

# MaterialsEuroRoads

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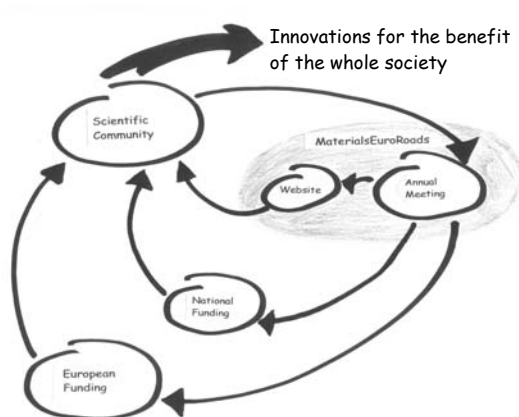
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## MaterialsEuroRoads Newsletter Issue 1

December 2007

### MaterialsEuroRoads: Networking is the key word

Various strategic materials actions exist in Europe but they are often felt to be fragmented. A networking platform "MaterialsEuroRoads" was set up in March 2007 in Paris to coordinate and accelerate efforts in this



area and to strengthen Europe's position in materials technology and research. The adjoining diagram illustrates how MaterialsEuroRoads functions in conjunction with research and funding institutions.

This first newsletter is designed to inform you about the activities in the Materials Foresight Community and the actions carried out within MaterialsEuroRoads. We hope that you will find it useful in your everyday work!

### Next Annual Meeting of MaterialsEuroRoads scheduled for 20th May 2008 in London

It is our pleasure to announce that the MaterialsEuroRoads 2008 Conference will take place on 20th May 2008 at the Institute of Materials, Minerals and Mining (IOM3), 1 Carlton House Terrace, London. The agenda will include contributions from Martyn Chamberlain (DG Research), Anthony R. Flambard (ERA-NET "ACENET"), Jenny Melia (ERA-NET "Matera") and Bernie Rickinson (Materials KTN). For further details about the event please contact: [Stuart.preston@iom3.org](mailto:Stuart.preston@iom3.org). For further details about registration which will be available on-line, please contact: [Eileen.ellis@iom3.org](mailto:Eileen.ellis@iom3.org)

The MaterialsEuroRoads Meeting is shortly after the Materials Congress 2008, which will take place between 13th -15th May 2008 in Grantham, Lincolnshire ([www.iom3.com/news/congress08.htm](http://www.iom3.com/news/congress08.htm)).

### MaterialsEuroRoads in a Nutshell

- A Forum for key European players in the fields of foresight and the forecasting of developments in Materials Technology
- An annual meeting facilitates the dialogue between materials foresight activities, funding agencies and ministries in order to shape tomorrow's world by identifying materials topics of high priority.
- Currently involves 33 participants from 6 countries from industry and trade organisations, research institutes, universities, ministries and funding organisations
- First (constitutional) meeting in March 2007 in Paris



## On-going Foresight Activities

The materials foresight community is wide-spread and in order to gain an overview of activities in this field, we will periodically report about key on-going foresight activities or institutions working in the fields of foresight and forecast.

In this issue, we begin with the **European Foresight Monitoring Network (EFMN)**.

The European Foresight Monitoring Network monitors ongoing and emerging foresight activities and disseminates information about these activities to a network of policy researchers and foresight practitioners. It thus supports the work of policy professionals at regional and national levels.

The EFMN is part of the European Foresight Knowledge Sharing Platform and monitors and maps foresight activities all over the world. Upto April 2006 the EFMN had already identified and mapped more than 1000 foresight initiatives in countries as varied as the EU member states, Japan, China and Korea, the USA, Canada and Brazil.

The EFMN publishes approximately 40 briefs a year on topics of interest to foresight practitioners and policy professionals. An overview of the available briefs and more information on the EFMN and its activities is available from the EFMN Web site: [www.efmn.info](http://www.efmn.info).

The foresight brief No. 115 "SMART Perspectives of European Materials Research" is a contribution of the Foresight Action for Knowledge-Based Multifunctional Materials Technology SMART, from which MaterialsEuroRoads was developed. The brief focus on three socio-economic areas where new materials will have a market effect: energy, safety and security and better life including health-care.

## First World Materials Summit took place on 4th – 5th October 2007 in Lisbon, Portugal

Top materials scientists from around the world met under the auspices of the Portuguese European Presidency in Lisbon on 4th - 5th October to tackle the problem of climate change. Delegates discussed how best to reduce CO<sub>2</sub> emissions during energy production and use by the introduction of new and innovative materials and processes. Possible strategies for low-emission energy technologies including solar energy, wind power, biofuels, hydrogen fuel cells and nuclear fission and fusion were examined. Each of these technologies requires new and improved materials. The outcome of this summit included a paper summarising its conclusions (which will soon be available via our Web site) and an agreement to set up a new global networking initiative "CORME" (Coordination of Research on Materials for Energy) to coordinate and accelerate efforts in materials research for energy applications. This will be organised by the International Union of Materials Research Societies (IUMRS).

