. 10-13, 2004.
- J. Morant, J. Martinez –Duart, R. Martins, short Course in: “Fundamentals and Applications of Nanotechnologies”, EMRS 23/24 May 2004 Strasbourg, France.

Membership in the steering and/or organising committee

- Member of the organizing committee of the Conference "International Conference on Applied Chemistry", July 01-03, 2021 at Munich in Germany. The main theme of the conference is “Modernistic Advancements and innovative applications in Applied Chemistry”.
- Member of the Programme Committee of Quantum Sensing and Nano Electronics and Photonics XVIII, [SPIE Photonics West](#); 23-28 January 2021, The Moscone Centre, S. Francisco, CA, USA.
- Member of the Programme Committee of 22nd International Union of Materials Research Societies – International Conference in Asia ([IUMRS-ICA 2021](#)), from 3-8 August 2021, at ICC Jeju, Korea.
- Member of the organizing committee of the Science and Innovation Congress Switzerland – Portugal 2019, 2-3 May, Lisbon (<https://swissportugalscience.net/>).
- Member of the Conference Technical Committee of the International Conference on Smart Sensing and Intelligent Systems (ICSSIS 2018 www.icssis.org), Beijing, China, May 25-27, 2018.
- Member of the program committee of SENSORCOMM 2018, The Twelfth International Conference on Sensor Technologies and Applications, September 16 - 20, 2018 - Venice, Italy.
- Member of the International Advisory Board of the 8th Forum on New Materials, CIMTEC 2018, Perugia, Italy 10-14 June 2018.
- Member of the Nomination committee of the KIC Raw Materials, representing the Central CLC, 2017.
- Chair of the Scientific Committee of 7th Conference on Materials science UGALMAT 2016, 19-21 May, Galati, Romania. He also belongs to the KIC CLC steering Committee.

- Member of the International Advisory Board of the International Union of Materials Research Societies-International Conference of Young Researchers on Advanced Materials” (ICYRAM 2016), December 11-15, 2016, Bangalore, India.
- Member of the Scientific Committee of the 4th Dresden Nanoanalysis Symposium, Dresden Congress Center, June 15, 2016.
- Member of the International Scientific Committee of International the Doctoral School of Engineering, University of Galati, Romania, IOSUD-UDJG, Galati, Romania, 4-5 June 2015.
- Member of the International Advisory Committee of 8th International Conference on Materials for Advanced technologies of the Materials Research Society of Singapore and 16th IUMRS International Conference in Asia, together with 4th Photonics Global Conference 2015, held in Suntec, Sigapore, 28th June to 3 July 2015.
- Member of the International Advisory Committee for the Energy Materials Nanotechnologies, EMN Summer Meeting 2015 hold in Cancun, Mexico (<http://www.emnsummer.org/2015/>).
- Member of the International Advisory Committee for the Energy Materials Nanotechnologies, EMN Qingdao Meeting 2016 (<http://www.emnmeeting.org/qingdao/2016/>).
- Member of the International Scientific Committee of Conference 'Science in Technology 2015' (SCinTE 2015, www.scinte.gr), Athens, Greece, 5-7 November 2015.
- Member of the Scientific Evaluation Panel in the Domain of Graphene Flagship), FLAG-ERA, Joint Transnational Call 2015.
- Member of the international scientific committee of the multidisciplinary Conference of the Doctoral School of UDJG, (CSSD-UDJG 2015), Galati, Romania, 4-5 June 2015.
- Member of the International Advisory Board of the 15th International Meeting on Information Display, 18-21 August 2015, Daegu, Korea.
- Member of the International Advisory Board of International Conference on Materials for Advanced Technologies ICMAT 2015 and the 16th International Union of Materials Research Societies, International Conference in Asia IUMRS-ICA 2015, Singapore, 28 June to 3 July 2015.
- Member of the International Advisory Board of 14th International Union of Materials Research Societies-International Conference on Advanced Materials (IUMRS-ICAMS 2015), Jeju International Convention Centre, Jeju, Korea, October 25-29, 2015.
- Member of the International Scientific Committee of the XIV Brazil MRS meeting, held in Rio de Janeiro, Brazil, 27th September to 1st October 2015.
- Member of the International Advisory Committee for the Energy Materials, Nanotechnology, EMN Fall Meeting taking place at Orlando Florida, USA from Nov. 22 to 25, 2014(<http://www.emnfall.org/2014/>).
- Member of International Advisory Committee of IUMRS-ICA2014, hold from 24th (Sun.) to 30th (Sat.) August 2014 at Fukuoka University, Japan, organized by the IUMRS Japan and hosted by the Asian MRS Asian Members.
- Member of the International Advisory Board of Symposium FH “Recent Developments in the Research and Application of Transparent Conducting and Semiconducting Oxides” of the 6th Forum on New Materials (June 15-20, 2014), CIMTEC 2014, Italy.
- Member of the International Advisory Committee of the International Conference in Asia – 2013, organized under the International Union Materials research Society, (IUMRS-ICA-2013), from December 16-20, 2013 at Indian Institute of science, Bangalore, India.
- Member of the International Advisory Committee of International Conference in Advanced Materials, IUMRS-ICAM2013, Qingdao International Convention Center, China, Sept. 22-27. 2013.

- Member of the International Advisory Board of ICANS 25 (<http://www.icans25.org/>), August 18–23, 2013 Toronto, Ontario, Canada.
- Member of the 7th International Conference on Materials for Advanced Technologies, ICMAT 2013, 30 June to 05 July 2013, Singapore.
- Member of the organizing committee of Oxide-based Materials and Devices Conference, Part of the SPIE International Symposium on Integrated Optoelectronic Devices 2012 (conference 8363), January 22-25, 2012 San Francisco, CA USA.
- Member of the organizing committee of the 8th International Thin Film Transistor Conference ITC 2012, Lisbon, 30-31 January 2012.
- Member of the organizing committee of the 4th International Symposium on Transparent Conductive Materials, TCM2012, October 21-25 2012, Crete, Greece.
- Member of the International Advisory Committee and chair for the “International Conference of Young Researchers on Advanced Materials (ICYRAM 2012)” Organized by the Materials Research Society of Singapore in association with NUS and NTU, 1st – 6th of July 2012, at Biopolis, Singapore.
- Member of the Int. Conf. on Amorphous and Nanocrystalline Semiconductors, since 1999 (biannual: ICANS 2011).
- Member of the Organized program committee, SPIE West, Oxide-based Materials and Devices II, S. Francisco, USA, 23-28 January 2011.
- Member of the IASTED/NANA 2010), Nov. 1–3, 2010, Cambridge, Massach., USA (<http://www.iasted.org/conferences/home-707.html>).
- Member of the organising committee of the 4th MPA 2010 (Inter. meeting on Developments in Materials, Proc. and Appl. of Emerging Technologies), Braga, – 28-30 July 2010.
- Member of the CIMTEC 2010, 5th Forum on Materials Solutions for Sustainable Energy, Symposium FI “Recent Developments in the Research and Appl. of Transp. Cond. and Semicond. Oxides”, Montecatini-Florence, It., June 13-18, 2010.
- Member of the organizing committee of Oxide-based Materials and Devices Conference, SPIE West 2010, January 22-27, 2010 San Francisco, CA USA.
- Member of the organizing committee of 4th Conf. on ZnO Materials and Devices SPIE Photonic West, OPTO2009, 24-29 January 2009, San Jose, California, USA.
- Member of the organizing committee of the 2nd Inter. Symp. on Transparent Conductive Oxides, IS-TCO 2008, 22 - 26 October 2008, Hersonissos, Crete, Greece.
- Member of the organising committee of 4th IASTED Int. Conference on Nanotechnology and Applications (NANA 2008), Sep 29-Oct 01, 2008, Crete, Greece.
- Member of the 3rd Int. Conference on Amorphous and Nanostructured Chalcogenoides-ANC-3, Brasov, Romania, 2-6 July 2007.
- Member of the 1st International Symposium on Transparent Conducting Oxides (1st TCO, Crete, Greece, 23-25 October 2006.
- Member of the Initiative for Science in Europe (ISE), that launch the European Research Council, under the Chair of JosV© Mariano Gago (Creating a European Research Council. Letter to the editor, Science, August 2004: <http://www.initiative-science-europe.org/pdf/04-Science-Letter-Creating-ERC.pdf>).
- Member of the of the organising committee of the 2003 IEEE International Symposium on Industrial Electronics, 2003, Rio de Janeiro, Brazil.

Activity as referee/evaluator

2020-Evaluator of scientific merit of reserachers for the Swiss National Science Foundation and for the University of Waterloo, Canada.

2020- Evaluator of M-ERA-NET call (Additive Manufacturing).

2019- Evaluator of projects from Technology Foundation, The Netherlands

2019- [Agency for Science, Technology and Research from Singapore](#).

2018- to present Evaluator of research projects for the Kazakhstan National Agency;

2018- to present Evaluator for projects from [Norway Reseach Council](#)

2017- Evaluator of projects from The State Education Development Agency of Latvia

2012-to present: Invited as evaluator of Italian Research Quality Evaluation 2004-2010, in the field of physics.

2011-to present: Invited as project and Institution evaluator Romania. Evaluator of advanced projects; start projects; networking of the Romania Science Foundation, 2012

2010- 2020 Evaluator of European Research Start Grants in the field of Electronics and Materials Science;

2004- 2019; Evaluator for the Spanish and Italian project (Cineca) and grant evaluations in the frame of the Minister of Research and Higher education; Projects Evaluator of Fp4, FP5, Fp6, FP7;

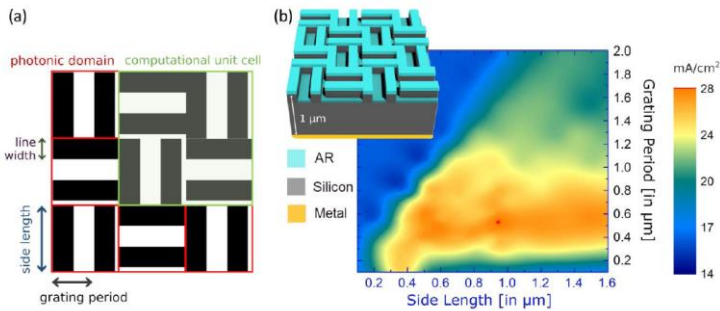
2000- to present, project evaluator of the Portuguese Agency of Innovation;

Referee of Scientific Journals

Referee in the following main journals: Nature Materials; Nature Communications; Nature Nanotechnology; Advanced Materials; Advanced Functional Materials; Advanced Electronics Materials; Advanced Materials technologies; Advanced Sciences; ACS Applied Materilas and Interfaces; ACS Applied nanomaterials; ACS Applied Energy Materials; ACS Nano; ACS Omega; Applied Cermic Technologies; Applied Electronics Materials; Applied Materials; Applied Materials Today; Applied Nanomaterials; Applied Physics A; Applied Surface Sciences; Carbohydrate Polymers; Ceramics International; Crystal Growth and Design; Current Applied Physics; Discover Materials; Journal InfoMat; Journal of Alloys and Compounds; Composites Part B: Engineering; Journal of the Electron Devices Society; Journal of Materials Science: Materials in Electronics; Journal of Rare Earths; Journal of Physics D; ECS Journal of Solid State Science and Technology; Langmuir; Materials; Materials Chemistry and Physics; Materials Letters; Materials Research Bulletin; Materials Today: Proceedings; Mechanical Systems and Signal Processing; Nanomaterials; Plasma Chemistry and Plasma Processing; Solid State Sciences; Superlattice and Microstructure; Surface and Coatings Technology; Surfaces and Interfaces; NANOELLETTERS, BIOELECTRONICS AND BIOENGINEERING; Physica Status Solidi a, b and RRL; Nano letters; Journal of American Chemical Society; Applied Physics Letters; Journal of Applied Physics; IEEE, EDL; IEEE, ED; Electrochemical Society; European Physics Letters; Polymers Advanced Technology; Solar Energy Materials and Solar Cells; Journal of Materials Chemistry; Journal of Physics Chemistry; Thin Solid Films; J. of Non Cryst. Solids; Materials, Chemistry and Physics; Crystal Growth; Surface Coatings; Sensors and Actuators, Vacuum.

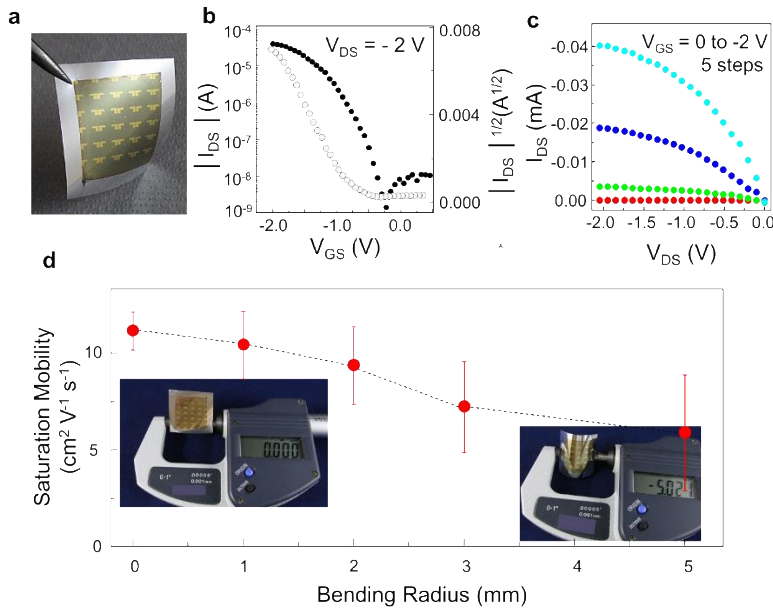
Demonstrators, prototypes and test vehicles developed

Along his career he has been involved in the development of the following demonstrators/ proof of concept test vehicles:



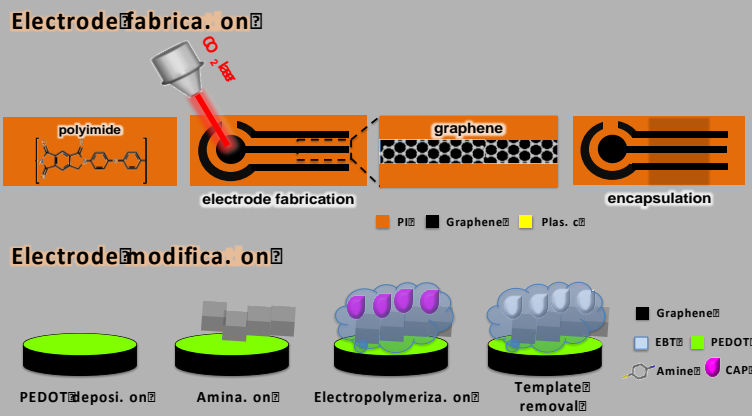
Simple design rules to maximize absorption on solar cells, **2020**. Breakthrough concept developed together with the University of York, UK with a strong impact on the scientific community (more than 1 million viewers)

The figure shows: (a) Representation of the checkerboard's photonic domain and computational unit cell. (b) The parameter map shows the computed maximum achievable photocurrent density J_{max} as a function of the grating period and domain size. The inset shows the test cell with the checkerboard structure over it. The linewidth is here kept at half the grating period. The red dot marks the optimal parameter set that maximizes the broadband absorption in the 1 μm c-Si layer.



World hole mobility record on p-type TFT based on Halide Perovskites, processed on flexible foils (mobilities exceeding $15 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$) **2020**.

a) Photograph of a flexible MAPbI₃-DES perovskite p-type TFT on Kapton substrate. (b) Transfer characteristics (I_{DS} vs V_{GS}) at $V_{DS} = -2 \text{ V}$. There we also show the dependence of the modules of the square root of I_{DS} as a function of V_{GS} . (c) Output characteristics of a MAPbI₃-DES flexible TFT (I_{DS} vs V_{DS}), for V_{GS} varying from 0V to -2 V in 0.5V steps. (d) The field effect mobility (saturation) of flexible MAPbI₃-DES TFTs under different bending curvature radii.

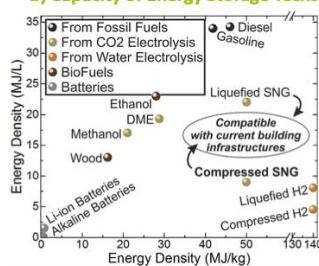


Electrodes for electrochemical biosensors produced by Laser Induced Graphene on flexible polymers (**2020**)

a) Energy / Raw Materials Flow Diagram:

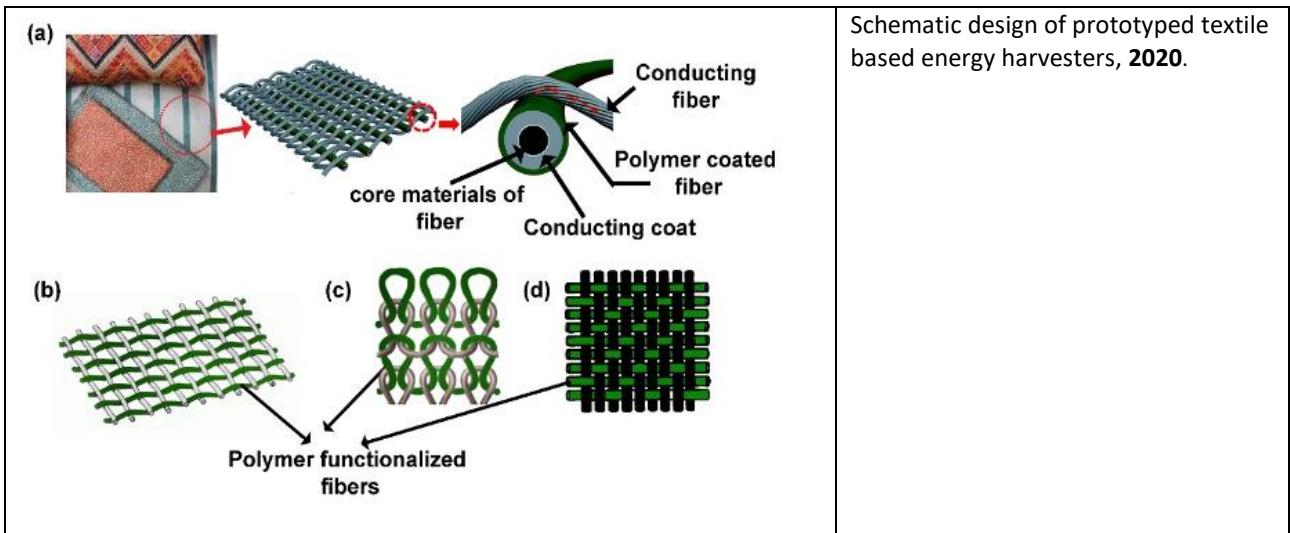


b) Capacity of Energy Storage Techs:

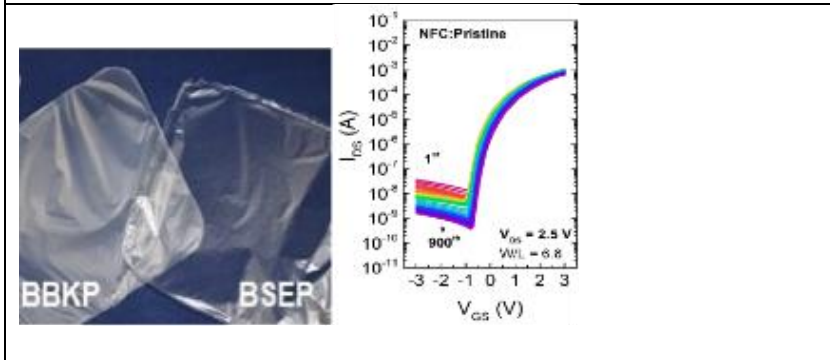


Proposition to built-up gas solar refineries (**2020**):

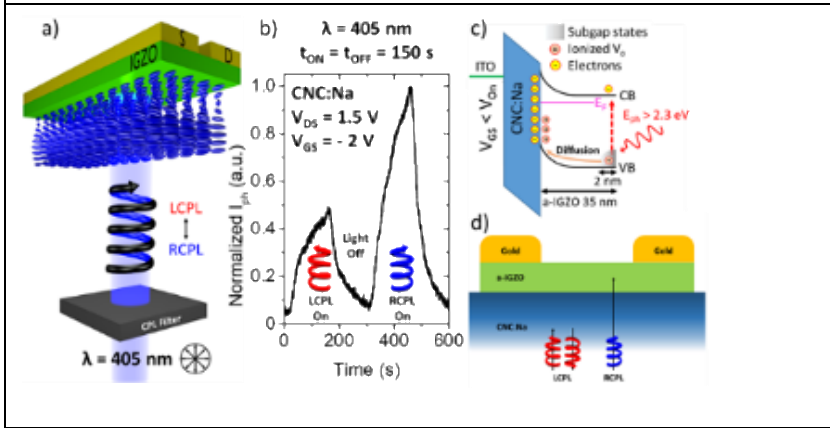
a) Energy / Raw Materials Flow Diagram; b) available techniques for energy storage



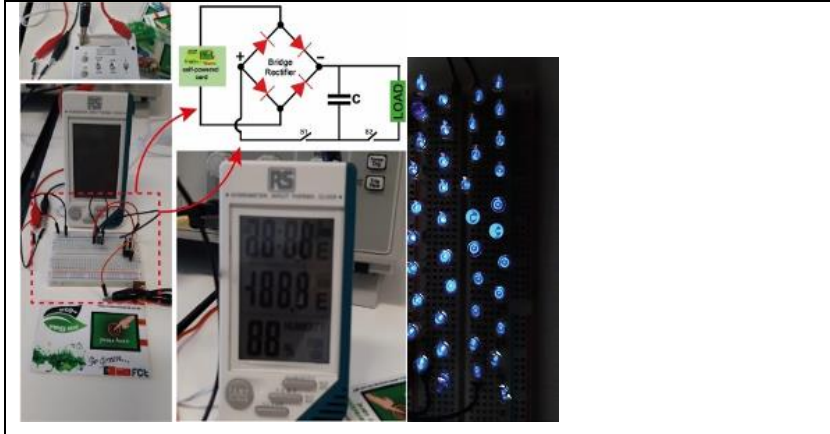
Schematic design of prototyped textile based energy harvesters, 2020.



