

PROFESSOR RODRIGO MARTINS – PRESIDENT OF THE E-MRS’S SENATE – SPOKE TO PEN ABOUT THE SUCCESS OF THE EVENT AND THE IMPORTANCE OF MATERIALS RESEARCH TO EUROPE’S FUTURE PROSPERITY

Materials future

IN September, the European Materials Research Society (E-MRS) held its annual Fall Meeting in Warsaw, Poland, under the auspices of the European Materials Forum (EMF) which Pan European Networks attended. Here, Pan European Networks speaks to Professor Rodrigo Martins, president of the Senate of the E-MRS, Vice-Chair of Energy Materials Industrial Research Initiative (EMIRI), and member of the Advisory Board of Horizon 2020 in DG Research and Innovation (advanced materials, nanotechnology, biotechnology and manufacturing) about the success of the event and the importance of materials research to Europe’s future prosperity.

How did the E-MRS’s Fall event build on or complement the activities held in Lille earlier in the year?

The E-MRS Fall Meeting was really fantastic. The event saw a record number of attendees (over 1,100) and it complemented the Lille meeting by bringing the discussion of new concepts within the so-called ‘Materials Common House’ to the arena of science and technology. Here, for the first time, we were able to bring the interests of the European scientific community in the field of materials into a wider context by bridging the E-MRS and the EUROMAT-2015 meeting (promoted by FEMS) with common events organised between 19-20 September, involving what we called the ‘Materials Weekend’ (the organisation of six tutorial courses and a summer course with more than 200 attendees) and the Materials for Europe workshop: a high level discussion involving the European

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Commission and the main European stakeholders in the field of materials.

What do you feel are some of the biggest barriers to the wider commercialisation of materials-related research in Europe, and how could they be addressed?

Most of today’s bottlenecks were discussed by the Director General Clara de la Torre during the workshop referred to above. She highlighted the efforts of the Commission to clearly promote the area of innovation by promoting the creation of the European Innovation Council; the establishment of bridges with structural regional funds by promoting the establishment of common project financing platforms between the Horizon 2020 framework programme and such funds; the establishment of inter-regional programmes tackling common interests as a way to enhance markets and to consolidate key areas of development in Europe where materials can be seen as a cross-cutting enabler; the reinforcement of the consolidation of the Materials Common House; and the role of the different key players in the Alliance for Materials, such as the E-MRS, whose role has been reinforced as a key partner to promote advocacy both in Europe and globally.

Concerning the establishment of a new philosophy aiming to promote advanced materials commercialisation, I would like to emphasise the role that the Energy Materials Industrial Research Initiative (EMIRI) will have by acting like a public private partnership (PPP) in a key area of our development.

Do you think the European Commission’s graphene-related activities will help overcome some of these issues?

The creative and innovative areas will certainly help to promote a new era of (knowledge-

Around 2,200 scientists from across Europe gathered in Warsaw in September to debate the key issues connected to materials, including innovation, Horizon 2020 and smart infrastructures.

At the 'Materials for Europe' event – a part of 'Materials Weekend' – on 19 September 2015, more than 70 invited VIP participants discussed with Clara de la Torre, director of the Key Enabling Technologies Directorate in DG Research and Innovation of the European Commission, a strategic view on the latest challenges in the materials field. She focused on the vital role of materials for a highly competitive European industry and explained the Commission's approaches to co-ordinating R&I within the framework of the present and future European research programmes and initiatives.

Other major topics discussed by academics, industrial materials researchers and politicians in the Polish capital were the innovation policy and the role of materials in this context. In particular, the role of the European Innovation Council to complement the works of the European Research Council was highlighted. The need to follow-up and evaluate projects to ensure that technological breakthroughs relevant to European industry are recognised and market uptake is facilitated was also stressed.

Also debated was the need to strengthen the new concept of a Common House of Materials, aimed at discussing and integrating cross-cutting fields where materials are the key requirements for development and progress. Additionally, smart infrastructures and how to potentiate them/link to regional clusters as well as the relationship between Horizon 2020 and the allocated national structural funds, focusing on the various strategies and the policies to be used to gain the maximum benefit, were discussed.

'Materials for Europe' was organised by the European Materials Research Society and the Federation of European Materials Societies, under the umbrella of the European Materials Forum and the Alliance for Materials. The event formed an integral part of a Materials Weekend, which brought together the two largest materials conferences ever held in Central Europe, namely the E-MRS Fall Meeting and the FEMS EUROMAT conference; both of which took place at the Warsaw University of Technology.

The events aimed to strengthen materials science and engineering in Europe and to increase its visibility as well as demonstrate that the development and implementation of new materials is essential to meet the societal needs associated with energy, health, transport and climate change.

In addition to Materials for Europe, the Materials Weekend also included the Warsaw 'Festival of Science' as well as tutorial courses on cutting-edge materials developments and a 'Young Scientists Workshop'.

in Warsaw we organised a graphene-related tutorial which saw the participation of the key players from the Graphene Flagship, including its director, Professor Jari Kinaret – for which we thank the strong contribution of Professor Vincenzo Palermo – which highlighted some areas relevant to this.

In addition, the Commission has also been looking for sustainable areas connected to the environment, such as issues surrounding CO₂, or novel, low cost and fully recycled multifunctional materials to overall serve the comfort of and to promote a better life for our citizens, such as paper electronics.

One issue we have discussed in the past is the need to bridge the gap between different disciplines. What more do you feel needs to be done here, and what assistance can the E-MRS lend (e.g. Innomatnet etc.)?

We have certainly been promoting the issues of multidisciplinary and interdisciplinarity. For this, another key conclusion we can take is that we increasingly need smart multifunctional materials able to serve a plethora of applications, with emphasis on the key pillars of our development: energy, water, food and health. To close this envelope, we also need to look for novel disruptive concepts connected to the design and production of novel materials, where the area of multifunctional modelling will be a clear key strategic area of our future development.

To this end, the E-MRS is heavily involved in promoting the field of materials such as through the STIMULATE project, which is designed to promote the relevancy of materials to the growth of our economy, to the younger generations and European citizens more generally.

As usual I say: "No materials, no party."

Given the success of this year's E-MRS events, what are your hopes for 2016?

I am quite confident of a better and stronger Europe. I am also confident that if we fail to approach research as a way of promoting the conditions required for job creation and the generation of new ideas and concepts – which will go on to be the source of development which will lead Europe to the frontline of science and technology – then we will fail.

Research into materials will be key here, and the E-MRS will thus remain at the forefront so as to continue to serve the extraordinary materials community that we have in Europe.

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based) industrialisation, and this will not only be the case for the graphene platform. Indeed,