

Newsletter - June 2015

Letter from the President

Dear Reader,

The year 2015 started for FEMS with the Executive Committee (EC) Meeting held on January 13 in the offices of IOM3 in London. Three of the four new elected EC members were also present: Eric Le Bourhis, France affiliated with SF2M, Bernie Rickinson, Great Britain, affiliated with IOM3 and Albano Cavaleiro, Portugal affiliated with SPM were present. The fourth new officer, Csaba Balazsi, Hungary and affiliated with MAE, was unable to attend. Two Executive Officers, Michel Bussouge, France (SF2M) and João Mano, Portugal (SPM) completed their terms of office at the end of 2014 and FEMS thanks them warmly for their expertise and engagement during the four years they were active for FEMS. Dr. Roland Langfeld was invited to participate at the meeting as a guest. He is Research Fellow at Schott AG and represented DGM at this meeting. Further guests present were Prof. Lindsay Greer (Univ. of Cambridge), chairman of the Scientific Committee of EUROMAT 2015 and Prof. Wojtek Swieskowski (Warsaw Univ. of Technology), chairman of the Management Committee of EUROMAT 2015. The following important topics were discussed at the meeting:

- FEMS EUROMAT conference to be held in WUT, Warsaw (21.-24. September 2015) and the associated Materials Weekend (19 and 20. September 2015)
- Junior EUROMAT 2016
- EUROMAT 2017 to be held in Thessaloniki, Greece.
- European Activities including the EU Project MATCH and the MATSEEC Expert Group
- FEMS activities to promote exchange with and between member societies

The members of the EC were asked during the meeting to indicate 3 of the 11 key tasks, identified as important to be developed for the future of FEMS, they would be interested in either assuming the lead or being an active contributor. The priority activities which were identified as a result of SWOT analyses carried out by the EC and in conjunction with the member societies (see separate article) are as follows:

1. Meetings with society representatives
2. Topic Conferences (industrial related, organised by a few FEMS societies)
3. New Generation of Junior EUROMAT Conferences
4. EUROMAT Conferences (including awards)
5. European Activities – Programmes/Projects
6. European Activities – ETPs, MatSEEC Follow Up
7. Communication & Dissemination
8. 5 year strategic plan

The EC members who are interested in these topics will group together and start working on the topics on a regular basis with the assistance, where required, of the Secretary and other members of the EC.

It was also decided to have regular FEMS regional meetings to discuss common issues of FEMS and member societies. The first meeting will take place in Frankfurt on May 13, 2015, invited are AIM, BvM, DGM, IOM3 and SF2M. Further meetings in other regions will be planned soon.

FEMS has a very enthusiastic Executive Committee and we are confident we can further improve the FEMS activities over the next few years and continue to make them more attractive for the member societies and their members in Europe.

Yours



Margarethe Hofmann-Antenbrink
President FEMS

Breaking News

The first call for project proposals has been published on 1st June 2015 for the EUREKA Metallurgy Europe Cluster of which FEMS is a member. This cluster aims at developing and industrialising the next-generation of metallic materials and metallurgical manufacturing routes for the 21st century, the submission deadline for project outline proposals being 31 July 2015.

Weblink: <http://bit.ly/1cG2AFp>

EUROMAT 2015, Warsaw



FEMS EUROMAT 2015
European Congress and Exhibition on Advanced Materials and Processes

The scientific programme, is now posted on the conference website (www.euromat2015.fems.org). The call for abstracts has been sent out to about 4000 people and the proposed plenary speakers have all accepted to present at the conference. The conference exhibition is scheduled for the Tuesday and the Wednesday, the plenaries on the Monday and Thursday mornings and the posters each day over lunch, 13:00 – 15:00, in parallel with the session G, which is a session with invited speakers from industry (Siemens, McKinsey, Umicore, Dow Chemical Europe) and research (Foundation for Polish Science, National Centre for Scientific Research “Demokritos”, Swiss-Nex Boston, Boston, Ecole Polytechnique Fédérale de Lausanne, European Space Agency, EMIRI).