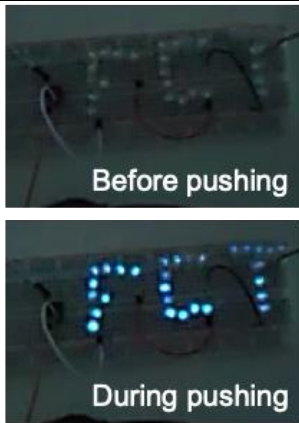
Functional cellulose membranes made of ionically modified nanofibers as gate dielectric in FETs, 2019



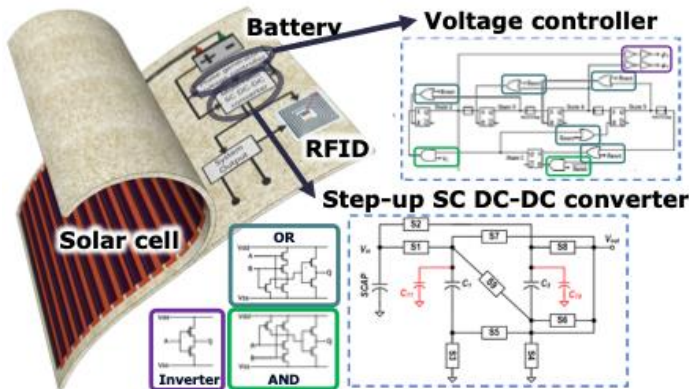
Proof-of-concept of a photosensitive chiral transistor presented here, could enable the use of polarization as an additional degree of freedom for information processing: a) Schematic of Circular Polarized Light detection in a IGZO FET b) photogenerated current for Left-CPL and Right-CPL cycle. c) band diagram of ITO/CNC/a-IGZO. d) schematic of optical path through the CNC membrane, 2019



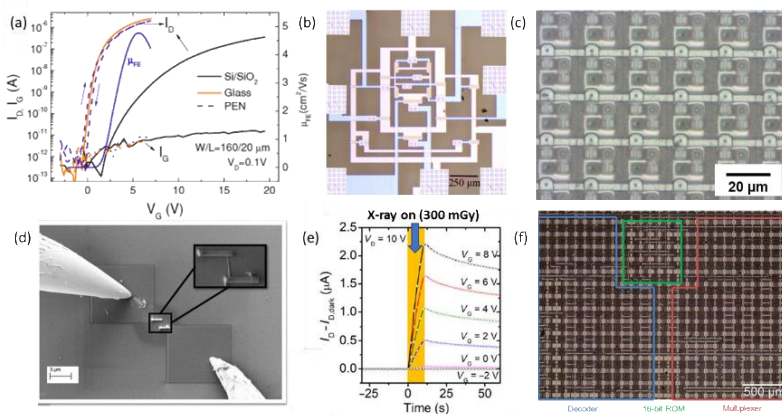
Triboelectric nanogenerators (2019). A prototype concept of an eco-energy card built on paper



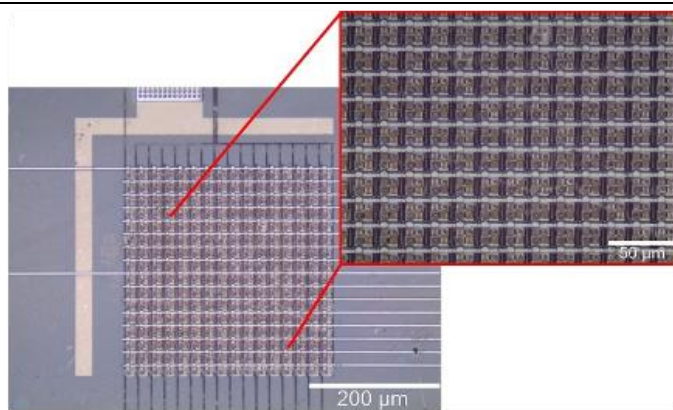
Triboelectric nanogenerators (TEGs) working as a power source to light up 29 blue LEDs in series (2019)



Packages of integrated self-sustainable power energy unit on flexible foils that includes the solar cell, battery, supercapacitor and the electronics for power management (2019).

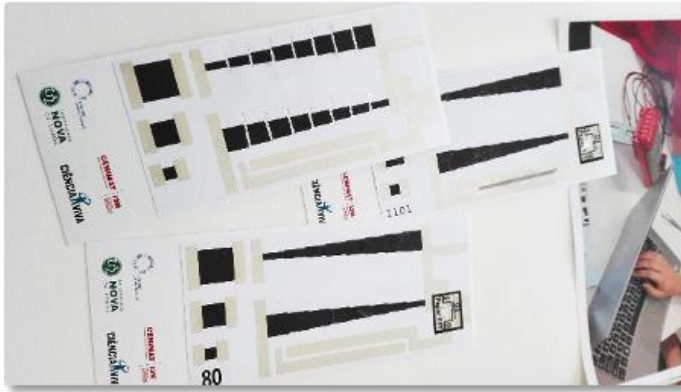


Oxide (nano)electronics: (a) ZTO TFTs transfer characteristic; (b) micrograph of IGZO-TFT based differential amplifier; (c) micrograph of part of a active matrix backplane with miniaturized ($L=2 \mu\text{m}$) IGZO TFTs; (d) SEM image of a single ZTO NW being electrically probed; (e) electrical response of IGZO TFTs under X-rays; (f) micrograph of part of RFID chip following a matrixial layout approach. The section shows >350 discrete IGZO TFTs interconnected by a multi-level metallization scheme (2019)



Ultra-high density (1270 PPI) active matrix based on oxide TFTs for augmented reality applications, 2018

Within P2020 ORABAC project (collaboration with Lusospace) this active matrix with a pixel pitch of only $20 \mu\text{m}$ was developed, with processing temperature of only $180 \text{ }^\circ\text{C}$. This process explores the resolution limits of current lithographic tools and the backplane will now be integrated with micro-LEDs to produce AR eyeglasses.



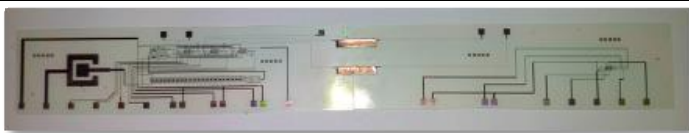
Electronics on/from paper platform, 2018

CENIMA/I3N has developed prototypes of voltage dividers combined with transistors and inverters, all made on paper. 1500 prototypes were produced to serve as practical exercise in the International Physics Olympiads 2018, where they were tested by more than 500 student form all over the world.



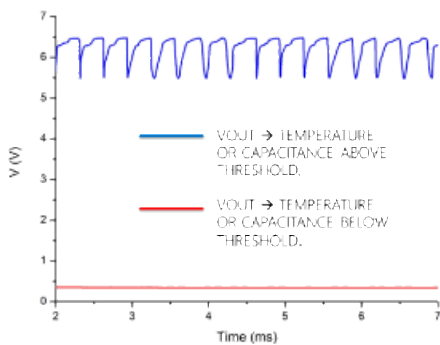
Cellulose matrix for integrated sensing functions, 2018

Within P2020 CelSmatSense project it was developed an innovative cellulose matrix capable of being used simultaneously for microfluidics and printing electronics. This new matrix was successfully implanted in printed electrochemical sensing platforms

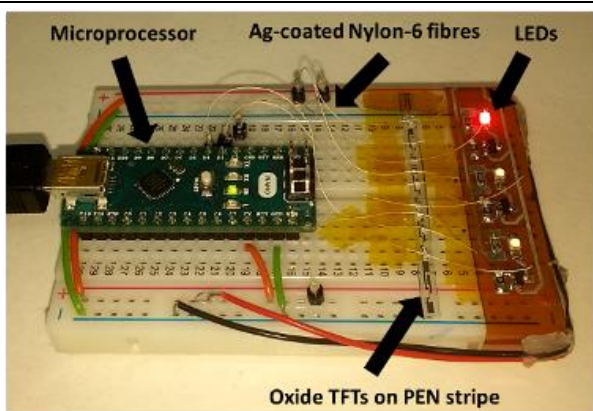


Flexible oxide electronics for smart packaging, 2017

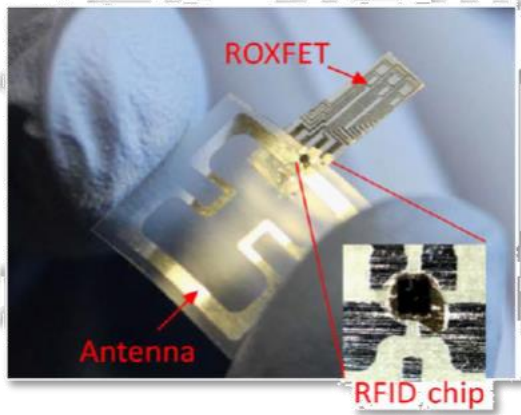
Within H2020 Roll-Out project, circuits based on ZTO TFTs (Indium-free) on PEN substrates for fill level sensing readout and temperature sensing+readout, to be integrated on bottles, with comparable performance to IGZO TFTs ($\mu_{FE} > 5 \text{ cm}^2/\text{Vs}$, $S = 0.26 \text{ V/dec}$, $V_{on} \approx 0 \text{ V}$, $\text{On/Off} > 10^7$).



Circuit includes >150 TFTs.

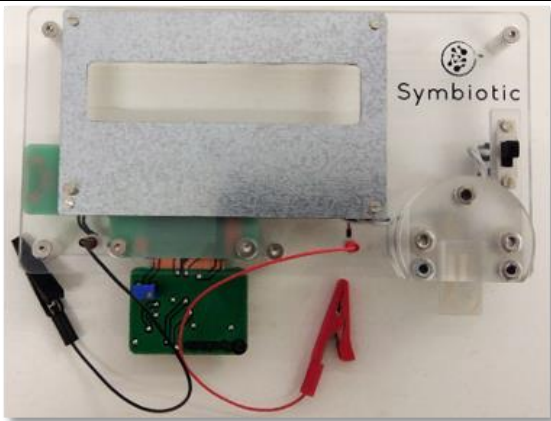


Oxide-based fibre transistors integrated with conductive polymeric fibres, 2017. Within 1D-Neon project, initial attempt to integrate a stripe with 10 oxide TFTs on PEN fabricated at $T < 150 \text{ }^\circ\text{C}$ with extruded fibres based on Nylon-6 coated with Ag using an electroless plating method to turn them electrically conductive. Fibre TFTs are acting as switches to turn on & off LEDs, interconnected by the conductive fibres.



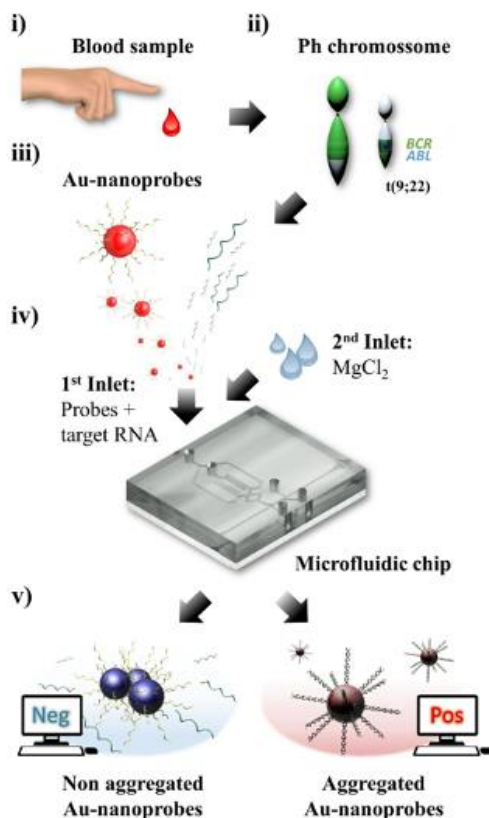
Programmable passive RFID radiation sensor based on ROXFET, **2017**

As an outcome of the FP7 i-FLEXIS project, oxide TFTs on PEN acting as X-ray sensors were integrated with an RFID chip and antenna in cooperation with Univ. Bologna and Tagsys. This prototype allows to have an alarm when a certain dose of radiation is detected.



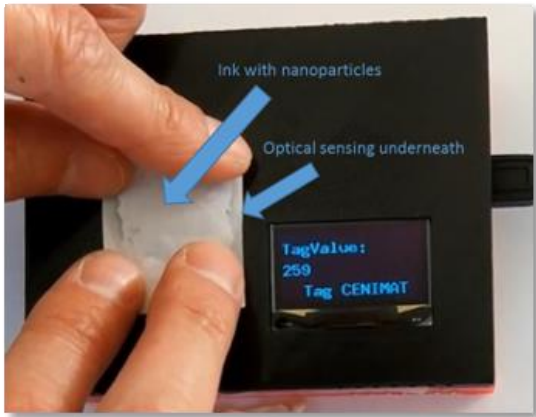
Symbiotic Platform: Platform for integration of the biosensor-based fuel cell and the electrochromic (EC) display, **2017**.

The system is conceived to house all the subsystems required to test the devices, and has the biosensor-based fuel cell support, an electronic board, a magnetic EC display holder, a switch to turn off the EC display and a system to connect the two output poles of the fuel cell to the system.

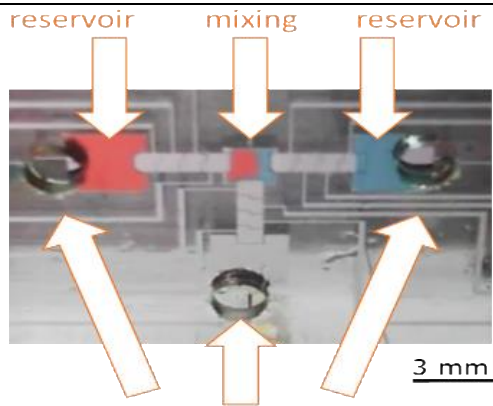


Multifunctional microfluidic chip for optical nanoprobe based RNA detection, **2017**

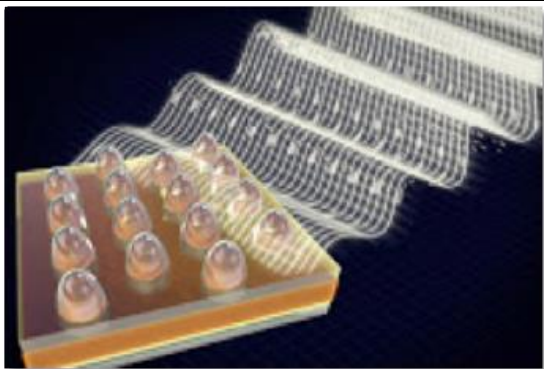
Multifunctional microfluidic chip for optical nanoprobe based RNA detection, which uses gold nanoprobe to perform RNA optical detection inside a microfluidic chip. To prove the concept, this device was used for screening chronic myeloid leukemia, a cancerous disease that can be better treated in its early stages and is lacking on routine screening tests. The chip passively mixes target RNA from samples, gold nanoprobe and saline solution to infer a result from their final colorimetric properties. An optical fiber network is used to evaluate its transmitted spectra inside the chip (2017).



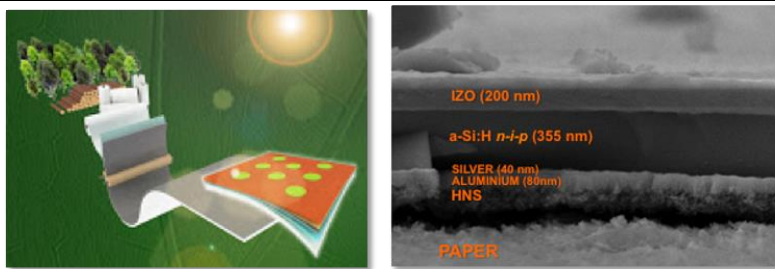
Optical system for detection/discrimination of photoluminescence nanoparticles, **2017**. In the frame of the project Nanomarkers from INCM, development of an electronic system for the detection of photoluminescence nanoparticles within inks developed and produced ant CENIMAT on the scope of a contract project with Portuguese Mint and Official Printing Office (2017)



Digital Microfluidics control system, **2016**
 Digital microfluidics (DM) demonstrator to dispense, move, merge and split nL to uL droplets. This system also incorporates a transparent thin film-heating element that allows the control the DMF chip temperature and performs DNA amplification tests.



Photonics for Solar cells and SERS, **2016**
 Development of nano disperse particles (conductive or dielectrics) on the surface of optoelectronics devices such as solar cells and surface enhancement Raman Spectroscopy, SERS aiming to increase the light collected by an absorber layer.



