



European Materials Research Society

Spring Meeting 2015

from May 11th to 15th
Lille Grand Palais - France

Call for papers

deadline for abstract submission:

15 January 2015

www.european-mrs.com

Symposium A1 (combined with A): Carbon dioxide recovery and circular economy of carbon

Carbon dioxide is one of the essential molecules for life cycle and energy. Its storage has a key role for human activities and can be summarized as the starting step for biomass production but also the final step of combustion processes. These two key steps identify the storage of all human and biosphere activities. Today the question is how to control the large amount of carbon dioxide emission which is responsible of climate change but at the same time, the energy needed for 7 billion of capita cannot be neglected.

Today, carbon dioxide can be used through a new circular economy by industrial processes, opening the way of both energy storage and network regulation. However, to reach these objectives, new electrochemical processes, photocatalysis and photolysis of water have to be developed, in order also to create new polymers.

Scope of this two days symposium (combined with symposium A: Materials, mechanisms and devices in nano energy) is to discuss the current R&D situation, especially by considering the materials aspects in our E4F model for a future sustainable energy supply for the whole world.

Both fundamental and technology oriented researches in materials being mandatory to contribute to solve the problem related to the need of reduction of CO₂ in the atmosphere and to store the electricity generated by renewable energy sources, **contributions are solicited in the following areas:**

- CO₂ sources and purification
- Splitting and recovery of CO₂ by innovative technologies, especially catalysts and plasma processes
- Generation of new fields including solvent properties, dyeing, EOR, energy storage and syngases
- Organic chemistry processes based on CO₂ recovery mainly for biodegradable-polymers

Invited speakers:

- S. Biollaz, PSI, Switzerland
- K. Hashimoto, Tohoku University, Institute for Materials Research, Japan
- Z. Ismagilov, Institute of Coal Chemistry and Material Science, RAS, Kemerovo, Russia
- O. Kröcher, Bioenergy and Catalysis Laboratory, PSI, Switzerland
- J. R. Morante, IREC, Catalonia Institute for Energy Research, Spain
- P. Rutberg, Institute for Electrophysics and Electric Power, Polytechnical State University, Saint Petersburg, Russia
- C. Sanchez, Collège de France, Paris
- X. Wang, Key Lab of Polymer Ecomaterials, Chinese Academy of Sciences, China

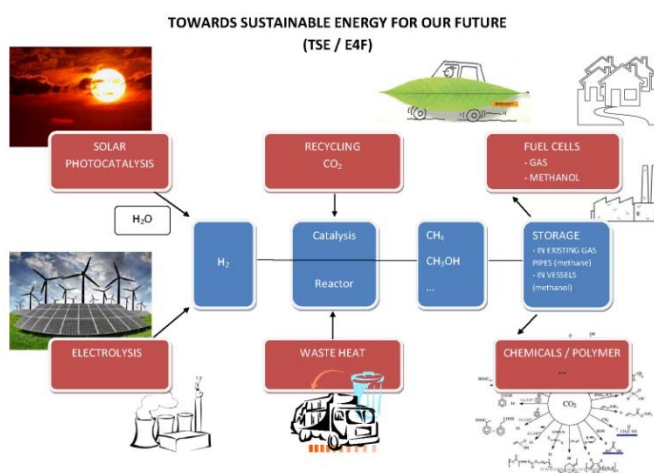
Scientific committee:

- L. Bedel (CEA & CEOPS consortium)
- T. Lippert (E-MRS / PSI)
- R. Martins (University of Lisbon)
- J. P. Massué (E-MRS)
- G. Mignani (Solvay)
- P. Siffert (E-MRS)

Supported by:



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Symposium organizer:

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