

NEWSLETTER - January 2012

Editorial of FEMS President Ehrenfried Zschech

Towards a strong European materials community



Prof. Dr. Ehrenfried Zschech

At the beginning of my two-year term as president of FEMS, I would like to express my thoughts on some of the challenges facing me and the FEMS Executive Committee, and I would like to derive major tasks ahead of us. Within the next two years, I will focus on the following three key topics: (1) Increase visibility of the key role of materials in Europe,

in collaboration with other societies like E-MRS as well as committees and representatives of the European Commission, (2) Improvement in the continuity of the coordination of materials-related topics in the periods between the EUROMAT conferences, with the particular goal to strengthen European networks between universities, institutes and industry and to extend the knowledge transfer using new forms of collaboration, (3) Formation of a strong Executive Committee team of leading experts from Materials Science and Engineering and close collaboration with the national member societies.

“Advanced Materials” is one of the Key Enabling Technologies (KETs) which are essential for Europe’s innovative strength and competitiveness, and for the development and roll-out of sustainable products and services. Materials are absolutely necessary for virtually every initiative of the KETs, materials research and development is a competitive technological enabler! Therefore, the so-called European dilemma, i. e. the region’s dif-

ficulties in translating its scientific results into marketable products and economic benefit (Only 15% of the world’s high technology products are produced in Europe!), provides a challenge particularly to our community of materials scientists and engineers. To cross this internationally recognised „valley of death“, the following three pillars have to be strengthened in particular: (1) the pillar focused on technological research, (2) the product demonstration pillar focused on product development, and (3) the production pillar focused on world-class, advanced manufacturing. To provide an essential contribution to the three pillar bridge model, with the particular goal to shorten the cycle from knowledge generation to marketable products and services, FEMS will trigger the dialogue between representatives from academia, industry and politics, and we will propose novel models for collaboration.

With our challenging goals in mind, we will rely on the ideas and the active contributions of all members of our community of materials scientists and engineers in Europe, the close collaboration and targeted interactions between FEMS, the national member societies and other European societies and organizations. We need an atmosphere of inter-society partnership that brings materials researchers together. I am looking forward to a dynamic, proactive dialogue within our European community of materials scientists and engineers. ■

Next FEMS newsletter (May 2012)

- Horizon 2020 and related FEMS activities
- New EU calls in the fields of MSE
- Reports and statements of FEMS Executive Officers
- Preparation of EUROMAT 2013

The major event for young materials scientists and engineers: JUNIOR EUROMAT 2012: Lausanne, Switzerland, 23 – 27 July 2012

Over the past twenty years FEMS has become well known for JUNIOR EUROMAT. This biennial conference for young materials scientists offers attractive opportunities to young materials scientists, constituting a wide-ranging tool for the integration in materials science and engineering. The symposium is primarily a meeting point for Master's and PhD students, however, there is no limitation on the „categories“ and ages of participants. Professors and industrial representatives are welcome. The symposium is intended to reflect the informal atmosphere of a summer school, held in Lausanne on the picturesque shores of Lake Geneva. JUNIOR EUROMAT will again be organised as a poster



conference, i. e. all the contributions will be on display as posters. But the poster authors are also requested to introduce their poster orally in one of the lecture halls (3 minutes each) making use of up to three illustrations. Subsequently, the authors will be available for further discussion in front of the poster panels. A special session at JUNIOR EUROMAT will give candidates for the FEMS Lecturer Awards the opportunity to present their lectures. On the basis of these presentations the two FEMS Lecturers for 2013 will be selected. ■

For further details please visit the conference website: <http://www.dgm.de/dgm/junior-euromat>



FEMS News

EUROMAT 2011 Montpellier, France, September 12 - 15, 2011

EUROMAT 2011 was a success, with 2150 participants at the biannual European meeting of materials scientists and engineers. About 2800 contributions were presented in 20 parallel oral sessions and in poster sessions. For further information please visit the conference website: <http://euromat2011.fems.eu>

Meeting of the FEMS Executive Committee Dresden, Germany, January 13, 2012

The FEMS Executive Committee met in Dresden in January 2012. Major topics on the agenda were European activities like Horizon 2020 (we will report in Newsletter No. 02/2012) and the upcoming Aarhus conference as well as FEMS communication and interaction with member societies. Ehrenfried Zschech acknowledged the high commitment of members of the FEMS Executive committee whose terms ended in 2011: Bill Clyne, George Kaptay, Maurizio Vedani, Jean-Marie Welter.