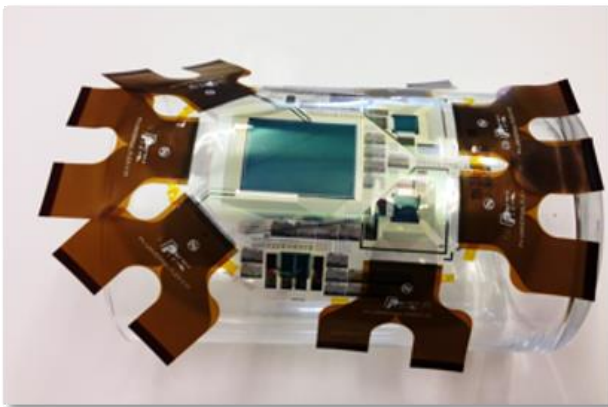
TetraSolar, and paper solar, **2015**
 Silicon solar cells processed at low temperatures on cardboard and paper. It is shown the sketch of the concept; a cross section of the solar cells constitutes on the cardboard. The Tetra Solar concept won the Exame Informatica 2016 Innovation Award



Paper electronics, 2015

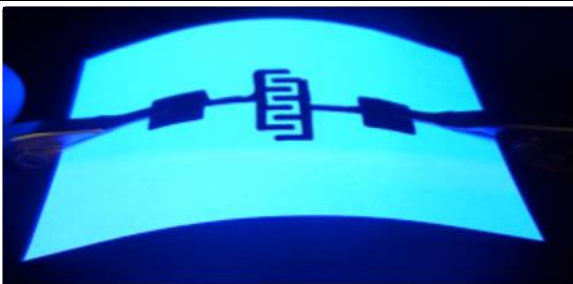
Demonstrator showing different components integrated on a paper sheet that includes resistances, transistors on paper and an electrochromic display.

The paper ICs was awarded with the Organic and Printed Electronics – Association prize during the LOPEC - Large-area, Organic & Printed Electronics Convention 2015, held in Munich, Munich, 2015



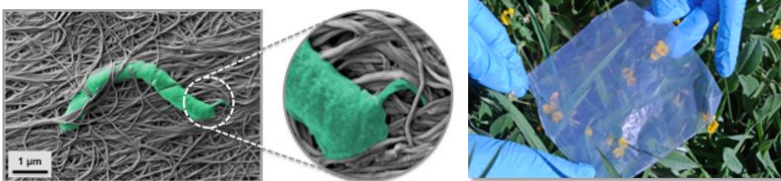
Back plane and active Matrix fully based on ZTO films, 2015

Processing in Europe the first back plane based on an active matrix fully oxide based, Indium free. The work was performed in collaboration with TNO/IMEC in the frame of ORAMA project, 2015.



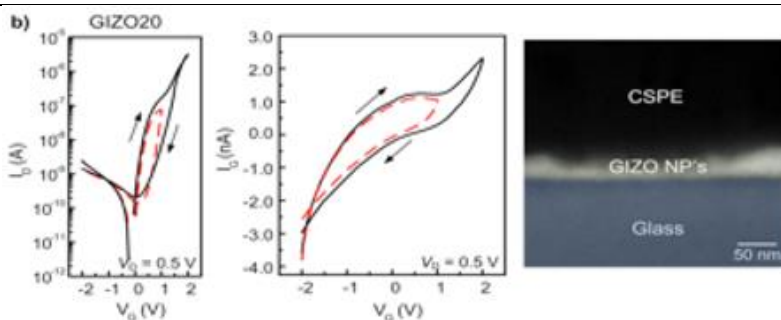
Paper based ZnO sensor, 2014

Surface paper functionalized with ZnO nanoparticles processed via solution methods, used as UV radiation sensor.



Bacterial cellulose nanopaper, 2014

Transparent paper produced by bacteria, such as acetobacter xylinum, to be used on bio/electronics applications, as a component (transistors) or a substrate (solar cells).



Electrolyte-gated transistors with IGZO NPs, 2014.

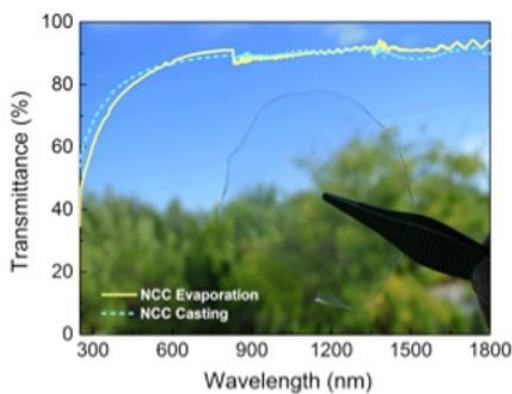
Top-gate EGTs, shadow mask patterning, processed at RT and annealed at TA=250 °C. Electrolyte provides efficient step coverage of NPs, lowering operating voltage and where On/Off \approx 10⁶, $\mu\approx$ 1.0 cm²/Vs, S=0.1 V/dec. It is also shown a sketch of the device configuration.



Flexible OLED Display based on IGZO TFTs, 2014

OLED display processed in a plastic foil, whose active matrix is based on IGZO TFTs exhibiting mobility's exceeding $20\text{cm}^2/(\text{V}\cdot\text{s})$ and whose yield achieved was over 95%.

The development was made with the cooperation of Cambridge University and TNO/IMEC in the frame of ORAMA project.

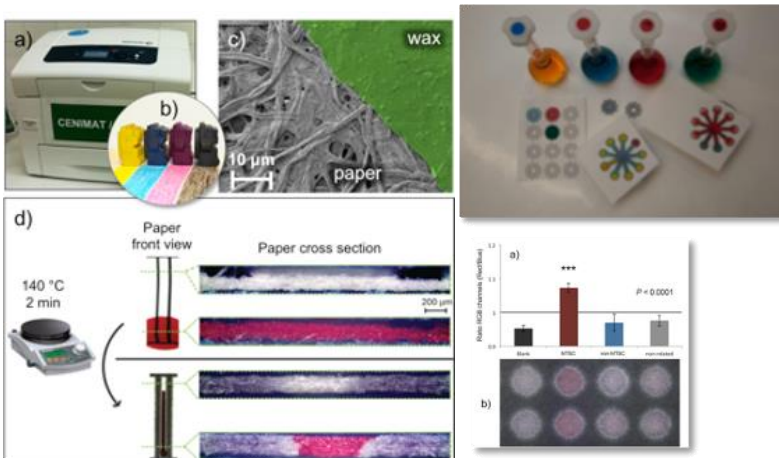


Nanopaper, 2013

Transparent nanopaper based on cotton nanofibrils.

It is also depicted a sketch of the steps taken to process TFTs.

It is also shown an image of the device using gold electrodes.



Biodiagnostic platforms on paper, 2012

Lab-on-Paper, where printed wax is used to create microfluidic channels into the paper. The detection process is based on colorimetric methods and the platform is used to detect several biological components such as tuberculous mycobacteria nucleic acids and anti-Leishmania antibodies. It is shown the way how microfluidics channels are formed; tested labels on paper for tuberculosis and an image of the Leishmania

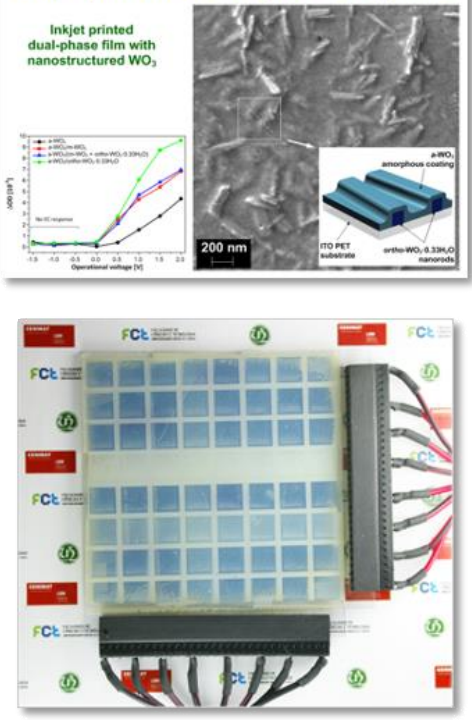


Photovoltaic Roof tiles and tiles, 2012

Processing of amorphous silicon based solar cells on conformable roof tiles as well as on tiles, with different designs and configurations, as shown in the sketch. It is also shown an image of the tiles solar cells processed as well as the trophy gained.

The concept won the Innovation prize 2012, AIP, "Solar roof tiles."

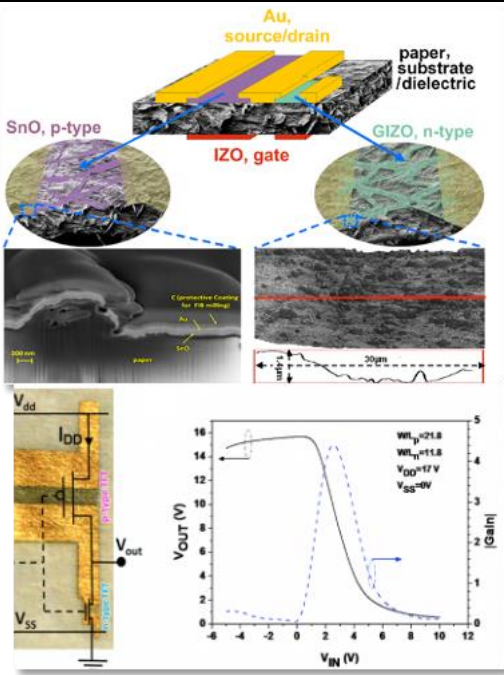
WO₃ hydrothermal synthesis application



Synthesis of electrochromic nanoparticles, **2010/11**

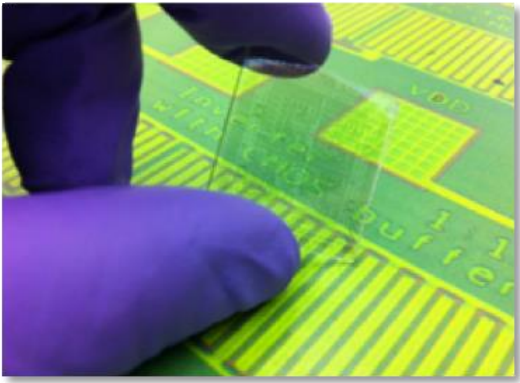
Synthesis of nanoparticles to be applied in electrochromic devices., with different controlled configurations and dual phases crystalline to amorphous ones).

Below it is depicted SEM image of WO3 nanoparticles; the electro-optical characteristics of such structure's inkjet printed; all solid-state EC prototype. Outcomes of the PhD work of W. Pawell, 2010/2011, patent.



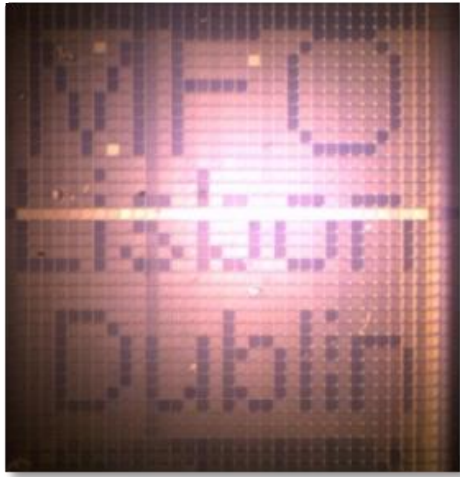
CMOS with and on paper, **2011.**

The first worldwide processed CMOS device, exploiting paper as an active component of the same, 2011, patent. It is shown a sketch of the device constitutes and configuration; cross-section image of the device; a picture of paper CMOS and the corresponding transfer characteristic, where also it is depicted the CMOS gain.



Fully oxide-based CMOS processed on glass, **2010**

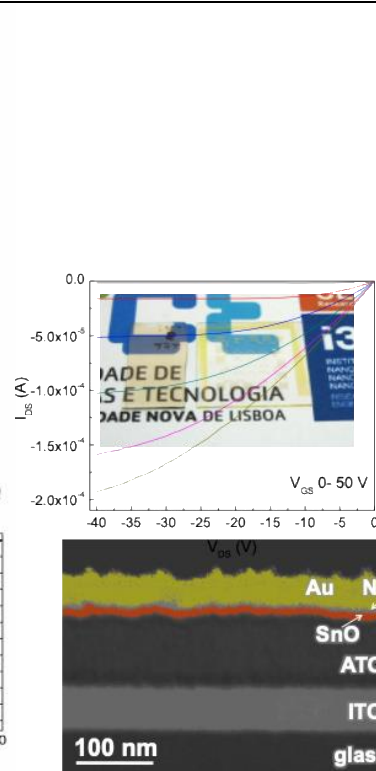
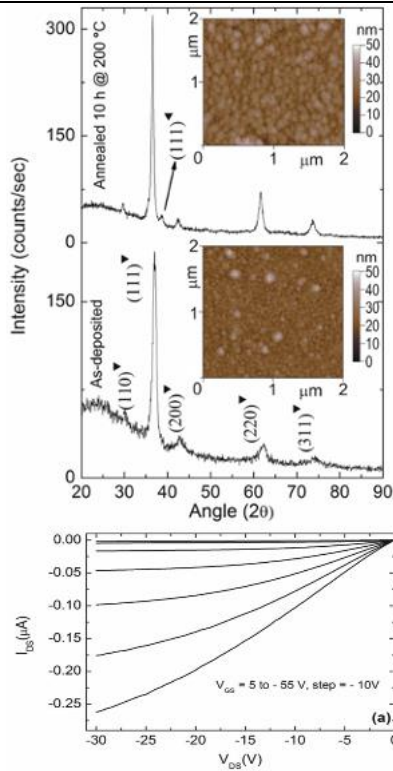
First fully oxide CMOS devices produced in Europe and pioneering worldwide. The concept was jointly patent between FCT-UNL and ETRI/Korea.



Oxide based display back plane (128x128 pixels), **2009**.

Back display based on a full oxide active matrix (128x128 pixels), developed in conjunction with HP, Ireland in the frame of the first EU Multiflexoxide project dealing with active oxides for display applications. Below I is shown an image of a 350x350 μm pixel of the active matrix.

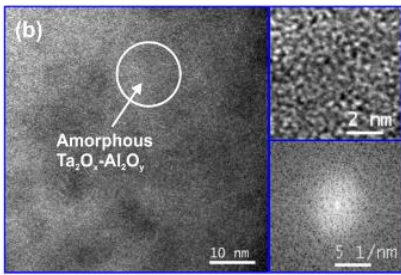
This project was considered in the top 10 of FP6 projects run at DG Research and Innovation.



p-type TFT of Cu₂O and SnO, **2010**.

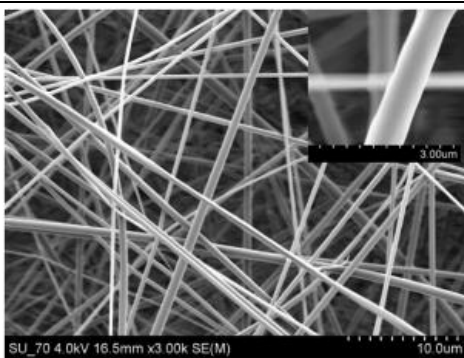
Room temperature processed p-type TFT by sputtering technique. The images show first the structure and surface morphology of copper based TFT, where it is also depicted the output characteristics of the same.

The second set of images refer SnO based TFT, showing them deposited on glass and mylar, a cross section of the same and its output characteristics. Joint patent with ETRI/Korea, 2010



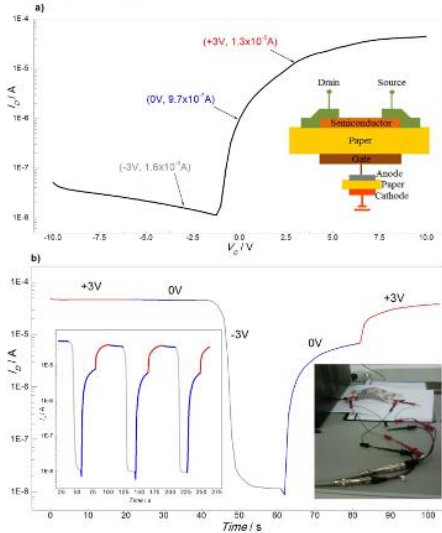
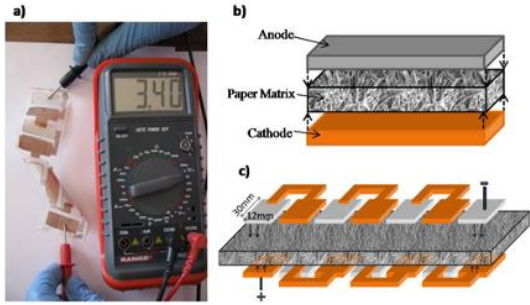
Amorphous multicomponent dielectric oxides, **2009**

Combination of high and low band gap oxide dielectrics such as Ta₂O₅-SiO₂, Ta₂O₅-Al₂O₃ or HfO₂-SiO₂, aiming to process highly smooth dielectrics for TFT applications, 2009, patent.



Polymeric Biofuel cell, **2009**

Proof of concept, of a polymeric based fuel cell, fuelled by sweat of the human body

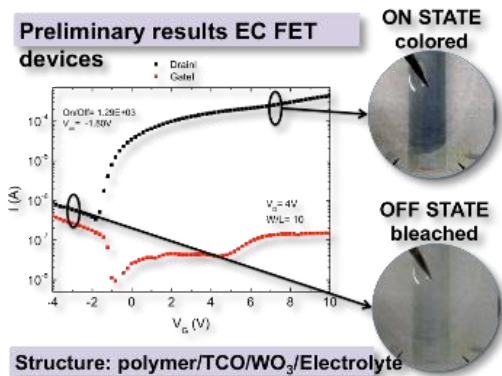


Self-rechargeable paper batteries (patent), 2009

Proof of concept and its use to control a paper transistor. A) shows the set of paper batteries connected in series and supplying a 3.4 V; b) a sketch of the paper battery structure; c) a sketch of how paper batteries are interconnected in series.

Below we show the output characteristics of the paper transistor driven by the paper battery, where it is also depicted the cycling behaviour achieved, 2009.