We are happy to announce the following Plenary Speakers from Europe, USA and Asia:



Marek Darecki, President, General Director WSK Rzeszów, President, Pratt & Whitney Poland President, Aviation Valley Association “New era of Polish industry – transformation of aerospace”



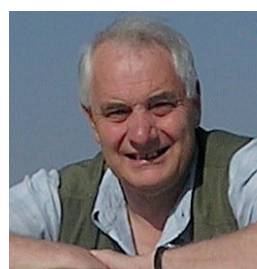
Ke Lu, Director of Shenyang National Laboratory for Materials Science, China, “Can property trade-offs in materials be broken via nanostructuring?”



Antoni Tomsia, Senior Scientist, Lawrence Berkeley National Laboratory, “Bioinspired materials and how they will change our lives”



Patrice Turchi, Distinguished Member of the Technical Staff at Lawrence Livermore National Laboratory President (2015) of The Minerals, Metals and Materials Society (TMS), “What are ‘first-principles’ methodologies good for?”



Alan Windle, Emeritus Professor of Materials Science, University of Cambridge, UK, “Carbon nanotube materials: a new sort of stuff?”

Further Plenary Speakers will include the FEMS Awardees of the European Materials Medal, the FEMS Innovation Prize and the Prize for Materials Science and Engineering, who will be selected from the candidates that have been nominated by the FEMS member societies. The Awards Committee in FEMS consists of Ehrenfried Zschech, Pawel Zieba and Pedro Portella. The term of these EC members will finish end of 2015 so Csaba Balazsi and Eric Le Bourhis will take over the FEMS awards committee from 2016 to 2017.

Materials Weekend

Between FEMS EUROMAT 2015, and the EMRS 2015 Fall Meeting, both to be held in Warsaw, there will be the organisation of a “Materials Weekend” for which FEMS Past President Prof. Ehrenfried Zschech is responsible. This weekend is jointly organised by FEMS and EMRS under the umbrella of the EMF and financially partially supported by the new H2020 CSA Project MATCH.

The Materials Weekend will take place September 19th and 20th, to demonstrate the strength of the European community of materials scientists and engineers within the “Common House of Materials”, an initiative of the Alliance for Materials (A4M). Representatives from industry and academia will discuss with politicians the topic “Materials for Europe”, and how to strengthen the competitiveness of the European industry. Several further activities will attract particularly young scientists: Young scientists from Europe are invited to present their original



scientific results in a 2-days workshop, and materials scientists with high reputation in the community will provide six tutorials. The “Festival of Science”, already a tradition for the Warsaw community, will be officially opened at Warsaw University of Technology on September 19th. More information : <http://materialsweekend.pl>.

Junior EUROMAT 2016

The last Junior EUROMAT (JE) was held at the new SwissTech conference centre in Lausanne in July 2014 (photo) this was the 12th JE to be organized by FEMS. Plenaries were organized each day with renowned scientists, there were 319 delegates present and their posters covered all areas of Materials Science. Candidates for the two FEMS lecturer awards presented their fields of research. The two winners, Christian Grenier (Karlsruhe) and Henry Proudhon (Mines Paristech) were elected by the delegates' votes. This truly unique event providing young researchers (PhD students and post-docs) the opportunity of a truly international platform for networking and by this to increase their visibility in the scientific community.

Nevertheless it was decided to improve the conference for 2016 in view of the participation from the countries with large FEMS member societies which were underrepresented such as the UK, France and Italy. The organisation of the presentation sessions, working/discussion and poster sessions shall be structured differently and also more senior scientists should be present to give young researchers more opportunity for exchanging



with experienced people. DGM has expressed interest in continuing to organize the JE conferences in the future. The creation of a scientific committee comprising junior professors and young managers from industry was recommended. FEMS will continue to organize the call for tenders for JE2016 and JE2018. This will include determining the venue for the conferences (not necessarily Lausanne). Within the EC several members expressed their aim to actively support the organisation of the next JE in 2016.



EUROMAT 2017

The decision that HMS and HSSTCM will organise EUROMAT 2017 in Thessaloniki was taken during the Lausanne EC and GA meetings. The conference in Thessaloniki will take place the third week in September. 2017 will be an important year for FEMS as we will be celebrating 30 years of activity and this will feature as part of the EUROMAT 2017 events and other activities planned throughout the year.