Meeting of the FEMS and E-MRS Presidents Brussels, Belgium, January 20, 2012

Ehrenfried Zschech, President of FEMS, and Rodrigo Martinez, President of E-MRS, met in Brussels to align the strategies of both societies and to prepare a STOA workshop to address the important role of materials for Europe's innovative strength and competitiveness to the European Parliament.



FEMS Executive Committee, Dresden, January 2012

Winner of the European Materials Medal for 2011: Günter Gottstein

The winner of the FEMS European Materials Medal 2011 was Professor Dr. rer. nat. Dr. h. c. Günter Gottstein, Chair of Physical Metallurgy and Metal Physics at RWTH Aachen, Germany. Established in 1993, this gold medal is awarded every other year in recognition of truly outstanding contributions to the field of Materials Science and Engineering.

Günter Gottstein is an outstanding materials scientist with high international reputation, who combines excellent science, outstanding teaching abilities, scientific and social leadership as well as engagement in the European materials science scene. He was awarded with the gold medal in recognition of his pioneering contributions to metal physics and metallurgy, particularly linking microstructure and materials properties of materials. Günter Gottstein has established theoretical models and computer simulations which describe mi-

crostructure evolution in materials quantitatively. This development allows a targeted materials development and the transfer of his scientific results into practical applications even for industrial purpose.



Prof. Dr. Günter Gottstein

The European Materials Medal was presented to Günter Gottstein during the EUROMAT 2011 conference, at which he gave a Plenary Lecture entitled "Physical Metallurgy meets Industry: Do Physical Fundamentals Serve Industrial Materials Processing?". ■

FEMS Awards 2011

FEMS European Materials Medal

Günter Gottstein, RWTH Aachen, Germany in recognition of his pioneering contributions to metal physics and metallurgy for the understanding of materials properties

FEMS Materials Science and Technology Prize

Olivier Guillon, Technische Universität, Darmstadt, Germany in recognition of his significant contributions to the development of PZT ceramics, in particular sintering and phase transformations

FEMS Materials Innovation Prize

Michael Graetzel, EPFL, Lausanne, Switzerland in recognition of his pioneering research on electron transfer reactions in mesoscopic materials and their application in solar energy conversion systems, optoelectronic devices and lithium ion batteries

FEMS Lecturer Awards for Excellence in MSE

Xavier Sauvage, Université de Rouen, France in recognition of his important contributions to materials science and engineering, applying atom probe tomography for understanding deformation induced atomic transport, interdiffusion and phase transformations

Joanna Michalska, University of Technology Katowice, Poland in recognition of her important contributions to materials science in the field of corrosion of superalloys, steels, titanium and magnesium alloys

For further details please visit the FEMS Awards website: <http://www.fems.org/awards>

FEMS communication tools

The relaunch of the FEMS web page is planned for the 2nd quarter of 2012. The goal is to publish 3 FEMS newsletters per year (January, May, September). All member societies are asked for contributions and information which should be published. Please send all information to hugh.dunlop@constellium.com ■

FEMS Executive Committee

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Upcoming conferences

JUNIOR EUROMAT 2012

Lausanne, Switzerland, July 23 - 27, 2012
<http://www.dgm.de/dgm/junior-euromat/>

YUCOMAT 2012

Montenegro, Serbia, September 3 - 7, 2012
http://www.mrs-serbia.org.rs/conference_program2012.html

NANOSMAT 2012

Prague, Czech Republic, September 18 - 21, 2012
<http://www.nanosmat-conference.com/>

EUROMAT 2013

Sevilla, Spain, September 8 - 12, 2013
<http://euromat2013.fems.eu>

FEMS newsletter

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Please send comments and contributions to hugh.dunlop@constellium.com

FEMS Member Societies

Austria: Austrian Society for Metallurgy and Materials (ASMET)

Belgium: Benelux Métallurgie

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

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

Hungary: Országos Magyar Bányászati és Kohászati Egyesület (OMBKE)

Italy: Associazione Italiana di Metallurgia (AIM)

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

Italy: Associazione Italiana Compositi & Affini (Assocompositi)

Latvia: Latvian Materials Research Society (LMRS)

Lithuania: Lithuanian Materials Research Society (LMRS)

Netherlands: Bond voor Materialenkennis (BvM)

Norway: Norsk Metallurgisk Selskap (NMS)

Poland: Polskie Towarzystwo Materialoznawcze

Portugal: Sociedade Portuguesa de Materiais (SPM)

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

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

Slovenia: Slovensko Drustvo 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)