Preliminary results EC FET devices



Electrochromic Field Effect transistors, 2009

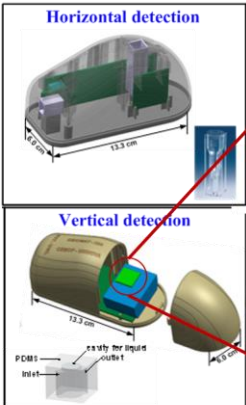
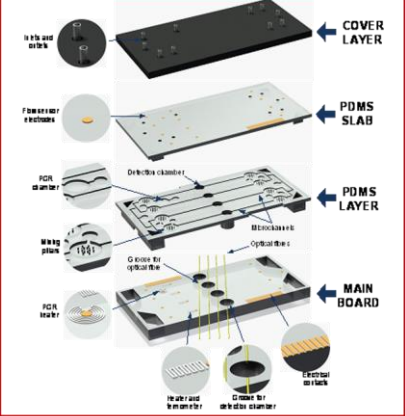
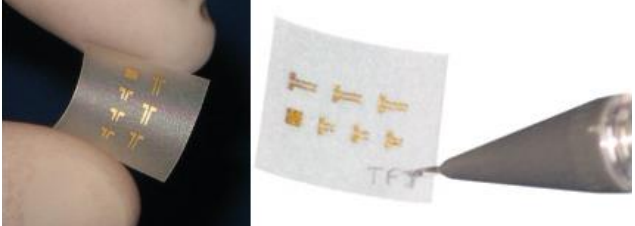
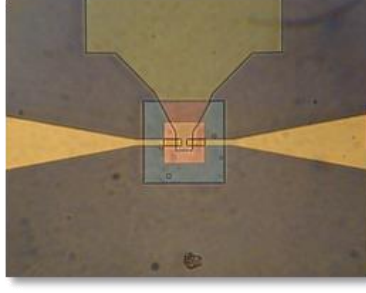

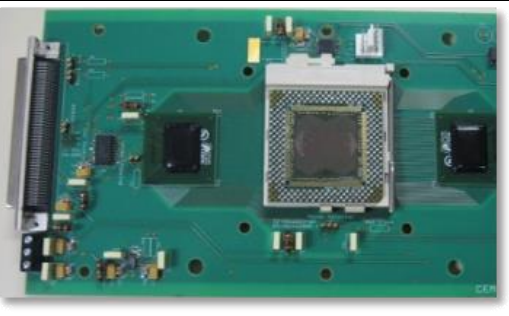
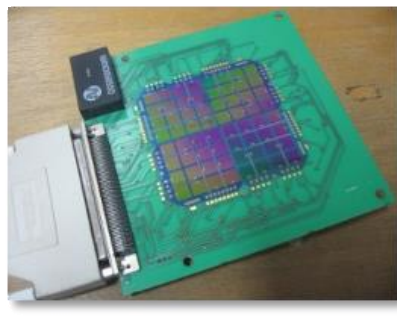
Processing by the first time an inorganic based electrochromic transistor aiming to act simultaneously as a transistor and a pixel two in one), processed at room temperature in low-cost substrates such as mylar and paper, 2009, patent.

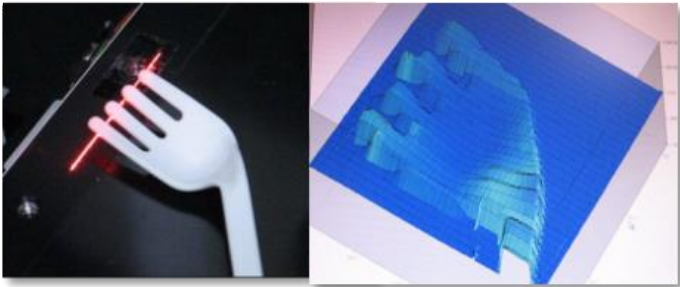
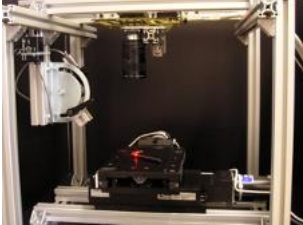



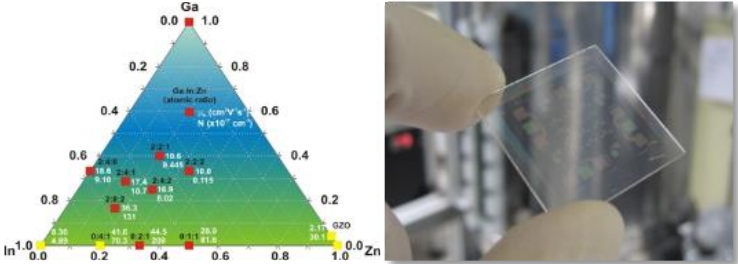
The image shows the on and of state performances of the electrochromic TFT as well as a sketch of the device.

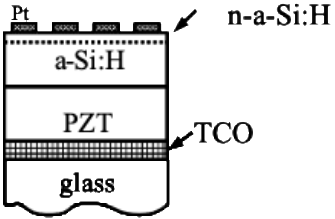
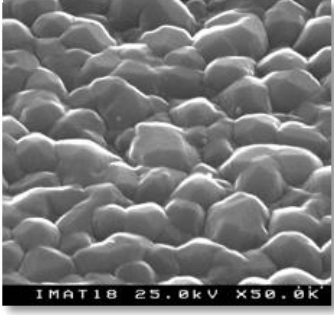
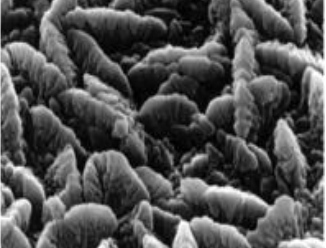
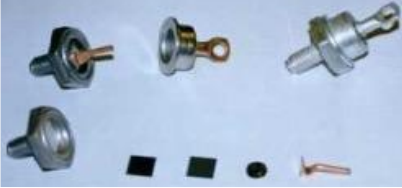

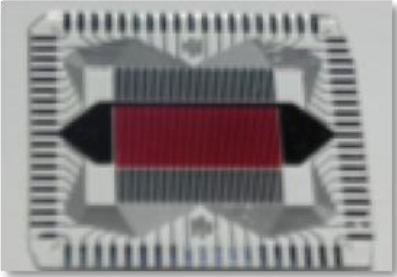



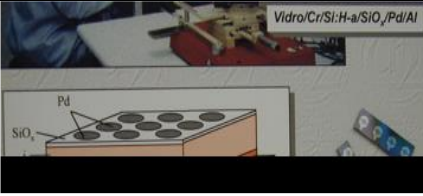



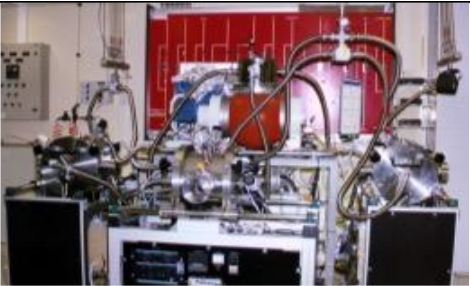
Ink jet print electrochromic devices, 2009




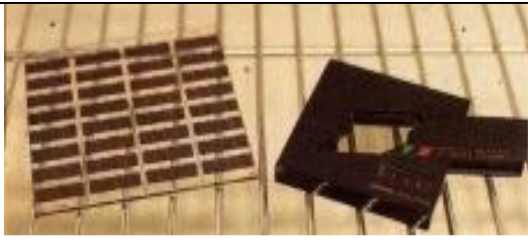

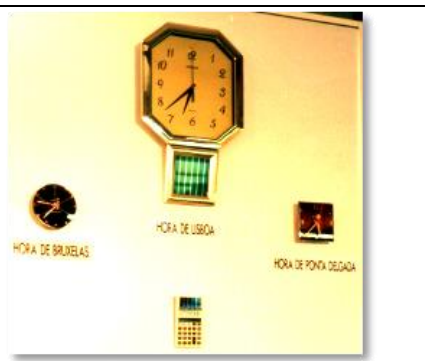
Proof of concept for an addressing static matrix based on nanostructured electrochromic materials, 2009, patent.

<p>Colorimetric DNA biosensor</p> 	<p>Microfluidic/Lab-on-Chip</p> 	<p>DNA/RNA colour-Bio-sensor system, 2008-2012 Demonstrator of a colour-based bio detection system on rigid or flexible platforms, for direct connection to computer via USB constituted by PCB, photo detector, light source (LED) container and corresponding electronics peripherals, 2009, patent. Partial outcome of the PhD thesis of L. Silva. It is also shown the microfluidic system developed to be interconnected to the developed detection system.</p>
	<p>Paper transistor and memory paper transistor, 2008/09 Exploiting by the first time in the world the used of cellulose paper as a component in active devices. Below we show the setup used to test the paper transistors Invention and patent: 2008/2009.</p>	<p>Paper transistor and memory paper transistor, 2008/09 Exploiting by the first time in the world the used of cellulose paper as a component in active devices. Below we show the setup used to test the paper transistors Invention and patent: 2008/2009.</p>
	<p>Nano Si TFT using high k dielectrics, 2007. Processing of nanostructured silicon based TFT using high dielectrics. Outcomes related to L. Pereira PhD thesis, 2007</p>	<p>Nano Si TFT using high k dielectrics, 2007. Processing of nanostructured silicon based TFT using high dielectrics. Outcomes related to L. Pereira PhD thesis, 2007</p>
		<p>PSD 128/L array for 3D inspection produce, 2007 First a-Si:H 128 psd integrated array produced in the world for 3D applications, 2007, patent. On right side we show a 3D/PSD control PCB board where the integrated array is connected for measurement purposes.</p>
	<p>Infra red sensor integration for light spot detection application (arm laser simulation), 2007. PCB showing the integration of IRS used in harnesses for shooting simulation.</p>	<p>Infra red sensor integration for light spot detection application (arm laser simulation), 2007. PCB showing the integration of IRS used in harnesses for shooting simulation.</p>

	<p>System developed to test the integrated linear position sensitive detectors (32 and 128 integrated units), 2006.</p> <p>The figure shows show the real object and its 3D image reconstruction using a 128L a-Si:H integrated array. System used to support PhD thesis of J. Contreras</p>
	<p>Optical inspection chamber prototype for 3D applications, 2006</p>
	<p>IRS detectors, 2006</p> <p>Infrared detectors using crystalline silicon technology, encapsulated and obeying to commercial specifications.</p>
	<p>Transparent electronics, 2004</p> <p>The concepted of invisible connections using highly transparent and conductive oxides, such as IZO, 2002-2004.</p>
	<p>Solid State Meter, 2004</p> <p>Solid-state meter based on electrochromic solid-state devices, to be used on security blood/liquid analysis systems 2004, patent.</p>
	<p>Fully oxidized based TFT, 2003-2008.</p> <p>First full oxide based TFT processed at RT on glass substrates, using sputtering based processes, with mobility's > 20 $\text{cm}^2 \text{V}^{-1} \text{s}^{-1}$, On/Off ratios > de 10^8 and on voltages of 0-1 V.</p>

	<p>Production of ferroelectrics memories, 2001. Production of the first ferroelectrics memories using TCO/n-a-Si: H/PZT/a-Si:H/Pt structures.</p>
	<p>Production of polycrystalline silicon by LPCVD, 2001. Production of electronic grade polycrystalline silicon thin films using the LPCVD technology. Activity related to L. Pereira PhD thesis</p>
	<p>Production of polycrystalline Si and SiC by "hot-wire-CVD", 1999. Production of polycrystalline thin films of silicon and silicon-carbon alloys (non doped and doped) at low temperatures, using a low-cost technology for applications in electronics and Optoelectronics. Outcomes of I. Ferreira PhD thesis</p>
	<p>New Cu/Sn metallurgical systems for soldering applications, 1999. Development of new metallurgical systems able to replace the conventional lead welding processes able to sustain high temperatures, as required for power electronic components.</p>
	<p>"Hot-wire-CVD" Plasma assisted, 1998. Project and production of "hot-wire-CVD" plasma assisted to produce electronic grade structured thin film silicon. Supported I. Ferreira PhD thesis</p>
	<p>32 integrated array of linear position sensors based on a-Si:H technology., 1998. Device consisting of 32 integrated linear a-Si:H optical position sensors for three-dimensional continuous inspection system applications, (1998, patent). Outcomes of E. Fortunato PhD thesis</p>

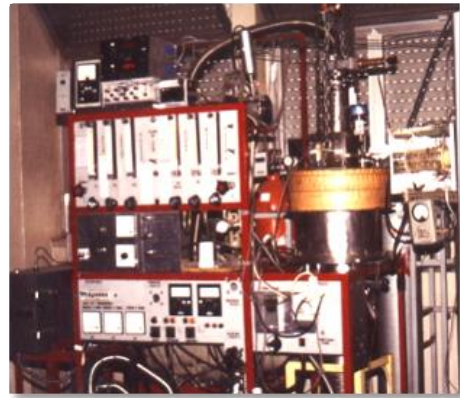
	<p>Optical ruler, 1998. Measurement system of alignments and positioning of objects based on 1-d a-Si:H position sensors, for noncontact measurement applications.</p>
 <p>Vidro/Cr/Si:H-a/SiO₂/Pd/Al Pd SiO₂</p>	<p>Hydrogen Sensors, 1997 Devices based on hydrogenated amorphous silicon MIS structures, for application as hydrogen gas sensors.</p>
	<p>PECVD systems, 1997. Project, design and installation of 3 PECVD reactors of diode and triode type, to support the laboratory classes of graduation and post-graduation as well as research and development of semiconductor materials and devices based on amorphous silicon and their alloys.</p>
	<p>Infra red detectors based on crystalline silicon, 1996. Uncapsulated and capsulated p-n devices based on crystalline silicon technology for use in optical detection systems. The p-n junctions were fully produced in Portugal (DCMFCTUNL and CEMOPUNINOVA), using diffusion-controlled atmosphere furnaces (AP-CVD) (ANIMEE 1996 honours prize).</p>
	<p>Uni and bi-dimensional position sensors, 1995. Hydrogenated amorphous silicon pin devices with areas of (0.5 cm \times 8 cm and 8 cm \times 8 cm, respectively), for use in optical control systems, capable of providing a continuous information (analogue sensors) (ANIMEE 1995 honours prize and patent). Outcomes of E. Fortunato PhD thesis</p>
	<p>Ultra High Vacuum PECVD system, 1995. Project, installation and commissioning of a PECVD system consisting of 3 processing Chambers in which the flow of gas is heated and circulated within the Chambers prior to be dissociated, in accordance with rules of fluid dynamics.</p>

	<p>PECVD in-line system: demo unit for scale up, 1994. Project, installation and commissioning of an online system (6 chambers) for large area (30 cm x 40 cm) thin film device production, capable of processing 4 substrates simultaneously, based on PECVD technology.</p>
	<p>DC/RF magnetron sputtering system, 1993. Project, installation and commissioning of a production system for processing transparent conductive oxide coatings as well as optical anti-reflecting coatings in large areas (30 cm x 40 cm), by dc/rf magnetron sputtering, capable of processing simultaneously two substrates using two different targets.</p>
	<p>Flight time measurement set up, 1992. Implementation of flight time technique known as "Flying Spot Technique", for determination of ambipolar diffusion coefficient in semiconductors. Outcome of M. Vieira PhD thesis</p>
	<p>Amorphous silicon solar cells for commodities, 1991. Integrated solar cells for use in instrumentation systems and solar clocks. 775 clocks were produced under demand of National Science and Technology Foundation of Portugal, some distributed to Eureka attendees in 1992, Lisbon, Portugal.</p>
	<p>Double chamber PECVD system, 1990. Design and development of dual Chamber PEVD system where a differential pumping is achieved between chambers, guaranteeing a level of contamination in the process below few ppb. The system developed allows the production of large areas hydrogenated amorphous silicon (20 cm x 30 cm).</p>
	<p>Solar watches and solar calculators, 1989. First solar calculators and watches produced in Portugal using amorphous silicon photovoltaic devices grown on glass substrates, fabricated under the project PORTSOL, photovoltaic company resulting from a joint venture between the battery company Tudor and UNINOVA.</p>

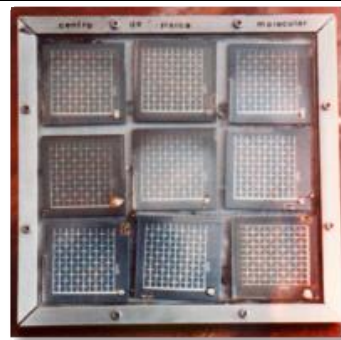
	<p>$\mu\text{c-SiC(B)}/\text{a-Si:H}/\mu\text{c-Si(P)}$ solar cells, 1986.</p> <p>Production, at European level, of the first Carbon-Silicon alloys, which enabled get microcrystalline silicon carbide front layer on pin solar cells with open-circuit voltage exceeding 1 Volt.</p>
	<p>Production of a-Si:H by PECVD assisted by UV radiation, 1986.</p> <p>This technology was developed aiming to optimise silicon-carbon alloys, concerning its composition and structure, leading to production of films with outstanding electro-optical performances.</p>
	<p>Large area solar cells based on amorphous silicon technology, 1985.</p> <p>Production, at European level, of the first amorphous silicon solar cells of pin structure exceeding sizes of 15 cm × 15 cm, using stainless steel substrates. The photograph shows the cell linked to a small engine, for functional demonstration. Outcomes of R. Martins PhD thesis.</p>
	<p>Amorphous based solar cell module, 1985.</p> <p>The first photovoltaic module of a-Si: H built in Portugal using cells of large area deposited on stainless steel substrates. The module in question has been optimized to give a nominal voltage of 12 Volts and a nominal current of 1 Ampere, having been in demonstration during the exhibition of ANIMEE in Feira Internacional de Lisboa. Outcomes of R. Martins PhD thesis.</p>
	<p>Resistive thermal evaporator, 1985.</p> <p>System developed to produce highly transparent and conductive oxides by thermal reactive evaporation for applications in Optoelectronics. Supported the PhD thesis of N. Carvalho.</p>



Remote plasma deposition system, built at U. São Paulo, Brazil, **1983**. Project, installation and commissioning of PECVD system of two consecutive Chambers (remote plasma) developed in Brazil, Microelectronics Laboratory of Escola Politécnica da Universidade de São Paulo, LMEEPUSP, for production of a-Si: H solar cells (sizes: 10 cm ×10 cm). Outcomes of R. Martins PhD thesis



Production of a-Si:H by remote plasma process, **1982**. Development of the entire technological process leading to the production of amorphous silicon films by PECVD technique, using a system of two consecutive Chambers, one for gas decomposition, followed by another where the substrate is placed, and the growing process takes place. TCDDC system, later known as remote plasma (Patent). Outcomes of R. Martins PhD thesis



Amorphous Silicon solar cell panel, **1981**. The first Panel of amorphous silicon solar cells manufactured in Portugal. The cells were deposited on stainless steel substrates of 5 cm ×5 cm, with a pin structure. The collective grid was designed in order to maximise the number of charges captured in each solar cell. Outcomes of R. Martins PhD thesis



First amorphous silicon Deposition Systems in Portugal **1980-1982**. First PECVD systems installed in Portugal. An inductive type system (radio frequency signal carried out through a coil placed around a quartz tube), similar to that developed by Prof. W. E. Spear (inventor of the amorphous silicon material with electronic characteristics) and another diode type reactor (externally capacitive match system). These systems were fabricated and installed in 1980 and 1982, respectively. Outcomes of R. Martins PhD thesis.

Projects of the MEON/CENIMAT group and others (EMRS).

PROJECTS OF MEON/CENIMAT AND CEMOP, CONNECTED TO DCM/ FCT-UNL

In the following we mention the set of projects where we have been involved, where the budget mentioned it refers only to the one allocated to units of the Campus governed by FCT-UNL.