The World Materials Summit states that advanced materials, materials research and innovation are probably the most important elements needed to develop the required new technologies to provide a clean reliable energy supply with a significant reduction in CO<sub>2</sub> emissions. In the considerations to confirm this strategy, some statements focus on materials technologies:



- (1) Present technologies do not enable fossil fuels to be eliminated.  
The optimum way to overcome this problem is the rapid development of new materials and technologies and to ensure their application to achieve reduced energy consumption in all commercial and domestic sectors.
- (2) Advanced materials can contribute to the reduction of CO<sub>2</sub> emissions.  
New concepts are required to increase energy efficiency, to reduce the emission of pollutants to the environment and to monitor the causes of environmental destruction. In all these processes materials play the fundamental role.
- (3) Fundamental research is needed for innovative new technologies.  
In order to get truly innovative novel technologies, 'breakthroughs', a paradigm-shift is necessary. The possible use of CO<sub>2</sub> as a resource, rather than it being a problem, by recycling it into a C-H compound would completely change the current situation.
- (4) The present technologies cannot generate hydrogen without CO<sub>2</sub> emission.  
A technologically satisfactory method for the storage of hydrogen has still not been achieved for mass production and new concepts and materials are drastically necessary to reduce the costs if the widespread use of the technology is to be promoted.

Information about the meeting is available at:

[http://www.fct.mctes.pt/pt/EU2007/docs/FMSMR\\_Programme240907.pdf](http://www.fct.mctes.pt/pt/EU2007/docs/FMSMR_Programme240907.pdf)

## Meetings Calender of events with foresight or roadmapping character

**January 29-30, 2008**  
**Berlin, Germany**

**SusChem Stakeholder and Brokerage event**  
**„Realising our sustainable future“**

Sessions on scientific and policy issues (chemical technologies, sustainability, polymers for energy, raw materials change) as well as panel discussions of issues of societal interest (climate change, nanoscience). Workshops for brokerage and networking in Reaction & Process Design, Materials, Industrial Biotechnology and Energy.

Draft agenda and registration on [www.suschem.org](http://www.suschem.org)

**March 9-13, 2008**  
**Killarney, Co. Kerry,**  
**Ireland**

**ERA-Chemistry 3rd Flash Conferences on emerging fields of immediate scientific importance: "Carbohydrates at the Interfaces of Biology, Medicine and Materials Science"**

Modern carbohydrate chemistry encompasses the synthesis, analysis and study of the carbohydrates which are relevant to biology, biotechnology, medicine and materials science. This flash conference aims to bring together a diverse group of scientists who are working in the broad area of carbohydrate chemistry and chemical biology to discuss recent progress and challenges. Topics will include "Synthesis and (chemo)enzymatic synthesis of carbohydrates and glycoconjugates", "Glycomaterials", "Structural studies of carbohydrates and glycoconjugates".



Further information:

<http://www.erachemistryevents.net/agenda/subtheme.php?id=113>

**May 20, 2008**

**London, UK**

### **Annual Meeting of MaterialsEuroRoads**

Aim: Representative view and discussion on materials roadmaps and their implementations throughout Europe. Dialogue between materials scientists, ministries and funding agencies about their expectations.

Further information:

[www.smart-ssa.net/c3/index.php?index=23](http://www.smart-ssa.net/c3/index.php?index=23)

**September 7-11, 2008**

**Düsseldorf, Germany**

### **The 4th International Symposium on Macro- and Supramolecular Architectures and Materials: Synthesis, Properties and Applications**

As novel materials will play a key role in science and technology in the 21st century, the objectives of this symposium series are in providing an interdisciplinary forum for scientists engaged in the full spectrum of research, development, application, and to discuss the current status and recent developments of these materials with a focus on the chemistry and practical approaches. In addition, the meeting will provide an opportunity to overview the field by covering a wide range of topics. Themes have selected to accommodate a wide range of interests to facilitate interdisciplinary interactions in both academic fields and industrial science and technology.

Further information:

[www.chemie.uni-duesseldorf.de/Faecher/Organische\\_Chemie/OC2/ritter/MAM\\_08](http://www.chemie.uni-duesseldorf.de/Faecher/Organische_Chemie/OC2/ritter/MAM_08)

**September 29 – October 1, 2008**

**Crete, Greece**

### **The IASTED International Conference on Nanotechnology and Applications ~NANA 2008~**

Nanotechnology is one of the most promising technological fields in the world today. Although many of its greatest advances are at least a generation out, and some of the predicted gains are speculative, nanotechnology offers the potential to revolutionize the way people live their lives. Nanoscale science may dramatically improve on current fibre-optics and electronics technology while ameliorating the cost, durability, and weight of extant aircraft building materials. No less important, nanotechnology could one day solve the world's energy problems.

NANA 2008 will bring together leading experts in the fields of nanobiotechnology, nanoelectronics, power and energy, environmental applications, nanomaterials, and nanoethics.

Further information:

<http://www.iasted.org/conferences/home-615.html>

There is the possibility to announce a meeting, conference or workshop which include foresight activities in the calendar. Contact us.



## More Information about MaterialsEuroRoads

- The homepage: [www.materialseuroroads.net](http://www.materialseuroroads.net)  
General information about the network's aims and how to participate can be found here.
- The internal pages of [www.materialseuroroads.net](http://www.materialseuroroads.net) provide information about foresight and forecast studies relating to materials innovation and also include the presentations from the last annual meeting. To access these pages and to participate in the network please apply for membership via e-mail. You will need to provide a CV and a short description of your recent and ongoing foresight activities in materials.

Kind regards

Your MaterialsEuroRoads Team

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MaterialsEuroRoads is a network for key European players in the fields of Foresight and Forecast of Developments in Materials Technology. The network is a non-profit organisation which emerged as a result of a roadmapping project financed as a Specific Support Action under the auspices of the 6th European Framework Programme.

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