European Activities



MatSEEC
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The European Science Foundation expert committee MatSEEC (Materials Science and Engineering Expert Committee) organised a meeting in Lisbon in October 2014 to discuss the future of MatSEEC, since the current term of the committee was completed at the end of 2014. The organisation of a high level meeting has been organised on April 16/17 together with a broad range of stakeholders from the MSE field, in collaboration with FEMS, EuMat, E-MRS, MatVal and relevant research organisations. During this event, new initiatives including a possible mission for a post MatSEEC consortium was discussed. The main conclusion of the steering committee and participants present at that High Level Workshop held in Brussels was that a future MatSEEC is still needed at European level and should be implemented. A further meeting will take place the next months to define the next steps. MatSEEC website: <http://www.esf.org/hosting-experts/expert-boards-and-committees/materials-science-and-engineering.html>



Another action important for FEMS is that of Metallurgy Europe, a new major EUREKA Project (<http://metallurgy-europe.eu>) which was a major outcome of the MATSEEC activities. Dr. David Jarvis, (European Space Agency, ESA), has built up a EUREKA Programme which will soon start with calls for projects. FEMS is involved in the organisation in view of dissemination and exploitation. (see <http://www.eurekanetwork.org/metallurgy-europe/about>)



FEMS is also partner in a new H2020 CSA project MATCH. The project started in January 2015 with 18 Partners, will have a duration of 30 months and a total budget of 1,999,100.00 Euros. The full title of the project is “The Alliance for Materials way to the creation of the MATerials Common House – MATCH”. The project’s main objectives are to:

1. Integrate the diversity of ideas in Materials developments across the main Materials R&D&I organisations to create synergy and an integrated Materials R&D programme for Europe;
2. Create the conditions for a genuine collaborative and coordinating environment among different stakeholders for Horizon 2020 Materials related initiatives and policies;
3. Identify the key research and technology developments where materials are required to meet the challenges of the 21st century across all major sectors whose innovation strategies rely on availability of novel advanced functional and structural materials;
4. Identify the cross-cutting materials research and innovation support infrastructure needed to enable European industries to be globally competitive;
5. Raise public awareness of the socio-economic benefits of emerging advanced materials technologies, particularly those addressing sustainable technologies and processes in the various modern technologies which are useful to build up environmentally friendly products. This will include the identification of alternatives to current materials security issues (need of nanotechnologies and medium/long term thinking on materials substitution). Finally this project will pull together all the key materials technologies and supporting infrastructure to advise the Commission about the priorities for Horizon 2020.

Advanced Training Course “ Nano-scale Materials ” in Dresden

A new European Advanced Training Courses “ Nano-scale Materials - Characterization Techniques and Applications ” will be held in Dresden (Germany) from June 9 to June 11, 2015. This training course, organized by the German Society of Materials Science (DGM) with support of FEMS and in collaboration with the Dresden Fraunhofer Cluster Nanoanalysis (DFCNA), will contain 9 lectures given by experts from industry and science. Based on the positive feedback of the course participants, a practical lab training in small groups will be offered again. The course will

provide knowledge in the field of high resolution analytical techniques for characterization of nano-scale materials and structures. Practical training is offered on most modern tools, e.g. at the FEI SEM/FIB Dual-beam system Helios Nanolab 660 and at the Zeiss SEM Gemini 550 tool, but also on X-ray tomography systems and scanning probe microscopes. The participants will have the opportunity to visit the analytical labs at Fraunhofer IKTS Dresden and TU Dresden. More information: <http://dgm.de/Fortbildung>.