Table: Summary of the National, International and Industry related projects where R. Martins participated as Coordinator or co-coordinator, Responsible, Co- Responsible or just Researcher

Designation	Coord.	Resp.	Co-Resp.	Memb	Total	Value(k€)
NATIONAL PROJECTS FUNDED BY PORTUGUESE NSF & OTHERS	15	16	1	26	58	7,144.919
NATIONAL PROJECTS INDUSTRY ORIENTED: QREN AND ADI/ANI	1	8	1	10	21	5,587.36014
INTERNATIONAL PROJECTS FINANCED BY E.U.	8	31	8	13	64	27,896.4515
OTHER INTERNATIONAL PROJECTS	3	1	0	0	4	940.500
INTERNATIONAL INTERCHANGE PROJECTS	1	3	0	1	5	178.500
PROJECTS DIRECTLY FINANCED BY INDUSTRY	3	1	1	6	11	1,742.73378
LARGE INFRA STRUCTURE PROJECTS	5	1	0	0	6	8,793.5409
PROFESSIONAL FORMATION PROJECTS	3	1	0	0	4	2,320.8350
SCIENTIFIC RESEARCH ACTIVITIES AT CENIMAT	0	1	0	0	1	1,917.04395
Total	39	63	11	56	174	51,059.52424

NATIONAL PROJECTS

FINANCED BY MCIES/MCTES AND CALOUST GULBENKIAN FOUNDATION

1. “Materials Engineering National Network”, association of the 6 public Portuguese Universities to develop the visibility and interest of Materials engineering field. A 6 years program financed by MCIES/MCTES: 2004-2009. Coordinator: R. Martins. Co-coordinators: E. Fortunato and I. Ferreira. Budget Campus FCT 115.000,00 €
 2. Nanotransistors of oxide semiconductors, prize stimulus to Research 2008, field Physics of low dimensions, proposal number 17545. Coordinator: P. Barquinha. Scientific responsible: E. Fortunato. Budget campus FCT: 10.000,00 €
- Overall Budget: 125.000,00 €**

FINANCED AND COORDINATED BY FCT/MCTES AND I3N

1. IDS Paper, PTDC/CTM-PAM/4241/2020. Partners: Uninova, FCT-Nova and AlmaScience. Coordinator (R. Martins) (200 k€).
2. CENIMAT|i3N – MEON, UID/CTM/50025/2016-2019, POCI-01-0145-FEDER-007688 (345.000k€). Coordinator: FCT-UNL (R. Martins). Partners: NOVAidFCT, UNINOVA, UNI MINHO, UNI AVEIRO. Resp. E. Fortunato.
3. Superior Efficiency and Flexibility with Improved Perovskite Solar Cells with Quantum Nanostructures and Light Management, Supersolar, 02/SAICT/2017, Nº 028430. Coordinator NovalD. Partners. LNEG, Uninova. Coordinator, M. Mendes (159 896.69 €)
4. Local Resources for Multifunctional Tetrahedrite-based Energy-Harvesting Applications, LocalEnergy, 02/SAICT/2017, Nº 029905, Coordinator: LNEG. Partners: Nova ID, IST. Responsible: M. Mendes (47175.0 €).

5. Tandem Solar Cells Improved Optically, TACIt, 02/SAICT/2017, Nº 028837. Coordinator: FCIENCIAS.ID. Partners: INL and Uninova. Responsible: M. Mendes (65712.5€).
6. Integrated Microfluidic platform for cancer screening via circulating free DNA digital PCR, 02/SAICT/2017, dPCR4FreeDNA. Coordinator. NovalD. Coordinator: H. Águas. 237, 407.78 €
7. Cellulose-inspired hybrid and inorganic chiral nanostructures for application in electronics and photonics, CHIHC, 02/SAICT/2017. Coordinator: Nova ID. Coordinator: L. Pereira (239054.85€).
8. Flash sintering of lead-free functional oxides for processing sustainable use of materials for energy and related applications, FLASH. Coordinator: U. Aveiro/I3N. Partners: INL and NovalD. Responsible L. Pereira (60 258.2 €).
9. In search of a new generation of sunlight-activated photocatalytic nanomaterials for water treatment, Icarus, 02/SAICT/2017, PTDC/EAM-AMB/30989/2017. Coordinator: IBET. Partners: NovalD. Responsible E. Fortunato (48 700 €).
10. Integration of thin film transistors and oxide-based memristors in neuromorphic networks, NeurOxide, 02/SAICT/2017 Nº 030812. Coordinator NovalD. Partner INESC TEC. Coordinator Asal Kiazadeh (178717.37 €).
11. Development of new materials based on oxides and two-dimensional heterostructures, Proc^o 441.00 Polland-2017. Coordinator: FCT-NOVA. Coordinators L. Pereira and Volodymyr Khranovskyy (4000 €).
12. Development of transparent electrodes based on metallic nanowires networks, Agreement FCT/PHC-PESSOA 2019_20. Coordinator FCT-NOVA. Coordinator A. Pimentel (1500.0€).
13. Highly Efficient and Flexible Thin Film Crystalline Silicon - Perovskite Tandem Solar Cells, FLEXSOLAR, PTDC/CTM-REF/1008/2020. Partners: Uninova, UA/I3N. Coordinator (H. Águas) (200 k€)
14. CENIMAT|I3N – MEON, UID/CTM/50025/2013-2016, POCI-01-0145-FEDER-007688 (345881.0€). Coordinator: FCT-UNL (R. Martins). Partners: NOVAidFCT, UNINOVA, UNI MINHO, UNI AVEIRO. Resp. E. Fortunato
CENIMAT|I3N – MEON, UID/CTM/50025/2013-2016. Coordinator (E. Fortunato): Uninova (62930.0 €). Resp. R. Martins
15. Life Science Action for students, ID99/FCT-2015. Coordinator. FCT/UNL (R. Igreja) (7170.0 €).
16. High Efficient Thin film Tandem Solar Cells via Combined Materials and Nano-Photonic Light Trapping, AltaLuz PTDC/CTMENE/5125/2014. Coordinator (R. Martins): Uninova (117200.0 €). Partners: LNEG. ID Nova. ICETA
17. Disposable SERS Microfluidic Platforms for food Toxin Detection, DISERTO (Ref^a: PTDC/CTM-NAN/2912/2014). Coordinator: Uninova (H. Águas). Partners: UCIBIO; ITQB, ID Nova (163587.0 €). Resp Uninova: R. Martins
18. Cellulose Nanocomposites for a New generation of paper electronics, - PapEL, PTDC/CTM-NAN/5172/2014. Coordinator: Uninova (L. Pereira) (198480.0 €). Partner NovalD/CENIMAT. Responsible: R. Martins
19. Innovative Microfluidic devices based on cellulose able to support 3D skin modelling, SkinChip. PTDC/BBB-BIO/1889/2014. Coordinator: INEB. Partners U. Minho and Uninova. Responsible E. Fortunato (62184.0 €). Co-Responsible: R. Martins.
20. Bridging Nature-Inspired Ionic Fluids and Microfluidic Aqueous Biphasic Systems for the Purification of Monoclonal Antibodies, PTDC/QEQ-FTT/3289/2014. Coordinator: ITQB. Partner: Uninova (H. Águas) (63000.0 €).

21. Functionalised paper for flexible electronic applications, Papel funcionalizável para aplicações na electrónica flexível – FunPaper: EXPL/CTM-NAN/1184/2013, Coordinator Uninova (L. Pereira), CENIMAT (50000.0 €)
22. PhD programme in Advanced Materials and Processing Technologies (AdvamTech), FCT- PD/294/2012 - AdvamTech involving 8 public Universities. Coordinator: Faculty of Science and Technology (FCT-UNL). Partners: IST-Lisbon, Univ. Aveiro, Un. Coimbra, Un. Porto, Un. Beira Interior, Un. Minho. Coordinator: R. Martins (total budget (450000.0 €).
23. Nanostructured Disposable and Low-Cost Substrates for Ultrasensitive Surface Enhancement Raman Spectroscopy: Application to Pesticides Detection - NANO-U-SERS, EXPL/CTM-NAN/0754/2013. Coordinator UNINOVA (H. Águas), FCT/UNL (REQUIMTE), Instituto de Ciências e Tecnologias Agrárias e Agro-Alimentares (ICETA-Porto/UP) (50000.0 €).
24. Multifunctional Nanoscale Oxide Materials – MULTINOX, EXCL/CTM-NAN/0201/2012, CEMOP/Uninova and CENIMAT/FCT-UNL: Budget Campus FCT: 500000.0 €. Coordinator: E. Fortunato. Resp. R. Martins
25. Low temperature-controlled incorporation of Si quantum dots in amorphous matrices (Si, SiC, and SiN) for application as active layers in single- and multi-junction solar cells, PTDC /C TM-ENE/2514/2012. Coordinator Uninova/CEMOP (H. Águas); CENIMAT, UA/I3N; CEFITEC/FCT-UNL. Resp. R. Martins. Budget CENIMAT+CEMOP: 152232.00 €
26. Development of microfluidic platform for single cell studies, PTDC/BBB-IMG/1225/2012. Coordinator: ITQB, Partner CENIMAT-FCTUNL. Responsible: H. Águas. Budget CENIMAT: 58034.00 €.
27. GraFiTran - Graphene nanoribbons for transistors. Project financed by I3N. Partners: IPC, ESCOD and CENIMAT. Coordinator: (IPC). CENIMAT Responsible: P. Barquinha. CNIMAT budget: 16000.00 €.
28. $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$, a Novel In Free Absorber for Thin Film Solar Cells. PTDC/CTM-MET/113486/2009. Coordinator: U. Aveiro. Responsible. H. Águas. Researchers: S. Filonovitch, I. Ferreira, R. Martins. Partners: Un. Aveiro, CENIMAT. Budget Campus FCT: 30000.00 €.
29. Multifunctional zinc oxide structures: from materials to new generation of devices. ERA-MNT/0005/2009, ERA-MNT 2009, FCT/MCTES, 01/02/2010. Coordinator: E. Fortunato. Researcher Responsible: P. Barquinha and R. Martins. Researchers: L. Pereira, I. Ferreira, Partners: CENIMAT/FCT/UNL, Univ. Galati (Romania); National Institute for R&D in Microtechnologies (Romania): Budget Campus FCT: 180000.00 €.
30. Self-organizing power management for photovoltaic power plants, CMU-PT/SAI/0005/2009, CMU-PT, FCT/MCTES, 02/07/1905. Coordinator: V. Grade, INESC/Porto. Researcher Responsible: E. Fortunato and P. Barquinha. Researchers: R. Martins, L. Pereira, I. Ferreira. Partners: INESC Porto/FE/UP), FCT-UNL, CMU. Budget Campus FCT: 148199.00 €
31. “Integrated paper memory using channel oxide thin film transistors, - IMPACT”, PTDC/CTM/103465/2008. Coordinator: R. Martins. Scientific Responsible: E. Fortunato. Researcher Responsible: L. Pereira. Researchers: P. Barquinha, I. Ferreira. Partners: CEMOP/Uninova e CENIMAT/FCTUNL. Budget Campus FCT: 195000.00 €
32. “From paper electronics to electronic paper - Paper_@”, PTDC/EEA-ELC/099490/2008. Coordinator: E. Fortunato. Scientific Responsible: R. Martins. Researcher Responsible: L. Pereira. Researchers: P. Barquinha, I. Ferreira. Partners CENIMAT/FCTUNL; CEMOP/Uninova. Budget Campus FCT: 198888.00 €
33. “Nanobio-sensors portable platform for ultra sensible multiple blood analysis– BloodFET”, PTDC/SAL-BEB/098125/2008. Coordinator. E. Fortunato. Scientific Responsible. R. Martins. Researchers: P. Barquinha; H. Águas; L. Pereira. Partners: CENIMAT/I3N. CEMOP/Uninova, DCV-FCT/UNL; HGO. Budget Campus FCT: 169000.00 €

34. "Electrochromic thin film transistors for smart windows applications. ELECTRA", PTDC/CTM/099124/2008. Coordinator. L. Pereira; Research Responsible: E. Fortunato and R. Martins. Researchers: I. Ferreira, P. Barquinha, H. Águas. Partners: CEMOP/Uninova. CENMAT/FCTUNL; UM. Budget Campus FCT: 162900.00 €.
35. "Solar cells deposition with high growth rates using innovative deposition concepts -"nanomorph"" ", PTDC/CTM/099719/2008. Coordinator: S. Filonovitch. Researchers: H. Águas, R. Martins, I. Ferreira, L. Pereira. Partners: CENIMAT/FCTUNL, UA. Budget Campus FCT: 144480.00 €
36. "Integrated evaluation of Nanomaterials: Characterization and determination of environmental toxicity- NanoTox", PTDC/CTM/099446/2008. Coordinator: A. Picado, INETI. Researcher Responsible: I. Ferreira. Researchers: H. Águas, E. Fortunato, R. Martins, P. Barquinha. Partners: INETI, FCTUNL (CENIMAT; DEA); UL; Instituto Ricardo Jorge. Budget Campus FCT: 48.890.00€
37. "Electro-optical devices for individual cellular analysis in micro fluidics systems", PTDC/SAU-BEB/102247/2008. Coordinator: A. Oliva, ITQB. Researcher Responsible: H. Águas. Researchers: E. Fortunato, S. Filonovitch, L. Pereira, R. Martins. Partners: CENIMAT/FCTUNL; INESC/Porto. Budget Campus FCT: 49440.00 €.
38. Hybrid Solar Cells, I3N financed project/2008. Coordinator: UA. Responsible Researchers: S. Filonovitch. Researchers: H. Águas, I. Ferreira, R. Martins. Partners: CENIMAT/FCTUNL/I3N; UM. Budget Campus FCT: 21300.00 €
39. "Development of a Micro fluidic Platform for DNA Amplification and Detection – MicroPlat", I3N financed project/2009. Coordinator: H. Águas. Researcher Responsible: E. Fortunato. Researchers: I. Ferreira; L. Pereira, R. Martins. Partners: CENIMAT/FCTUNL/I3N, UM; UA. Budget Campus FCT: 44500.00 €.
40. High mobility transparent thin film transistors based on amorphous oxide semiconductors for active matrices applications, PTDC/EEA-ELC/64975/2006, TRANSISTORS, FCT/MCTES. Coordinator: E. Fortunato. Researcher Responsible, R. Martins. Researchers: I. Ferreira, L. Pereira, P. Barquinha, H. Águas. Partners: CENIMAT/FCTUNL, Univ. Algarve and Uninova/CEMOP. Budget Campus FCT FCTUNL: 136545.00 €.
41. Nanobiodetection based on systems constituted by optical nano-sensors and gold nanoprobe: NANOBIOS, [PTDC/FIS/74274/2006](#), NANOBIOS, FCT/MCTES. Coordinator: R. Martins, Researcher Responsible: E. Fortunato. Researchers: I. Ferreira, L. Pereira, H. Águas. Partners: CENIMAT/FCTUNL, FCT e Uninova/CEMOP. Budget Campus FCT FCTUNL: 174240.00 €.
42. Advanced new integrated optical nano-sensors for nanobiodetection based on gold nanoprobe: NANOSEN , [PTDC/EEA-ELC/74236/2006](#), NANOSEN, FCT/MCTES. Coordinator: R. Martins, Researcher Responsible: E. Fortunato. Researchers: I. Ferreira, L. Pereira, H. Águas. Partners: CENIMAT/FCTUNL, FCT e Uninova/CEMOP. Budget Campus FCT FCTUNL: 137385.00 €.
43. Multifunctional oxides: new low temperature integration approach of oxide semiconductors as active and passive thin films for the new generation of electronic devices, MONALISA, [PTDC/CTM/73943/2006](#), [FCT/MCTES](#). Coordinator: I. Ferreira. Researcher Responsible: R. Martins. Researchers: E. Fortunato, L. Pereira, P. Barquinha, H. Águas. Partners: CENIMAT/FCTUNL; Uninova/CEMOP, Univ. Algarve. Budget Campus FCT FCTUNL: 124800.00 €.
44. "Transparent Thin Film Transistors based on ZnO for flexible display applications". Transflex POCTI/CTM/55942/2004. Coordinator: R. Martins. Researcher Responsible: E. Fortunato: Researchers: I. Ferreira, P. Barquinha, H. Águas, L. Pereira. Partners: CENIMAT, CEMOP. Budget Campus FCT: 79463.00 €
45. "Development of transparent p-type oxide semiconductors: from processing to device applications". Project POCTI/CTM/55945/2004. Partners: CENIMAT (Coordinator), CEMOP, U. Aveiro, ITN.

Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researchers: I. Ferreira, L. Pereira, H. Águas, P. Barquinha. Budget Campus FCT: 39500.00 €.

46. “Self sustained smart windows based on photo-electrochromic devices”, Project POCTI/CTM/48853/2002. Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researchers: I. Ferreira, H. Águas. Partners CENIMAT, CEMOP, U.M. (Physics Dept). Budget Campus FCT: 109650.00 €.
47. “Transparent conductive oxides for optoelectronic and gas sensor applications”. Project POCTI/CTM/38924/2001. Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researchers: I. Ferreira, H. Águas, L. Pereira. Partners: CENIMAT, e CEMOP. Budget Campus FCT: 85910.00 €.
48. “A one-step electropolymerisation of polypyrrole on metallic oxidizable surfaces in aqueous solution”. Project POCTI/CTM/41136/2001. Coordinator: J. Martins/FEUP. Researcher Responsible: E. Fortunato. Researchers: R. Martins, I. Ferreira, H. Águas. Partners: FEUP, CENIMAT e IST. Budget Campus FCT: 34500.00 €.
49. “Smart colour sensors based on novel silicon and their alloys multi-structures” Project POCTI/CTM/37344/2001. Coordinator: R. Martins. Researcher Responsible: I. Ferreira. Researchers: E. Fortunato. Partners: CENIMAT e UNINOVA/CEMOP (Coordinator). Budget Campus FCT: 115000.00 €
50. “New technologies for producing thin film solar cells – UNISOL” POCTI/CTM/12094/2001 e PRAXIS/C/CTM/12094/1998. Coordinator R. Martins. Researcher Responsible: I. Ferreira. Researchers: E. Fortunato. Partners: CENIMAT e UNINOVA/CEMOP. 49500.00 € (7650 € via POCTI).
51. “Linear Position sensors for 3D measurement systems – SELIPOS”, PRAXIS XXI, medida 3.1ª, 3/3.1/MMA/1788/95 1997/2001 e POCTI/CTM/1788/2001. Coordinator: R. Martins. Researcher Responsible: E. Fortunato. Partners: UNINOVA/CEMOP (Coordinator); FCTUNL; EID; FEUP; FCUP. Budget Campus FCT 105000.00 € (74075.00 €, pelo POCTI).
52. “A new flexible position angular sensor to be integrated in micromechanical devices” Project FCT, POCTI/1999/ESE/35578. Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researcher. I. Ferreira. Partners: CENIMAT and CEMOP. Budget Campus FCT: 97914.03 €.
53. “New amorphous silicon based materials used in novel flexible position sensors”. Project FCT, POCTI/1999/CTM/35440. Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researcher: I. Ferreira. Partners: CENIMAT e CEMOP. Budget Campus FCT: 74819.69 €.
54. “Linear Image amorphous silicon sensors, – SELISA” STRIDE, nº STRDA/C/CTM/66173/92 (1992/94). Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Partners: UNINOVA/CEMOP e FCTUNL. Budget Campus FCT: 68500.00 €
55. “Thin Film Microelectronics” JNICT, Project nº 87 618 (1987/90). Partners: FCTUNL e UNINOVA/CEMOP. Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 28750.00 €.
56. “Photovoltaic modules and particle detectors based on amorphous silicon devices”, EUREKA, contract nº 0366 – PARTIDEC (1990/93). Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Partners: FCTUNL, Portsol (Portugal); Semilab (Hungria); U. Torino (Itália); CIEMAT (Spain). Budget Campus FCT: 125000.00 €.

Overall budget: 7,144,919.11€

PROJECTS FINANCED AND COORDINATED BY Adi/ANI; QREN and PORTUGAL 2020

1. Development of platforms for detection and monitoring in CoronaVirus waters - ECO2COVID19- COVID 19. Partners: Águas do Tejo Atlântico, SA, FCT-NOVA (UCBIO+CENIMAT); U. Coimbra, INOVA+. Responsible: E. Fortunato (229800.10 €).

