

NEWSLETTER - December 2013

EUROMAT 2013 in Seville, Spain: Meeting Point 2013 for Europe's Materials Scientists

This year's FEMS conference EUROMAT opened its doors in Seville, Spain, from the 8th to the 13th of September. The largest and most important meeting of our entire European materials science and engineering community was organized in close collaboration and targeted interaction between FEMS and two national member societies, the Spanish and Portuguese Materials Societies (SOCIEMAT and SPM). EUROMAT 2013 was a success: It was a well organized conference with an excellent scientific program, characterized by a dynamic, proactive dialogue within the European community between materials scientists and engineers, from students to senior scientists. Overall, more than 1800 participants from 48 countries were present at EUROMAT 2013.

The conference covered practically the whole spectrum of materials and applications: Latest advances in Structural Materials, Functional Materials and Materials for Energy and Environment or Biomaterials were some of the main topic areas. In addition, great efforts were made to bridge industry and academia. Particular emphasis was given to young scientists and engineers with sessions like Career Development, Materials Education and Technology Transfer. A new form of discussion platform, the side events, scheduled during

the lunch break, were well received by the participants. Highlight was the talk "Horizon 2020 - Materials, a Key Driver of Innovation" given by Herbert von Bose, Director Industrial Technologies at DG Research and Innovation of the European Commission.

The Executive Committee of the Federation of European Materials Societies (FEMS), the Scientific and Managing Committees of EUROMAT 2013 as well as the organizing Spanish and Portuguese Materials Societies (SOCIEMAT and SPM) thank all the participants for their active contributions to EUROMAT 2013. We are already looking forward to EUROMAT 2015 in Warsaw, and we hope to continue the success of this year's event! <http://www.euromat2013.fems.eu>

Ehrenfried Zschech, FEMS President
Frank Muecklich, Scientific Chair of EUROMAT 2013
Paloma Fernandez, Head of the Management Committee of EUROMAT 2013

FEMS President at YOUTUBE:

<http://www.youtube.com/watch?v=iLwC5xX3CWQ>

Interview with FEMS President

<http://goo.gl/AeUeT8>



Close collaboration of major stakeholders of the materials community in Europe

In recent years the evolution of the European Commission policy on Materials R&D has created the right conditions for a convergence of activities and synergies between major stakeholders of the Materials community in Europe. Among these, the collaboration between FEMS, E-MRS and EuMaT within the Alliance of Materials (A4M) and beyond it, has been, and still is, definitely one of the best practices and success examples. With the aim of assuring the conditions for a continuation

and development of what has already been achieved by EuMaT and A4M, in view of an important event such as the launch of Horizon 2020 Programme, Ehrenfried Zschech was invited as representative of FEMS to join the Management Board of Alliance for Materials, A4M, and be a member of the Steering Committee of European Technology Platform for Advanced Engineering Materials and Technologies, EuMaT. ■

FEMS expert meeting to support the Metallurgy Roadmap Europe

The FEMS-organized expert meeting “Precipitation Hardening” was held in Paris on November 18, 2013, with the goal to address future requirements in this particular field of metallurgy. The motivation for this meeting originated from the prominent role of precipitation-hardened alloys for the following needs: i) Reduction of energy consumption, ii) Replacement of elements that are critically available for Europe or expensive, and iii) Optimization of processing routes and resulting microstructures for targeted properties. The expert team identified the requirements of industry for research, development and innovation in the field of precipitation hardening and prioritized topics as a potential input to the “Metallurgy Roadmap Europe”. With a resulting white paper “Precipitation-hardened alloys and their use in advanced products” which was provided to EuMaT, FEMS is supporting particularly the Metallurgy Europe initiative and the respective roadmap of the European Commission, as input for the Horizon 2020 program. The particular information that the expert team is



A group of experts in the field of metallurgy met in Paris in November (from left to right): Zygmunt Wozny, Pawel Zieba, Ehrenfried Zschech, Knuth Marthinsen, Olivier Hardouin Duparc, Witold Malec, Yves Bievenu, Alphonse Finel, Christophe Sigli

targeting on in this document is information related to the end user needs on parts that will necessitate metallurgical processing to achieve future market requests. In addition, the expert team developed the proposal to organize an annual European PhD seminar in the field of precipitation hardening. ■

FEMS is active partner in MatVal project

The Value Chain concept in the European Project MatVal is regarded as the key element driving synergistic benefits through a common path which integrates players, resources and strategies starting from the fundamental aspects of materials science up to the industrial system that produces and/or transforms materials into valuable products. The Roma Conference on 7th and 8th February 2012 was the starting point introducing the goals and methodologies of the project to the

relevant interested parties, and at EUROMAT 2013 one of the sessions was dedicated to the MatVal project. In 2014, the main objective for the 2nd half of the project will be to deliver an Innovation Action Plan including Policy Recommendations, and to start some first pilot implementations of the most promising stakeholder actions. More information is available at the MatVal web page: <http://www.matval.eu>

FEMS European Materials Medal in 2013

The FEMS European Materials Medal is the most prestigious award of our association. It is awarded in recognition of outstanding contributions to the field of materials science and engineering. Candidates for the award may be nominated by the national member societies and by the executive committee of FEMS.