FEMS SWOT analysis report

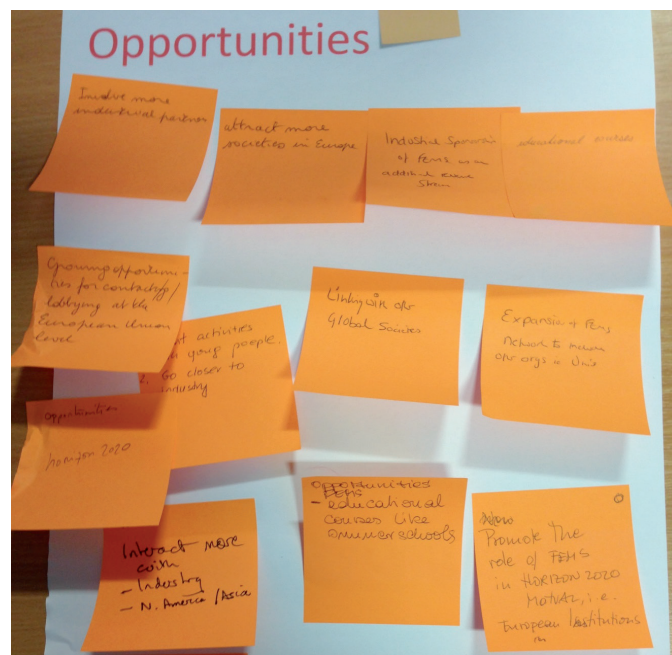
As part of the drive to engage more directly with member societies, the FEMS Management Committee (MC) felt it was important to reflect on FEMS from both an internal and external perspective. To achieve this, the EC (Executive Committee) initially undertook a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis during one of their meetings. This was subsequently followed by SWOT reports being sent to FEMS by a number of our member societies for which we are extremely grateful to. Some of the most important and relevant results from the SWOT will be discussed in this newsletter, a more detailed report can be requested from the FEMS Secretary (secretary@fems.org)

Strengths

Materials are now and in the future an essential component in the development and optimisation of products and processes. As one of the suppliers of materials knowledge, FEMS is an innovation stimulating and knowledge disseminating organisation. Our international relations are shown, amongst others, at the EUROMAT Conference series and also by the European projects. “Strength in Unity” is important in the future, which means that instead of many single voices FEMS as voice of its member societies may achieve greater exposure and have greater influence. First success stories can be communicated by common-interest actions (e.g. EUROMAT, MATCH, MATSEEC etc) If FEMS looks on their member societies, we can state that the support of well-established and active national societies is available (see active Executive Committee members), strong links to Representatives of 28 national societies with ~20,000 members have been established and that the institutional weight of FEMS helps local activities of Member Societies. The EUROMAT Conference is a well-established, successful conference and a recognised brand and Junior EUROMAT is as well. The FEMS Newsletter & Society Newsletter is the third and newest useful activity and brand of FEMS.

FEMS is not closing its eyes in view of weaknesses. We have to improve several projects to bring FEMS into the future as things evolve after nearly 30 years since the creation of FEMS. In 1987 conferences were the “market place” to meet and EUROMAT is still such a place. However FEMS has to strengthen its visibility outside our materials societies community. We have initiated communications with the industry related European Technology Platforms (ETP's).

By this we come to opportunities that FEMS has to influence the European materials agenda in the long term as an umbrella organisation speaking with a Common voice. We may pave the road for establishing a link between scientific federations of Europe and other continents since more and more participants at EUROMAT are from abroad, we are the network of international experts. In our FEMS business strategy we took up the wish of members to organise a “Chief Exec day” / “Societies



Day” with the key representatives of the national societies, so we start with regional meetings at which we bring together about 5 societies to discuss their recommendations. A page in English on the FEMS Webpage, enables information of a society, often in their own language, to be available for the whole community. We will take experiences from larger societies and share them with smaller ones. However there are also some threats, that we have to take into account. Materials lack visibility in the technology chain where down-stream stages get more attention as do the end products.

The Materials Sector in the different countries is generally not acknowledged regarding its importance in the Economy (local, European, Global) and therefore is often ignored when government policies are defined. FEMS on the other hand is still seen as too academic and therefore does not yet represent all the stakeholders which should include industrialists. With limited funds and therefore limited scope to do extra work our members and partners, are encouraged to actively support us. FEMS has already made good progress in addressing a number of the points highlighted above and during the EC meeting in London in January this year we were able to group the majority of the items raised during the SWOT analysis into key aspects to be addressed by the EC going forward in the future (as listed in the President's letter). Listening to our member societies is key to our survival in the future and the SWOT analysis has been a very useful tool for FEMS in this regard. The Management & Executive Committees will ensure that in the future, we build on and increase the strengths, address the weaknesses, focus and look to the opportunities, and be mindful of the current threats to ensure a bright future for FEMS beyond 2015 as we approach our 4th decade of operation.