2. Development of rapid tests for monitoring antibodies in serum and saliva - TecniCOV- COVID 19. Partners: U. Coimbra, FCT-NOVA, ISEP, INOVA+. Responsible: E. Fortunato (100000.00 €)
3. On-SURF – Mobilizar Competências Tecnológicas em Engenharia de Superfícies, POCI-01-0247-FEDER-024521/2017. Coordinator Tecnologia e Engenharia de Materiais (TEandM). Partners Bosh Portugal, Instituto Pedro Nunes, Nova.ID/MEON +Uninova/CEMOP (250.028,52€+ 30.000€= 280028.52 €); Instituto Politécnico de Bragança. Responsible: R. Igreja and E. Fotunato.
4. “ORABAC - Óculos de realidade aumentada de baixo custo”, Portugal 2020/2016, proposal nº 17852/2016. Coordinator: LusoSpace. Partners: CENIMAT/FCT-UNL and Uninova (421004.93 €+ 80011.50 €). Responsible: E. Fortunato and P. Barquinha.
5. “CelSmartSense - Plataformas electronicas de base celulósica para biodeteção”, Portugal 2020, proposal nº 017862/2016. Coordinator: Navigator Paper Figueira, S. A. Partners: CENIMAT/FCT-UNL, 271605.27 €. Responsible: R. Martins, E. Fortunato and L. Pereira.
6. Production of 3D-based zirconic ceramic implants, PIC3D. ANI/Candidatura nº 017896-2017. Coordinator INNOVNANO. Partner NoavID. Responsible I. Ferreira (379507.81 €)
7. “Sm@rtege - Desenvolvimento de Ferramentas Inteligentes”, Portugal 2020, proposal nº 17577. Coordinator TEandM - Tecnologia e Engenharia de Materiais, S. A. Partners: Instituto D. Pedro Nunes, Coimbra; CENIMAT/FCT-UNL, 83600.45 €. Responsible: R. Igreja and R. Martins
8. “i-TILES – Development of optical active thin films in ceramic tiles to improve the energetic efficiency in buildings”, QREN Ref: 39004, 2015. Coordinator UMBELINO Monteiro, SA, Partners: CENIMAT/FCT-UNL, GLEXYZ - Engenharia, Investimento e Desenvolvimento, Unipessoal, CTCV - Centro Tecnológico da Cerâmica e do Vidro, (395023.78 €). Responsible: E. Fortunato and R. Martins
9. “Development of nanostructured silicon photovoltaic devices, NanoSi-PVCELLS”, QREN Nº 5610, 2009. Coordinator: Solar Plus. Partners: CENIMAT/FCTUNL; CEMOP; UA. Researcher Responsible. I. Ferreira. Researchers: E. Fortunato, R. Martins, H. Águas, L. Pereira, S. Filonovitch. Budget Campus FCT: 292513.75 €.
10. “Development of photovoltaic systems on ceramic based materials, - Solar Tiles”, QREN Nº 3380, 2008. Coordinator: Revigrés. Partners: CENIMAT/I3N; CEMOP; INETI; Deviris; Dominó-Indústrias Cerâmicas SA; J. Coelho da Silva, SA; CTCV (Coimbra); Un. Minho; ADENE (Lisboa). Researcher Responsible. H. Águas. Researchers: I. Ferreira, E. Fortunato, R. Martins, L. Pereira, S. Filonovitch. Budget Campus FCT: 353008.75 €.
11. “New nanoxide composites for advanced fabrication of targets for passive and active Opto/Micro/Nano-electronics applications, NANOXIDES”, QREN Nº 3454, 2008. Coordinator: INOVNANO. Partners: CENIMAT/I3N e CEMOP/Uninova. Researcher Responsible. I. Ferreira. Researchers: E. Fortunato, R. Martins, L. Pereira, P. Barquinha. Budget Campus FCT: 524438.19 €
12. “YInvisible – Papel. Project Adl/Ideia/2006-2008. Partners: YDreams; FCT – Departamento de Química; FCT – Departamento de Materiais Renova – Fábrica do papel do Almonda, S.A. Coordinator: A. Câmara. Researcher Responsible: E. Fortunato. Researchers: R. Martins, I. Ferreira, L. Pereira, P. Barquinha, H. Águas. Budget Campus FCT: 154262.62 €.
13. “YInvisible – boards”. Project Adl/Ideia/2006-2008. Partners: YDreams; FCT – Departamento de Química; FCT – Departamento de Materiais; Bi-Silque, Artigos para Casa e Escritório, S.A. Researcher Responsible: E. Fortunato. Researchers: R. Martins, I. Ferreira, L. Pereira, P. Barquinha, H. Águas. Budget Campus FCT: 85000.00 €.
14. “YInvisible – Textil”. Project Adl/Ideia/2006-2008. Partners: YDreams; FCT – Departamento de Química; FCT – Departamento de Materiais; Fábricas de Malhas Filobranca, S.A. Researcher Responsible: E. Fortunato. Researchers: R. Martins, I. Ferreira, L. Pereira, P. Barquinha, H. Águas. Budget Campus FCT: 17100.00 €.
15. “1024 linear position sensors for optical inspection cameras -SENSIT” POE, accção B3, medida 3.1 (2002/2005), ref. 03/00197. Coordinator: R. Martins. Researcher Responsible: I. Ferreira. Researchers: E. Fortunato, H. Águas, L. Pereira. Partners: UNINOVA/CEMOP (CENIMAT+Tekelec. Budget Campus FCT: 527569.62 €.

16. "Development of crystalline silicon infra-red photodetectors -IRS". POE, acção B3, medida 3.1 (2002/2005), ref. 03/00198. Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researchers: I. Ferreira, E. Fortunato, H. Águas, L. Pereira. Partners: UNINOVA/CEMOP, CENIMAT, CSP. Budget Campus FCT: 471209.13 €.
17. "Optical inspection systems based on amorphous silicon position sensors, POSINSPEC" POSI/6207 Investment in consortium 2002/2005. Coordinator: J. Borges/Tekelec). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira, H. Águas, L. Pereira. Partners: Tekelec, CENIMAT, UNINOVA/CEMOP. Budget Campus FCT: 175797.00 €
18. "Solid state time meters – METES". POSI/6250- Investment in consortium 2002/2005. Coordinator: J. Borges/Tekelec). Research Responsible: E. Fortunato. Researchers: R. Martins, I. Ferreira, H. Águas, L. Pereira. Partners: Tekelec, CENIMAT e UNINOVA/CEMOP. Budget Campus FCT: 135878.72 €
19. "New soldering technology of silicon crystals with suppression of molybdenum discs – SOLTEC" PRAXIS XXI, medida 3.1b, L003-P31B-09/96, 1997/2001. Coordinator: A. Marvão/CSP. Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Partners: CSP (Coordinator), FCTUNL, FEUP. Budget Campus FCT: 310000.00 €
20. "ECOCLIMAT, Ecological Acclimatization", Project industrial financiado pelo PEDIP II, SINDEPEDIP, Projects, Medida 4.4 – Acção B, nº 25/00169, 1998/2001. Coordinator: A. Teixeira/ATECNIC. Co-responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Partners: ATECNIC, Coordinator; SETSOL; FATRÓNICA; FCTUNL (Depto Física, DEE and DCM as assistance services); FEUP; IST. Budget Campus FCT /DCM): 135000.00 €.
21. "Development of a Photovoltaic module", Project financiado pelo Ministério da Indústria, nº CDI-U/015/84 (1985/88). Coordinator: L. Guimarães. Resarcher Responsible: R. Martins: Budget Campus FCT: 165000.00 €.

Overall budget: 5,587,360.14€

INTERNATIONAL PROGRAMS

FINANCED AND COORDINATE BY EUROPEAN UNION PROGRAMS.

1. Emerging Printed Electronics Research Infrastructure, 2020-INFRAIA-2020-1, EMERGE, Reference 101008701. Partners. Coordinator UNINOVA, Portugal; Forschungszentrum Jülich (FZJ), Germany; Hellenic Mediterranean University, Greece; Almascience, Portugal; Fundacio Institut Català de Nanociència i Nanotecnologia, Spain; Materials Center Leoben Forschung GmbH (MCL), Austria; Warsaw University of Technology (WUT): Centre for Advanced Materials and Technologies CEZAMAT, Poland; RISE Research Institutes of Sweden, Sweden; Joanneum Research Centre for Research and Technology Hellas (CERTH), Greece; Technische Universität Dresden — TU Dresden, Germany. Coordinators (R. Martins and E. Fortunato). Budget: 1000 k€.
2. SYmbiosis for eNERGY harvesting concepts for smart platforms on foils, SYNERGY, H2020-WIDESPREAD-2020-5, CSA, proposal nº 952169. Coordinator: Uninova, PT (R. Martins) (216k€); NovaID (136K€), PT; Fraunhofer, IKTS, D; VTT, FL; SPIE, PT; U. Torino, IT; Tyndall, IE.
3. Fully Oxide-based Zero-Emission and Portable Energy Supply, FOXES, H2020-EIC-FETPROACT-2019, proposal nº 951774. Coordinator Materials Center Leoben, (MCL), AT, BUW, DE, AMO, DE, Uninova, Responsibles E. Fortunato and R. Martins, (900 k€), PT; UB, SP.
4. ERC Advanced Grant, Multifunctional Digital Materials Platform for Smart Integrated Applications - DIGISMA, 787410 (2019-23). Elvira Fortunato, 3.5 M€.

5. Integration of capacitive, thermoelectric and photovoltaic thin films for efficient energy conversion and storage Cellulose Aluminium Polymer multi-ions composite Solid electrolyte. CAPSEL. Proof of Concept/ERC. Coordinator NovalD. Coordinator I. Ferreira, (150 000.0 €).
6. SmArt Designed Full Printed Flexible ROBust Efficient Organic HaLide PerOvskite solar cells, APOLO, H2020-LCE-2016-2017, proposal nº 763989, Coordinator: Acondicionamento Tarrasense, Spain; partners: Un. Degli Studi di Roma tor Vergata, IT; CEA, FR; Fraunhofer GFAF, DE; Uninova, PT; Ecole Polt. Fed. Lausanne, S; Arkema, FR; Accurec-Recycling, DE; GreatCell Solar Italia, IT; Flexbrick, SP. Budget (Uninova): 396234.50 € (Pl. H. Águas, M. Mendes. Co Responsibles: R. Martins, E. Fortunato)
7. M-ERA-Net 2017, PROXIMA - Portable ROBust X-ray IMAge detector based on a flexible TFT array with organic and metal oxide semiconductors and an X-ray convertor. Coordinator: Flexnable. Partners: Agfa and CENIMAT: PI: E. Fortunato and P. Barquinha (Budget: 150000.00 €).
8. Scale-Up of Printed Electronics Recyclable SMART materials. Proposal number: 17161/2017KIC Raw Materials. SUPERSMART Coordinator: Arkema, France. Partners: Arjowiggins, France, CEA, France, Coatema Coating Machinery GmbH, Germany (COA), FCTUNL, Portugal; Fraunhofer ISC, Germany; Joanneum Research, Austria; Luquet & Duranton, France, Université de Bordeaux, France, VTT Technical Research Centre of Finland Ltd, Finland (VTT) RTO. Responsible: R. Martins, budget: 338340.00 €.
9. RM@Schools3.0. Raw Matters Ambassadors at Schools 3.0. Proposal number: 17146/2017, KIC Raw Materials. Coordinator: Consiglio Nazionale delle Ricerche (CNR). Partners: Stichting Wetsus, European centre of excellence for sustainable water technology (Netherlands); University of Liège; Belgium; Technische Universität Clausthal (TU-Clausthal), Kontaktstelle Schule - Universität (Germany); Universidad Politecnica de Madrid; Spain; Bay Zoltán Nonprofit Ltd. Hungary; Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM (Germany); Montan-Universitaet Leoben (MUL) Regional Innovation Center on Raw Materials for East and South East Europe – RIC ESEE (Austria); Material Science Dep. Faculdade de Ciencias e Tecnologia Universidade Nova de Lisboa; RWTH AACHEN University Faculty for Mechanical Engineering -Cybernetics Lab IMA/ZLW & IfU (Germany); Alma Mater Studiorum- Department of Agricultural Sciences of University of Bologna (Italy); KTH (Kungliga Tekniska Högskolan)- Dept. of Chemical Engineering (Sweden); Tallinn University of Technology (TTÜ), Department of Geology (Estonia); Geology Survey of Sweden (SGU), Uppsala (Sweden); CEA Commissariat à l'énergie atomique et aux énergies alternatives Nuclear Energy Division (France); Università Bicocca (UNIMIB) Milano (Italy); Politecnico di Milano, Dipartimento di chimica e materiali e ingegneria chimica "G.Natta"; Geological Survey of Slovenia (GeoZS) (Mineral Resources and Enviromental Geochemistry Department) (Slovenia); ECODOM (Italy). Responsibles: J. P. Veiga, R. Martins. Budget: 61573 €
10. IDS-FunMat-Inno-1 & 2. International Doctoral School in Functional Materials & Innovation (2nd cohort). Proposal Number 17184/2017, KIC Raw Materials. Coordinator: Université de Bordeaux, France. Partners: Grenoble INP (university, FR, CLC central); Univ. Liège (BE, CLC central); TU Darmstadt (DE, CLC central); University Aalto (FI, CLC baltic); University Milano Bicocca (IT, CLC south); CEA Centre d'Energie Atomique et des Energies Alternatives; Fraunhofer Gesellschaft (RTO, DE, CLC central); Tecnalia (RTO, ES, CLC south); Arkema (industry, FR, CLC central); NOVA de Lisboa (university, PT, CLC Central); University Leuven (BE, CLC west); University Leiden (NL, CLC west). Responsibles: R. Martins, J. P. Veiga. Budget: 122250.00 €.
11. European Centre of Innovation in Brazil, CEBRABIC, SPI, Fraunhofer, EMRS. Responsible: R. Martins
12. Development of novel two-dimensional functional oxide materials and their integration into future "green" electronics (GREEN 2D FOX), Funded by Sweden National Foundation. Coordinator FCT-NOVA. Coordinators Luis Pereira, Rodrigo Martin, Inv. Volodymyr Khranovskyy. (60000 €)
13. ERC Starting Grant, GA nº 716510, ERC -2016-STG-716510 "Transparent and flexible electronics with embedded energy harvesting based on oxide nanowire devices, TREND". P. Barquinha, 1500000 €

14. ERASMUS + KA2, proposal 2015-1-ELO1-KA203-013988 (01/09/2015 to 31/08/2018), "Electronics Beyond Silicon Era – ELBESIER. Coordinator: "Technological Educational Institute of Crete, (TEI of CRETE). Partner: CENIMAT/FCT-UNL (58656.00 €). Responsible: Elvira Fortunato.
15. M-ERA-Net/0005/2015, Functional Inorganic layers for Next Generation Optical devices, FLINGO. Coordinator: OSRAM (D); Fraunhofer (D); Uninova (Pt), Picosun Oy (FL). Responsible: R. Martins. Members: E. Fortunato, L. Pereira, P. Barquinha. Budget: 137089.00 €.
16. H2020- DRS-11-2015-RIA, proposal number 700395, HERitage Resilience Against CLimate Events on Site, HERACLES. Coordinator: CNR, Italy. Partners: E-Geos SPA (IT); Selex ES SPA (IT); Thales SA (FR); Fraunhofer (D); Arai Technologies SA (FR); Sistema GMBH (AUT); CVR S.R.L. (IT); Uninova (PT); The International Emergency Management Society AISBL (B); E-MRS (FR); Foundation and Technology Hellas (GR); University of Crete (GR); Ephorate of Antiquities of Heraklion (GR); Comune di Gubbio (IT); Universita Degli Studi di Perugia (IT): Responsible (EMRS +Uninova). Reponsibles R. Martins (PI), J.P. Veiga. Researchers: E. Fortunato, P. Barquinha. Budget: (337.5K€ (Uninova) + 250k€ (E-MRS).
17. H2020-NMP-2015-IA, proposal number: 685758-21D Nanofibre Electro-Optic Networks (1D-NEON). Coordinator: Oxford University (UK). Partners: Uninova (PT); Un. Cambridge (UK); CeNTI (PT); FUNDACIO EURECAT (SP); Textilforschungsinstitut Thüringen Vogtland e.V. (D); LG Display Germany GmbH (D); SAATI SPA(IT); Solvay Specialty Polymers (IT); SILVACO Europe Ltd (UK); BioAge (IT); RELATS S.A. (IT); HENKEL KGaA (D); PHILIPS ELECTRONICS NEDERLAND B.V. (NL) (987 M€). Responsible: R. Martins and P. Barquinha. Resrachers: E. Fortunato, R. Igreja, L. Pereira.
18. H2020-NMP-CSA-2015, GA Nº 685931, Nanotechnology Mutual Learning Action Plan for Transparent and Responsible Understanding of Science and Technology - NANO2ALL. Coordinator: SPI (PT). Partners: Jrc -Joint Research Centre- European Commission, Malsch Neelina Hermina, Stichting Vu-Vumc (954530344), L'union Europeenne Des Associationsde Journalistes Scientifiques Association (997405217), Vilabs Oe(955444375), Uninova-Instituto De Desenvolvimento De Novas Tecnologias, Association Europeenne Des Expositions Scientifiques Techniques Et Industrielles(998448452), Nanofutures Asbl, Agenzia Per La Promozione Della Ricerca Europea (EMRS+Uninova:100k€). Responsible: R. Martins. Co-responsibles: L. Pereira, E. Fortunato.
19. H2020-TWINN-2015, CSA, proposal number: 692373, Materials Synergy Integration for a Better Europe, BET-EU, Coordinator: Uninova. Partners: University of Cambridgw (UK); NOVA ID FCT (PT); -Teknologian tutkimuskeskus VTT Oy Finland (FL); Fraunhofer, IKTS (D); Sociedade Portuguesa de Investimentos, SPI (PT) (405K€). Coordinator: R. Martins.
20. H2020-MSCA-RISE-2015, GA nº nº 691010, Advanced Humidity to Electricity Converter – HUNTER. Coordinator: Uninova (275000 €). Partners: NOVA ID FCT (PT); ENSTIMA (PT); LUT; DIPE; SOLENE (FR); BLUEORIZON; BSU; UT AUSTIN (USA). Coordinator Andriy Lyubchyk.
21. H2020-ECSEL-09-2015, Type of action: ECSEL-RIA, (FCT), GA Nº 692451-2, Heterogeneous integration based on disruptive nanotechnologies for next generation smart system high power applications- SMART RF. Coordinator: Thales SA TRT FR Y. Partners: Uninova, Foundation for Research & Technology Hellas; Berliner Nanotest und Design GmbH; Institute of High Pressure Physics of the Polish Academy of Sciences, Institutul National de Cercetaredezvoltare Pentru Microtehnologie, Ethniko kai Kapodistriako Panepistimio Athinon, SHT Smart High-Tech, Cidete Ingenieros SL, Centre National de la Recherche Scientifique, Chalmers Tekniska Hogskola AB, Commissariat a l' Energie Atomique et aux Energies Alternatives, Fundacio institut de recerca de l'energia de Catalunya, Universite de Limoges, Fundacio institut Catala de Nanociencia i Nanotecnologia, Regie Ecole Superieure de Physique et de Chimie Industrielle, Technische Universitaet Chemnitz, I II V Lab, Thales Alenia Space France, INNOVNANO. Responsible: I. Ferreira (Budget:165k€).
22. ERASMUS + KA2, 2015-1-ELO1-KA203-013988, Electronics Beyond Silicon Era – ELBESIER. Coordinator: Technological Educational Institute of Crete. Partners: Uninova, Universitatea Din Bucuresti,

Uniwersytet Warszawski, Universidade Nova de Lisboa, Ecole Nationale Supérieure des Mines de Saint-Etienne, Panepistimio Kritis – 999588979. Responsible: E. Fortunato (45k€).