The first recipient of this award was Michael F. Ashby, emeritus professor in the Department of Engineering at the University of Cambridge, a world-renowned authority on engineering materials and author of several best-selling textbooks. This year, Michael Rappaz, full professor and head of the Computational Materials Laboratory at Ecole Polytechnique Federale de Lausanne (EPFL), received this award. He inspired the participants of EUROMAT 2013 in Seville with an enthusiastic plenary talk about fundamentals of materials science, covering macroscopic and microscopic aspects of metallic materials. ■



PhD students met in Crakow, Poland

On October 17th and 18th, 2013, the 2nd Joint PhD Seminar was held in Crakow (Poland). This follow-up meeting, after a successful event in Dresden 2012, was organised by the AGH University of Science and Technology and the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences in Crakow with support of FEMS. The aim of the Seminar was to provide PhD students with the opportunity to exchange experience and knowledge in their fields of expertise. During the meeting young scientists presented their new original results in scientific talks or posters. The topics included a wide variety of engineering materials, materials processing and advanced methods for materials characterization. Nearly 50 scientists from several European countries who attended this workshop provided a very positive feedback. Among the scientists

were the ENano team, an ESF founded young researchers group from Technical University Dresden (Germany), groups of PhD students from the Faculty of Materials Science and Ceramics and from the Faculty of Metals Engineering and Industrial Computer Science of AGH Crakow, as well as representatives from the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences.

In the common opinion of the President of FEMS, Ehrenfried Zschech, and the Dean of Faculty of Materials Science and Ceramics, Jerzy Lis, there is strong need to continue such type of meetings of young scientists and spreading-out them across Europe. Therefore, FEMS will support further European PhD Seminars and European Advanced Training Courses in 2014 ■

Honorary FEMS Membership for Bill Clyne

The very prestigious honorary membership of FEMS was provided to Bill Clyne, Professorial Fellow in the Mechanics of Materials at the University of Cambridge. This honorary membership was awarded in recognition of his truly outstanding contributions to the field of Materials Science and Engineering and to his commitment and activities to strengthen the European materials community, particularly within FEMS.

Bill Clyne 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 got his PhD from University of Cambridge in 1976. Bill Clyne held University posts in Brazil, Switzerland and Surrey, before returning to Cambridge in 1985 and being appointed to a personal chair in 1999.

Bill Clyne served in several positions in the FEMS Executive Committee from 2004 to 2011, being President of FEMS 2008/2009. He was Scientific Chair of EUROMAT 1991 in Cambridge, co-chair of EUROMAT 2005 in Prague and of EUROMAT 2007 in Nuremberg, and four times Topic Coordinator at EUROMAT conferences. ■

European Training Course in Dresden, Germany

In December 2013, the second European Advanced Training Course “Nano-scale Materials and Advanced Characterization Techniques” was held in Dresden (Germany). This new form of training courses, organized by the German Society of Materials Science (DGM) with support of the Federation of European Materials Societies (FEMS) and in collaboration with the Dresden Fraunhofer Cluster Nanoanalysis (DFCNA), contained 13 lectures given by experts from industry and science. The course provided knowledge in the field of high resolution analytical techniques for characterization

of nano-scale materials and structures. The participants had the opportunity to visit the analytical labs at Fraunhofer IZFP and IKTS.

Encouraged by the success of the first FEMS-supported European Advanced Training Courses (we reported in FEMS newsletters 03/2012 and 02/2013), FEMS will continue to organize such courses jointly with national materials societies. Suggestions for topics and initiatives for organizing such courses are welcome! ■

Invitation: JUNIOR EUROMAT 2014 in Lausanne

The FEMS Executive Committee would like to draw your attention to the conference JUNIOR EUROMAT 2014 - The Major Event for Young Materials Scientists which takes place from 21 to 25 July 2014 in Lausanne, Switzerland. <http://junior-euromat.fems.org/>

The conference is an international conference in a pleasant and familiar atmosphere. Young scientists present their thesis or first results of their PhD or master's degree in a short presentation accompanied by a poster. They will also meet top-class scientists who will give plenary talks and inform about their field of research.

JUNIOR EUROMAT is a great event to socialize with other young researchers in the field of materials science and engineering. The deadline for the submission of a poster abstract is 3 March 2014.



Submit your abstract here:

<http://www.dgm.de/dgm/junior-euromat/php/submission.php>

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

United Kingdom: Institute of Materials, Minerals and Mining (IoM3)

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