Dr Brett C Suddell
Vice President, FEMS

1st FEMS Regional Meeting, May 13, 2015, held at the DGM head office, Frankfurt

FEMS Management Committee (Dr. Margarethe Hofmann, President, and MatSearch, Switzerland, Dr. Brett Suddell, Vice President, and ASTUTE Project Manager Swansea University, and Director of BioBased Solutions Ltd, UK, Prof. Ludo Froyen, Treasurer, KU Leuven, Belgium, Dr. Hugh Dunlop, Executive Secretary, France) met with representatives of BvM: Dr. Eddy Brinkmann, President of the Netherlands Society for Materials Science (Bond voor Materialenkennis, BvM), Betase B.V, Dutch Ceramic Society, The Netherlands, IOM3: Dr. Bernie Rickinson, Chief Executive of IOM3, UK; SF2M: Prof. Eric Le Bourhis, member of the Management and Executive Board of SF2M, Université de Poitiers, France and Ms. Beate Toelle Kortmann Management Assistant of DGM at their head office. Important issues to discuss were the member relationship, the EUROMAT Conferences,

FEMS branding and FEMS visibility in the European Community. The meeting was characterized by a very open and fruitful discussion and there is a firm intention to continue with these face-to-face meetings. It was clearly stated that the FEMS brand is an important marketing and networking instrument which should be used in a more active way e.g. for conferences of member societies and also on their webpages. It is also important to encourage member societies to support FEMS in a "bottom-up" approach which guarantees that the rights of societies are not limited and information about all kinds of actions (events etc.) are exchanged early enough. FEMS will celebrate its 30th anniversary in 2017, during EUROMAT 2017 which will take place in Thessaloniki, Greece. We are looking forward to welcoming our 30th society member at this date. We warmly thank DGM for hosting this meeting.



From left to right : Eddy Brinkmann (BvM President), Brett Suddell (FEMS Vice President), Ludo Froyen (FEMS Treasurer), Eric Le Bourhis (SF2M board member and FEMS EC member), Margarethe Hofmann (FEMS President), Bernie Rickinson (CEO IOM3 and FEMS EC member), Hugh Dunlop (FEMS Executive Secretary) and Beate Toelle-Kortmann (Management Assistant, DGM).

FEMS newsletter

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Please send comments and contributions to secretary@fems.org

FEMS Member Societies :

Austria: Austrian Society for Metallurgy and Materials (ASMET)

Belgium: Benelux Métallurgie (BM)

Czech Republic: Czech Society for New Materials and Technologies (CSNMT)

Czech Republic: Metal Science Society of the Czech Republic (MSS)

Estonia: Estonian Material Science Society (EMSS)

France: Société Française de Métallurgie et de Matériaux (SF2M)

Germany: Deutsche Gesellschaft für Materialkunde (DGM)

Germany: Deutscher Verband für Materialforschung und -prüfung (DVM)

Greece: The Hellenic Metallurgical Society (HMS)

Greece: Hellenic Society for the Science and Technology of Condensed Matter (HSSTCM)

Hungary: Hungarian Society of Materials Science (MAE, Magyar Anyagtudományi Egyesület)

Italy: Associazione Italiana di Metallurgia (AIM)

Italy: Associazione Italiana d'Ingegneria dei Materiali (AIMAT)

Italy: Associazione Italiana Compositi & A ni (Assocompositi)

Latvia: Latvian Materials Research Society (LMRS)

Lithuania: Lithuanian Materials Research Society (LTMRs)

Netherlands: Bond voor Materialenkennis (BvM)

Norway: Norsk Metallurgisk Selskap (NMS)

Poland: Polskie Towarzystwo Materialoznawcze (PTM)

Portugal: Sociedade Portuguesa de Materiais (SPM)

Serbia: Materials research Society of Serbia (Serbia-MRS)

Slovak Republic: Society for New Materials and Technologies in Slovakia (SNMTS)

Slovenia: Slovensko Društvo za Materiale (SDM)

Spain: Sociedad Española de Materiales (SOCIEMAT)

Sweden: Svenska Föreningen för Materialteknik (SFMT)

Switzerland: Schweizerischer Verband für Materialwissenschaft und Technologie (SVMT)

Ukraine: The Ukrainian Materials Research Society (U-MRS)

United Kingdom: Institute of Materials, Minerals and Mining (IOM3)

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