23. ERC Start Grant, proposal number 640598, 2015, Luís Pereira, "New era of printed paper electronics based on advanced functional cellulose - NewFun", 1.5 M€, partner.
24. H2020-FETOPEN-2014-2015-RIA, proposal number 665046: Innovative Autonomous Electrical Biosensor synergistically assembled inside a passive direct methanol fuel cell for screening cancer biomarkers, SYMBIOTIC, Coordinator: Instituto Superior de Engenharia do Porto; Imperial College of Science, Technology and Medicine (UK); Uninova (PT); VTT Technical Research Centre of Finland (FN); Aarhus Universitet (DN). Responsible: E. Fortunato. Co-Responsible: R. Martins. Budget: 527k€.
25. ERC-2014-CoG, Consolidator proposal number 647596, I. Ferreira, Integration of capacitor, thermoelectrics and photovoltaic thin films for efficient energy conversion and storage – CapTherPV (2M€)
26. H2020-ICT-2014-1: proposal number 645241, Large area transparent thin film thermoelectric devices for smart window and flexible applications – TRANSFLEXTEG, Coordinator: Uninova. Partners: VTT, AGFA, CNRS, GRINP, STREP, Picosun, Aalto University, SolEarth, (750k€). Coordinator: I. Ferreira.
27. H2020-NMP-CSA-2014, Grant agreement no. 646031, The alliance for materials way to the creation of the MATerials common house – MATCH, Coordinator: Centro Sviluppo Materiali SPA (IT); Conseil Européen de l'industrie Chimique – CEFIC (BE); European Virtual Institute on knowledge-Based Multifunctional Materials AISBL (BE) - KMM VIN (BE); The Institute of Materials, Minerals and Mining - IOM3 (UK); European Apparel and Textile Confederation – EURATEX (BE); Nanofutures ASBL - Nanofutures (BE); Fundacion Tecnalia Research & Innovation – TECNALIA (SP); European Materials Research Society - EMRS (FR); Laboratorio di Scienze della Cittadinanza – LSC (IT); Fundacion Tekniker - IK4 (SP); Commissariat a l'Energie Atomique et aux Energies Alternatives – CEA (FR); Emiri Aisbl (BE); Centre de Recherche Public Henri Tudor – TUDOR (FR); Consiglio Nazionale delle Ricerche – CNR (IT); Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V – Fraunhofer (D); Federation of European Materials Societies – FEMS (BE); Spinverse oy (FL); UNINOVA (PT), (100 k€). Responsible: R. Martins, E. Fortunato, L. Pereira.
28. FP7-PEOPLE-2013-IEF, GA N° 629370, Advanced light trapping with DIELECTRIC micro-particle self-assembled arrays for low-cost and high-performance thin film solar cells, DIELECTRIC PV. Coordinator: FCT. I. Ferreira and R. Martins (147k€).
29. H2020, ICT-2014-1, proposal number 644631: High-performance, Flexible, AUTonomous Systems manufactured with Unique, Industrial ROLL-to-roll equipments (Roll-Out). Coordinator: VTT. Partners: Uninova, Fraunhofer, Fundacion Cidetec, Uppsala Universitet, Polyteknik AS, Picosun, OY, Logoplaste Innovation Lab Lda, MAIER, FOV (490 k€). Responsible: P. Barquinha. Members: R. Martins, E. Fortunato
30. "Integrated flexible photonic sensor system for a large spectrum of applications: from health to security-i-FLEXIS". FP7-ICT-grant n° 611070: Alma Mater Studiorum -Università di Bologna, UNIBO, Italy; EURORAD, France; ELETTRA – Sincrotrone Trieste, SCPA, Italy; UNINOVA, Portugal; CEA, France; Nanograde AG, Switzerland; TAGSYS, France (475000 €). Responsible: R. Martins, P. Barquinha, E. Fortunato
31. Stimulating the Public Attitude Towards Advanced Materials, STIMULATED, NMP.2013.2.3-1, Advanced materials – our allies for a sustainable future), Grant agreement no: 608995: National, Technical University of Athens, GR; National Center for Scientific Research, "DEMOKRITOS", GR; The Open University, UK; European Materials Research Society (R. Martins as president EMRS), FR; Serious Games Interactive, DN; APT Film & Television Limited, UK (30 000€). Responsible: R. Martins
32. "Novel Composite Oxides by Combinatorial Material Synthesis for Next Generation All-Oxide-Photovoltaics", FP7, Future Emerging Technologies, ENERGY.2012.10.2.1: Bar Ilan University IL, Coord.),

University Twente (NL); University Jaume (S); Darmstadt University of Technology (D); UNINOVA/CEMOP/CENIMAT (PT); SolMateS B. V. (NL); OSM-DAN (IL). Budget: 500000.00 €. Responsible: E. Fortunato, R. Martins.

33. "CO₂ - Loop for Energy storage and conversion to Organic chemistry Processes through advanced catalytic Systems", NMP.2012.2.1-2 Fine chemicals from CO₂. Partners: CEA, Fr (coordinator); Italcementi, It, IST, PT, OMNIDEA, PT, ENSCP, FR, FCTUNL, PT, GSER, Rom; IREC, SP; EMRS (co-coordinator); CCB, D. Budget: 185000.00 €. Responsible: R. Martins.
34. "Critical Raw Materials Innovation Network – Towards an integrated community driving innovation in the field of critical raw material substitution for the benefit of EU industry: CRM_InnoNet", R. Martins, as president of EMRS. NMP.2012.4.1-4 Substitution of critical raw materials: networking, specifying R&D needs and priorities. Partners: Chemistry Innovation Ltd (UK), (coordinator); Aerospace and defence Industries Association of Europe (BE); Commissariat à l'énergie atomique et aux énergies alternatives (Atomic Energy and Alternative Energy Commission) (FR); Conseil Européen de l'Industrie Chimique (BE); D'appolonia SPA (IT); European Materials Research Society (FR); C-Tech Innovation Ltd (UK); Federación Empresarial de la industria Química Española (ES); Fraunhofer-Gesellschaft zur Förderung der Angewandten Forschung E.V. (Fraunhofer Institute for Systems and Innovation Research ISI) (DE); SWEREA MEFOS AB (SE); PNO Consultants N.V. (BE); SEMI Europe-Grenoble Office (FR); Selskapet for industriell og teknisk forskning (NO); SP Sveriges Tekniska Forskningsinstitut AB (SE); Fundación Tecnalia Research & Innovation (ES); TNO Netherlands Organisation for Applied Scientific Research (NL); Delft University of Technology (NL); Teknologian tutkimuskeskus VTT (FI). Financing support to EMRS: 45000.00 €. Responsible: R. Martins
35. "Alliance for Materials, A4M", The European Super Network", R. Martins, as president of EMRS. NMP.2012.2.3-1 Networking of ETPs and main materials collective stakeholders in materials science and engineering. R.Martins, as president of E-MRS. Partners: Centro Sviluppo Materiali (IT); Conseil Européen de l'Industrie Chimique; The Institute of Materials, Minerals and Mining (UK); European Apparel and Textile Confederation (BE); ArcelorMittal (FR); TWI Limited (UK); European Virtual Institute on Knowledge-based Multifunctional Materials (BE); European Materials Research Society (FR); Rheinisch Westfaelische Technische Hochschule Aachen (DE); Instytut Metali Nieżelaznych (PL); The Federation of Materials Research Societies (DE); Fraunhofer Institute IPA (DE). Financing support to EMRS: 45000.00 €. Responsible: R. Martins
36. "Networking of materials laboratories and innovation actors in various industrial sectors for product or process innovation, - InnoMatNet", Theme 4 – NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies – CSAs (NMP.2011.2.3-3), R.Martins, as president of E-MRS. Partners: Sociedade Portuguesa de Inovação, (coordinator), European Business & Innovation Centre /b); Chemistry Innovation Limited UK, Institute of Materials, Minerals and Mining UK, BIBA – Bremer Institut für Produktion und Logistik GmbH, Germany, European Materials Research Society (E-MRS), France, European Architecture Foundation, Belgium; Fundació Privada CETEMMSA, Spain; European Network of Living Labs, Belgium; Transplant Live AS. Financing support to EMRS: 75.000 €. Responsible: R. Martins
37. Nanostructured ThermoElectric Systems for Green Transport & Energy Efficient Applications-NanoTEG, ENIAC-2010-1, JTI-CP-ENIAC, Coordinator (Thales/Fr).. Partners: Thales SA - Thales Research & Technology (Fr), Thales Avionics SA (Fr), Ecole Centrale Paris -Laboratoire d'Energétique Moléculaire et Macroscopique, Combustion (Fr), Commissariat à l'Energie Atomique et aux Energies Alternatives-LITEN (Fr), Schneider Electric Industries SAS (Fr), Micropelt GmbH (D), Infineon Technologies AG (D), Fraunhofer Institute IZM (D), Berliner Nanotest und Design GmbH (D), Technical university of Chemnitz (D), Panco GmbH (D), SHT Smart High Tech AB (Sweden), Valtion Teknillinen Tutkimuskeskus (Finland), Picosun Oy (Finland), Easy LED Oy (Finland), Catalan Institute of Nanotechnology (Spain), Cidete Ingenieros SL (Spain), Centro Ricerche Fiat SCPA (Italy), Uninova - Instituto de Desenvolvimento de Novas

Tecnologias (Pt), Biometric Technology Solutions Ltd (Ireland), Infineon Technologies Austria AG (Austria). Proposal number: 270689-2. Responsible: Budget to Uninova: 336670 €. Responsible. Ferreira, Co-responsible R. Martins

38. "Autonomous Printed Paper products for functional Labels and Electronics, APPLE" FP7-NMP-2010-SME-4, Proposal No:262782-2 APPLE CP-TP. Coordinator: Centre Technique du Papier (F).. Researchers: I. Ferreira, P. Barquinha. Partners: Uninova/CEMOP/CENIMAT, PT; VTT (FI); Varta (DE); Commissariat à l'Energie Atomique, F; Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, NL; Polypore, F; ViTechnology (BI); RG Plastiques, F; Felix-Schoeller (DE); JoutsenPaino (FI); Reynders Etiketten Polska (PI). Scientific coordinator: R. Martins and E. Fortunato. Co-responsible: L. Pereira Budget to Campus FCT: 458864.00 €
39. "Printable Organic-Inorganic Transparent Semiconductor Devices, POINTS", FP7-NMP-2010-SMALL-4. Coordinator: VTT (FI). Partners: Fraunhofer Gesellschaft zur Foerderung der angewandten Forschung, D; CENIMAT/FCTUNL, PT; University of Cambridge UCAM, UK; Multivalent Multivalent, UK; Promethean Particles Promethean, UK; Stora Enso Oyj Stora Enso, FI; 8 Bayer Technology Services, GmbH BTS DE; University Dunarea de Jos of Galati UDJG, RO. Co-coordinator: E. Fortunato. Researchers: L. Pereira, R. Martins, P. Barquinha, I. Ferreira. Budget to Campus FCT: 749600.00 €.
40. "Smart electrochromic active matrix components for stand-alone multifunctional devices, SMART-EC". FP7-ICT-2009.3.9: Microsystems and smart miniaturized systems, grant n° 258203 Coordinator: CRF (IT); Research Responsible (CEMOP/CENIMAT, PT).. Partners: Politecnico di Torino, IT; ACREO AB, SE; Rockwood Pigments Ltd, UK; Bundesdruckerei GmbH, DE; Commissariat à l'Energie Atomique et aux Energies Alternatives, for its LITEN laboratory, F; PLASTIQUES RG, F; Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e. V., DE; SOLEMS SA, F; ViTechnology, F; G24 Innovations Ltd; UK; Bioage S.r.l., IT. Co-coordinator: R. Martins. Scientific coordinator: E. Fortunato. Responsible: L. Pereira. Researchers: I. Ferreira, H. Águas. Budget Campus FCT: 832500.00 €.
41. "Oxide Materials Towards a Matured Post-silicon Electronics Era, Orama", FP7-NMP-2009-Large-3, CP-IP 246334-2 7 2010. Coordinator (Fraunhofer-D).. Partners: Foundation for Research and Technology Hellas, Gr; Institut Jožef Stefan, SL; Philips Electronics UK LTD; Philips Electronics Nederland B.V.NK, NL; OSRAM Opto Semiconductors GmbH, DE; Consiglio Nazionale delle Ricerche, IT; Justus-Liebig-Universitaet Giessen, DE; University College London, UK; University of Cambridge, UK; Eberhard Karls Universitaet Tuebingen, DE; Steinbeis GmbH & Co. KG fuer Technologietransfer, DE; Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek – TNO, NL; Centro Ricerche Fiat SCPA, IT; Bekaert Advanced Coatings NV, B. Co-coordinator and scientific responsible: R. Martins. Responsibles: E. Fortunato and L. Pereira. Researchers: P. Barquinha, I. Ferreira Budget Campus FCT:1115000.00 €.
42. Advanced Amorphous Multicomponent Oxides for Transparent Electronics, INVISIBLE - ERC N°228144, RTD-ERC-ADG-APPLICANTS@ec.europa.eu, 01/01/2009. Coordinator: E. Fortunato. Researchers: P. Barquinha, R. Martins, L. Pereira, I. Ferreira, H. Águas. Partners: CENIMAT/I3N and CEMOP/Uninova. Budget Campus FCT: 2250000.00 €.
43. "Multicomponent Oxides for Flexible and Transparent Electronics-MULTIFLEXIOXIDES" FP6-2004-TI-4" – Proposal n° 032231 (2006/2009). Partners: Uninova (PT), Tyndall (IR); CENIMAT (PT); U. Barcelona (ES); HP (IR); FIAT (IT); J. Stefan Institute (SI). Coordinator: R. Martins. Co-coordinator: L. Pereira. Scientific responsible: E. Fortunato. Researchers: P. Barquinha; I. Ferreira. Budget Campus FCT: 566000.00 €.
44. "ComplexEIT: Complexity, from nanotechnologies to large systems", FP7-2007- EAC/26/2007 (AG2007-4078-001). Coordinator (CEA-FR). Partners: IMEC, Fraunhofer Verbund Mikroelektronik Geschäftsstelle; Technische Universität Dresden; GAIA- Asociación de Industrias de las Tecnologías Electrónicas y de la Información del País Vasco; Airbus France SAS; Thales; Fondation de coopération scientifique Digiteo-Triangle de la Physique; Institut Polytechnique de Grenoble; Sciences Po Développement; Société

européenne de recherche sur les matériaux / Forum européen des matériaux; Cork City Council; University College Cork; Università di Pisa; STMicroelectronics SRL; Instytut Podstawowych Problemow Techniki PAN; Universidade Nova de Lisboa. Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 58600.00 €.

45. "Advanced Handling and Assembly in Microtechnology- ASSEMIC (2003/07)", 6th EU programme, Marie Curie Actions: Research Training Networks, proposal n^o 504826: U. Viena (AT). Coordinator: Un. Wien. Partners; FSRM (CH); ARC (DE); IMT (RO); WUT (PL); UNINOVA (PT); AmiR (DE); Robotiker (SE); FORTH-HELLAS (GR); Medplant Genetics + Proteomica (SE); RAL-CCLRC (UK); Fraunhofer Institut für Lasertechnik – ILT (DE); SSSA (IT); Nascatec (DE). Researcher Responsible: I. Ferreira. Co-Responsible: R. Martins, Researchers: E. Fortunato, H. Águas. Budget to Campus FCT: 265000.00 €.
46. PV-ENLARGEMENT –Technology Transfer, Demonstration and Scientific Exchange Action for the Establishment of a Strong European PV Sector", U.E. Contract: NNE5/2001/736, (2003/2006). Partners: DE WIP (DE),- Coordinator; Gehrlacher (DE); FH Munich (DE); ATB (AT); Vienna University of Technology, Institute of Power Systems and Energy Economics (AT); University Innsbruck, Anwendungszentrum für Mischbautechnologie (AT); Donau Universität Krems (AT); Viktor Kaplan Akademie, Mürzzuschlag (AT); TU Gabrovo (BG); Central Laboratory of Solar Energy & New Energy Sources (BG); SOLARTEC (CZ); Charles University Prague (CZ); Brno University of Technology (CZ); TU Ostrava (CZ); University of West Bohemia, Plzen (CZ); TU Liberec (CZ); Centre for Renewable Energy Sources, CRES (GR); Agricultural University of Athens (GR); Szent Istvan University Gödöllő (HU); Università di Roma 'La Sapienza (IT)'; Università degli Studi di Firenze (IT); Municipality of Pistoia (IT); Warsaw University of Technology (PL); Instituto Superior Tecnico (PT); Universidade Nova de Lisboa, UNL (PT); Universitea 'Politehnica' din Bucuresti (RO). Responsible: L. Guimarães. Co-responsible: R. Martins. Researchers: I. Ferreira, E. Fortunato. Budget to campus FCT: 54500.00 €.
47. "University Science Park – Organizational Framework (USP)" – TEMPUS UM _ JEP-16090-2001. Coordinator: Wien Univ. Partners: Universidade de Novi Sad – Jugoslávia; Universidade de Belgrado – Jugoslávia; Universidade de Banja Luka – Bósnia Yergozinia; MITOS S.A. – Greece; Univ. Middlesex – UK; IVAM NRW e.V. – Germany; CENIMAT – Portugal; Delft Univ. Netherlands – NL. Researcher Responsible: E. Fortunato. Researchers: R. Martins, I. Ferreira. Budget to Campus FCT: 8500.00 €.
48. "Development of new production techniques for highly efficient polymorphous solar cells- H-Alpha Solar". Brite-EuRam, NNE5-1999-00133 (2000/2003). Coordinator: Eindhoven. Partners: U. Eindhoven/TUE, Coordinator (NL); U. Orleans/GREMI (FR); CNRS/PICM (FR); UNINOVA/CEMOP (PT); ATECNIC/PORTSOL (PT); Balzers A. G./BPS (LI); Akzo Nobel Chemical b.v./ANC (NL). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira, H. Águas. Budget to campus FCT: 275000.00 €.
49. "European Network on Amorphous-Silicon Device Technology-ASINET". Brite-EuRam, GTC1-2000-28040 (2000/2003). Coordinator: CIEMAT. Researcher Partners: CIEMAT (ES), Coordinator; ENEA (IT); U. Cranfield (UK); Pilkington (UK); U. Barcelona (ES); CNRS/PICM (FR); Akzo Nobel b.v./ANC (NL); CNR (IT); U. Stuttgart (DE); IST (PT); LAMEL (IT); U. Torino (IT); U. Patras (GR); U. Delft/TUE (NL); UNINOVA/CEMOP (PT); U. Cambridge (UK); U. Utrecht (NL); U. Roma (IT); TNO (NL). Responsible: R. Martins. Researchers. E. Fortunato, I. Ferreira, H. Águas. Budget to Campus FCT: 220000.00 €.
50. "Innovative solar modules using the entire spectrum of the sunlight by concentration and dispersion" JOR3-CT98_7001 (1999/2002). Partners: MBB (DE); Photowatt (FR); FCTUNL (PT). Coordinator: L. Guimarães. Researchers: R. Martins, I. Ferreira, E. Fortunato. Budget to campus FCT: 145000.00 €.
51. "Inspection of large soldered joints and optimisation of soldering process – LASOL" Brite-EuRam, BRE-CT97-4689 (1998/2002). Researcher Responsible: R. Martins. Researchers: I. Ferreira, E. Fortunato. Partners: AEG, coordinator (DE); JENOPTIKS (DE); FERBV (DE), Fraunhofer Inst. (DE); NMRC (IRL); TEKELEC (PT); UNINOVA/CEMOP (PT). Budget to campus FCT: 245000.00 €.

52. "Co-ordination of microelectronics packaging and interconnection projects: Environment and trends for the development of European solutions – COMPETE" Thematic Network, BETC-1013/97 (1997/2001). Coordinator: MTA. Partners: MTA (FR); Alcatel (FR); Siemens (DE); ABB (DE); Phillips (NL); Thomson (FR); Bosch (DE); UNINOVA/CEMOP (PT); NMRC (IRL); IMEC (BE); SEAT (ES); RCA (GB); Osprey Metals (NL); MMC Packages (GB); NMRC (IRL); IMEC (BE); INESC (PT); UNINOVA/CEMOP (PT); BULL (DK); CNM (ES); Ericsson (SE); DASSAULT (FR); GEC MARCONI (GB); MATRA (FR); VTT (FL); Smartpack Tecnologia (IT); CIEMAT (ES); Heraeus (DE). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget to Campus FCT: 175000.00 €.
53. "Handling and assembly of functionally adapted microcomponents – HAFAM" ERB 4061 PL97- 0385 (1997/2000). Coordinator: Univ. Wien. Partners: Univ. Wien-TUW.IFWT, Coordinator (AT); CETEHOR (FR); FORTH-HELLAS (GR); IMM (DE); IMT (CH); METACON (AT); MTE (AT); Sincrotone Trieste (IT); UNINOVA/CEMOP (PT). Researcher Responsible: E. Fortunato. Co-Responsibles: R. Martins, I. Ferreira. Budget campus FCT: 215000.00 €
54. "New Materials for Intelligent sensors-MATISE". ALFA network, Ref. 50057.8. (1997/99). Partners: FCTUNL (PT); CEMOP (PT); CSIC (ES); CNRS/PICM; EPUSP (Brasil); National Univ. of San Martin (AG). Coordinator: E. Fortunato. Researchers: R. Martins, I. Ferreira. Budget to campus FCT: 95.000 €.
55. "Improved microcontact technology for power electronics", CRAFT, BRST-CT96-0253 (1996/98). Coordinator: Fraunhofer. Partners: CEM/Fraunhofer, Coordinator (DE); ABB (DE); CSP (PT); UNINOVA/CEMOP (PT). Researcher Responsible: R. Martins. Researcher: E. Fortunato, I. Ferreira. Budget to Campus FCT: 46500.00 €.
56. "Optimised sensor locations and sampling methods in industrial stack for environmental monitoring-OLASIS", STM, SMT4-CT95-2032 (1996). Coordinator; TECNATON. Partners: TECNATON, (ES); UNINOVA/CEMOP (PT); BRUNLE UNIV. (GB); ISQ (PT); ENDES (ES); KEMA (NL). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 200000.00 €.
57. "Micropowder processing using low-pressure plasma technology – dusty plasmas" Brite-EuRam II, BRE2-CT94-0944 (1994/97). Coordinator: Eindhoven. Partners: U. Eindhoven, Coordinator (NL); École Pol. Paris (FR); U. Orleans (FR); École Pol. Lausanne (CH); U. Barcelona (ES); UNINOVA/CEMOP (PT); U. Lyon (FR). Researcher Responsible: R. Martins. Researchers: I. Ferreira, E. Fortunato. Budget campus FCT: 220000.00 €
58. "Improved microcontact technology – IMMICO", Brite-EuRam II, BRE2-CT94-1025 (1994/97). Coordinator: Dassault. Partners: ALCATEL, (FR); Dassault (FR); Siemens (DE); CEM/Fraunhofer (DE); Trinity College (IRL); UNINOVA/CEMOP (PT). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget to campus FCT: 250000.00 €.
59. "Microfabrication with synchrotron radiation". Program HCM, ERBCHRXCT930394 (1994/96). Coordinator: IMM. Partners: IMM, (DE); Univ. Wien-TUW.IFWT (AT); CETEHOR (FR); FORTH-HELLAS (GR); IMT (CH); METACON (AT); MTE (AT); Sincrotone Trieste (IT); UNINOVA/CEMOP (PT); IMEC (BE); CNRS-LURE (FR); SERCDL-Daresbury GB); ULUND.MAX (SE); URFW.PI (DE); IPS (CH). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 200000.00 €.
60. "Amorphous silicon PV technology – OASIS-II". Program HCM, ERBCHBGCT920045 (1992). Coordinator: Univ. Delft. Partners: U. Delft, Coordinator (NL); U. Utrecht (NL); U. Eindhoven (NL); U. Stuttgart (DE); NAPS (FR); Microchemical (FL); CIEMAT (ES); IMEC (BE); UNINOVA/CEMOP (PT). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 125000.00 €.
61. "Optimisation of amorphous silicon solar modules – OASIS". JOULE, 0045/CE/618 (1990/93). Coordinator: Delft University. Partners: U. Delft (NL); U. Utrecht (NL); U. Eindhoven (NL); U. Stuttgart (DE); NAPS (FR); NESTOY (FL); CIEMAT (ES); IMEC (BE); UNINOVA/CEMOP (PT). Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget to Campus FCT: 255000.00 €

62. "Surface conditioning of electronic components for clean joining process". Brite-EuRam I, 4446/90 (1992/95). Coordinator: Phillips. Partners: Phillips (NL); RCA (GB); FCTUNL (PT); Daimler Benz (DE). Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget to campus FCT: 115000.00 €.
63. "European Masters on Renewable Energy" – XVII/4.1030/Z/98-166 Coordinator: EUREC Agency. Co-coordinator: L. Guimarães. Researcher Responsible: E. Fortunato. Researcher: R. Martins. Partners: Univ. Loughborough; Universidade Nova de Lisboa; Universidade de Northumbria; Universidade Técnica de Atenas; Universidade de Saragoça; Universidade de Kassel; Universidade da Córsega, Escola de Minas de Paris; Universidade de Atenas. Budget Campus FCT: 115000.00 €.
64. "Hydrogenated amorphous silicon integrated tandem solar cells produced by a two consecutive decomposition and deposition chamber (TCDDC) system – AMOR" JOULE, EN 3S-0144-P (1988/90). Coordinator: L. Guimarães. Co-coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Partners: FCTUNL, CEMOP/Uninova. Budget campus FCT: 565000.00 €.

Overall budget: 27,896,451.5 €

FINANCED AND COORDINATED BY OTHER INTERNATIONAL INSTITUTIONS

1. "Low-temperature sputter deposition exploration/ optimization of multi-component, amorphous and nanostructure heavy metal cation oxides for TFT and TFTT channel layer applications. Project financed by Fundação Luso Americana para o Desenvolvimento, FLAD and the American National Science Foundation (NSF). Partners: CEMOP/ UNINOVA, CENIMAT (Portugal), Oregon State University, Electrical department (OSU) (2005/2008). Coordinator: R. Martins. Researcher Responsible: E. Fortunato. Researchers: P. Barquinha, L. Pereira. Budget campus FCT: 85000.00 €.
2. "Materials Engineering and Physics of Quasimorphous Silicon Thin Films for its Application in Large Area Electronics". Project financed by Fundação Luso Americana para o Desenvolvimento, FLAD (project 85/02, 2002/2004) and the American National Science Foundation (NSF). Partners: CEMOP/ UNINOVA, CENIMAT (Portugal), University of Siracuse, Physics departme (USA). Coordinator: R. Martins. Researcher Responsible. I. Ferreira. Researchers: H. Águas, E. Fortunato. Budget Campus FCT: 95000.00 €.
3. "Optical detectors based on thin film technology for industrial applications – POTHINFILM" NATO Sfs, PO-931712 (1994/01). Partners: UNINOVA/CEMOP, FCTUNL; INETI; EID (PT). Coordinator: R. Martins. Scientific Responsible: E. Fortunato. Researchers: I. Ferreira. Budget Campus FCT: 675000.00 €.
4. "Improvement in metallization passivation for solar cells", USAID-CDR (C7-178) (1987/88). Coordinator: Univ. tela-Aviv. Partners: U. Tel-Aviv, (Israel); FCTUNL (PT). Researcher Responsible: R. Martins. Researcher: E. Fortunato. Budget Campus FCT: 85500.00 €.

Overall budget: 940,500.00 €

INTERNATIONAL INTERCHANGE PROJECTS

FINANCED AND COORDINATED BY GRICES/FCT/MCTES

1. "Development of novel two-dimensional functional oxide materials and their integration into future "green" electronics (GREEN 2D FOX)", Marie Curie Network. Coordinator: Department of Physics, Chemistry and Biology (IFM), Linkoping University/ Inv. Volodymyr Khranovskyy Responsibles: Luis Pereira and Rodrigo Martins. Budget 60000.00 €.
2. "Development of inorganic and organic optoelectronic flexible devices. Program CAPES/GRICES (2003/2007). Partners: DCM/FCTUNL; CEMOP (UNINOVA); USP (Brasil). Coordinator: E. Fortunato. Researchers: R. Martins, P. Barquinha, I. Ferreira, L. Pereira. Budget Campus FCT: 18500.00 €.

3. "Flat Panel Liquid crystal displays", in the frame of the Ibero-American program of research and Technology development of CYTED, Sub-Program IX, area of microelectronics (1995/2000 e 2002/2005). Coordinator: Un. Campinas. Partners: U. Campinas, Coordinator geral (Brasil); DCM/FCTUNL (PT); LME-EPUSP (Brasil); U. Santiago Chile; U. Paraguai; U. México; U. Madrid (Espanha); U. Venezuela; U. Peru; U. Uruguai. Researcher Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira, L. Pereira. Budget campus FCT: 65000.00 €.
4. "Environmental Solid State Microsensors" in the frame of the Ibero-American program of research and Technology development of CYTED, Sub-Program IX, area of microelectronics (1996/98). Partners: U. De La Plata, Coordinator (Argentina); U. México; U. Campinas (Brasil); CEMOP/UNINOVA (PT); U. Barcelona (ES); U. Santiago do Chile. Responsible: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 7500.000 €.
5. "Applications of amorphous silicon and their alloys to optoelectronic devices: Programa JNICT/CNPq, (1982/89). Partners: DCM-FCTUNL, Portugal and LME-EPUSP, Brasil. Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 27500.00 €.

Overall budget: 178,500.00 €

PROJECTS DIRECTLY FINANCED BY THE INDUSTRY (National and International)

1. "Nanomarcadores - Aplicação de conversores ascendentes nano estruturados em marcadores de elevada segurança para deteção eletrónica de cor": Nanomarkers: application of nano structured up converters in high security markers to electronic detection of color", Ref: AD 227/2016, Imprensa Nacional Casa da Moeda, 286872.90 €. Project Coordinators CENIMAT and CEMOP/Uninova. Coordinators E. Fortunato. and R. Martins.
2. "Papel Secreto - Desenvolvimento de sistemas electrónicos de informação utilizando tecnologia embebida e implementada em papel, visando o aumento da segurança e da rastreabilidade de pessoas, atos, bens e documentos. Secret paper: Development of electronic information systems using embedded technology implemented on paper, aiming at increasing the safety and traceability of persons, acts, goods and documents ". Ref: AD 89/2017. Coordinators: CEMOP/Uninova, CENIMAT. Partner: and CTS/Uninova. Coordinators R. Martins and E. Fortunato. Total budget: 483335.88 €
3. Testing new gate dielectric materials for thin film transistors using GIZO semiconductor produced by rf magnetron sputtering at room temperature (2015). Merck Chemicals Ltd. Coordinator: Uninova (92525.00 €). Responsible: E. Fortunato. Co-responsible: P. Barquinha. Members: R. Martins, L. Pereira
4. Testing new gate dielectric materials for thin film transistors using GIZO semiconductor produced by rf magnetron sputtering at room temperature. Merck Chemicals Ltd (2016). Coordinator: Uninova. Coordinator E. Fortunato. Responsible: R. Martins, Co-responsible: P. Barquinha. Members: L. Pereira. Budget 115000 €.
5. "Development of paper for electronic functions", Project fully financed by Suzano (2010-2012). Coordinator: E. Fortunato. Co-Responsible: R. Martins. Researchers: I. Ferreira, L. Pereira, P. Barquinha, N. Correia. Budget: 105000.00 €.
6. "Smart window with transparent electronic devices" IT R&D program of MKE [2006-S079-03], project financed by ETRI/LG, up to 2011. Coordinator: E. Fortunato. Researchers: R. Martins, P. Barquinha, L. Pereira, I. Ferreira. Budget Campus FCT: 125000.00 €.
7. "Improved Thin Film Transistors with High Transmission and Thermal Stability (HT TFT)" Project fully financed by Saint Gobin Recherche, France, Feb. 2008 to November 2010. Coordinator: E. Fortunato. Researcher Responsible: L. Pereira. Researchers: R. Martins, P. Barquinha. Partners: CENIMAT, CEMOP, Saint Gobin Recherche. Budget Campus FCT: 136500.00 €.

8. "Development of high stable and high mobility n and p-type TFTs to be used in AM-OLED and ICs: role of interfaces, adequate TCO and high-k dielectric layers", July 2007 to December 2008. Project fully financed by ETRI/LG, Korea. Partners: Cenimat, Cemop (Portugal) and ETRI (Korea). Coordinator: E. Fortunato. Researchers: P. Barquinha, L. Pereira, R. Martins Budget campus FCT 40000.00 €.
9. "Tests and validation of amorphous silicon solar cells" Project financed by Solar Plus (2007/2009). Coordinator: E. Fortunato. Researchers: R. Martins, I. Ferreira, H. Águas. Partners: CENIMAT, CEMOP. Budget Campus FCT: 250000.00 €.
10. "Fabrication and investigation of the electrical stability of amorphous multicomponent metal oxides ZnO based for solar cell applications- SAMMOXIS" project fully financed by Kaneka Corporation, Japan "008/2009). Partners: Cemop, Cenimat (Portugal) and Kaneka Corporation (Japan). Coordinator: R. Martins. Researcher Responsible: L. Pereira. Researchers: I. Ferreira, E. Fortunato. Budget Campus FCT: 52000.00 €.
11. "Investigation of the electrical stability of thin film transistors with active channel layers based on amorphous multicomponent metal oxides – STABOXI". March 2006 to December 2007. Project fully financed by SAMSUNG/SAIT, Korea. Partners: Cenimat and Cemop (Portugal) and SAIT (Korea). Coordinator: E. Fortunato, Researchers: R. Martins, P. Barquinha, L. Pereira. Budget Campus FCT: 56500.00 €.

Overall budget: 1,742,733.78 €

LARGE INFRA STRUCTURE PROJECTS

1. NOVA Advanced Nano Characterization Laboratory (NANOVA) financed by CCDR-LVT Lisboa-01-0246-FEDER-000008, 2018, LISBOA-46-2018-22- Investments in Technological Infrastructure. Coordinator E. Fortunato and R. Martins. Budget 4963540.90 €,
2. CENIMAT re-equipment, Consolidating and complementing processing and characterization tools for new multifunctional materials. Financed by FCT/MCTES, re-equipment program, 2005/2008. Coordinator: E. Fortunato. Researcher Responsible: R. Martins. Researchers: I. Ferreira. Budget CampusFCT: 600000.00 €
3. "O Centro de Investigação em Materiais – CENIMAT", sub-programas I e III da medida C do programa Ciência, Project nº 0073/C/91 (1991/94). Coordinator: R. Martins. Researcher Responsibles: E. Fortunato, I. Ferreira. Budget Campus FCT: 1380000. 00 €
4. "Processes of Microelectronics and Optoelectronics – CEMOP II" Project PEDIP nº 00250 (1991/93). Partners: UNINOVA and FCTUNL. Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 1050000.00 €
5. "Processes of Microelectronics and Optoelectronics Associated to Thin Film Technologies - CEMOP I". Project PEDIP nº 00038 (1989/91). Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Partners: UNINOVA e FCTUNL. Budget Campus FCT: 750000.00 €.
6. Installation of a clean room facility, JNICT, 1989. Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 50000.00 €.

Overall budget: 8,793,540.9 €

PROFESSIONAL FORMATION PROJECTS

1. Professional Formation Courses supported by Medida C, acção 1682, no CEMOP/UNINOVA. Professional formation supported by PEDIP for:
 - ✓ Course 1: Industrial Furnaces: Control and sensors applications (27/6/94 a 24/3/95);

- ✓ Course 2: Formation of technique to work on microelectronics and clean room environments (25/10/93 a 24/01/95).
 - ✓ Course 3: Technology of electro-optical displays (27/6/94 a 24/03/95).
 - ✓ Course 4: Thermal treatments of stainless steels and tribological coatings (27/6/94 a 27/03/95).
Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 525000.00 €.
2. Professional Formation Courses supported by Medida F, acção 1707, no CEMOP/UNINOVA. Professional formation supported by PEDIP for:
- ✓ Course 1: Characterization, Certification and Test techniques applied to materials and devices (27/6/94 a 27/6/96)
 - ✓ Course 2: Technologies used in Microelectronics and Optoelectronics fabrication environments (29/4/93 a 3/11/95).
 - ✓ Course 3: Technologies applied to the production of thin films used as protecting coating layers (27/6/94 a 26/6/96).
 - ✓ Course 4: Methodology of specifications used to design and to fabricate electronic systems (27/6/94 a 27/6/96).
 - ✓ Course 5: Application of Thin Film Technologies to the Optoelectronics and Microelectronics fields (01/ to 12/ 1994)
 - ✓ Course 6: Vacuum technologies
Coordinator: R. Martins. Researchers: E. Fortunato, I. Ferreira. Budget Campus FCT: 725000.00 €.
3. Qualimat Master course, Programa 2, Pedip Formação Profissional, Processo 4605/92/94 e 733/93. Coordinator: P.S. Cunha. Responsibles: R. Martins and D. Botas Partners: LNETI and DCM/FCTUNL. Responsible: R. Martins. Budget Campus FCT: 325000.00 €
4. Materials Engineering Master course, Programa 2, Pedip Formação Profissional, Processo 1607/93. Curso 2, Coordinator: R. Martins. Partner: DCM/FCTUNL. Budget Campus FCT: 745835.00 €

Overall budget: 2,320,835.00 €

RUNNING SCIENTIFIC RESEARCH ACTIVITIES AT CENIMAT

As Laboratório Associado since 2006, the MEO to which are connected the researchers R. Martins (group leader), E. Fortunato, I. Ferreira, H. Águas, L. Pereira, P. Barquinha, M. Mendes, R. Branquinho, A. Pimentel, D. Nunes, J. Pinto, S. Nandy, S. Goswami, S. Panighrai, earn the amount of 1,917,043.95 € (Programático + Básico).

Overall budget obtained in 38 years of activity: 51,059,524.24 €.

Caparica, Portugal, January 2021

Rodrigo Martins