

# The Energy & Materials Research Conference

## EMR 2012



Torremolinos, Málaga, Spain / 20-22 June 2012

### CORE TOPICS - GENERAL SESSIONS

#### Energy production from Biomass - Biofuels

Extraction of biomass materials  
Development/Improvement/Performance of materials for biomass systems/plants for heat & power and biofuels production.  
Materials for capturing CO2  
Materials for biofuels storage...

#### Solar Energy Materials

Solar cells based on silicon, CdTe-based and CIGS-based thin-film solar cells. Multijunction cells. Single crystal solar cells. Organic/polymer solar cells. Dye sensitized solar cells (DSSC). Nanocrystalline solar cells...

#### Fuel Cells and Fuel Science

Novel high-performance materials for components and systems in PEM, solid oxide, microbial, alkaline, direct methanol, phosphoric acid, molten carbonate and regenerative fuel cells. Anode, cathode and electrolyte materials. Degradation, corrosion...

#### Photovoltaics (PV)

Development/Improvement of processing techniques for thin film. Materials and techniques to increase capture of the full spectrum of sunlight. Suitable coatings and coating techniques. Materials degradation...

#### Wind Power Geothermal Energy Hydropower Wave and Tidal Power

Materials/Coatings/Methods to reduce fatigue and erosion-corrosion in constituent materials, sub-components and major structures. New materials and methods for energy-efficient turbines...

#### Concentrating Solar Power (CSP) and Solar Thermal

Development/Improvement of materials and coatings used in concentrating solar power systems. Materials for solar thermal collectors and storage tanks. Methods/materials to improve solar absorbance. Heat transfer...

#### Concentrating photovoltaics (CPV) and high concentration photovoltaics (HCPV)

Manufacture and durability of lenses for high efficient optic concentrators. Techniques to decrease the alignment error between the cell and the optic and to improve the efficiency...

#### Hydrogen

Materials for hydrogen production and purification. Characterization and analysis of high capacity materials for hydrogen storage. Materials for hydrogen vehicles...

#### Nuclear Materials

Development/Improvement of structural materials capable of operating at high temperatures, resistant to radiation damage, corrosion, environmental degradation... Development of advanced ceramics and coatings for fuels. Nuclear waste...

#### Energy Production from Fossil Fuels

Materials for fossil fuel extraction. Research into advanced materials and coating techniques to increase the efficiency of power plants. New methods and materials for CO2 storage and sequestration...

#### Other Themes

- Materials for energy transmission and distribution: smart-, green- and micro-grids. Superconductors...
- Materials for energy storage: Materials for electrical storage: Ultracapacitors - Supercapacitors - Nanostructured carbon electrodes, graphene or other electrode materials. Materials for electrochemical storage: Batteries, Flow batteries, Fuel cells. Materials for thermal storage. Materials for chemical storage...
- Advances in Lighting Materials
- Energy-Efficient Buildings Materials
- Materials for Energy Saving and Sustainability

### KEY DATES

**14 March 2012:**  
Deadline for early registration

**27 March 2012:**  
Deadline for abstract submission (for oral presentations)

**2 May 2012:**  
Deadline for abstract submission (for poster and virtual presentations)

**7 May 2012:**  
Notification of definitive presentation mode (for participants whose first option is oral presentation mode)

**23 May 2012:**  
Deadline for late registration

**30 May - 1 Jun 2012** Attendance confirmation for on-site participants (An email from the conference secretariat will be sent during this time requesting such confirmation. Failure to do this may result in withdrawal of the work(s) from the Final Program.)

**4 June 2012:**  
Deadline for submission of virtual papers

**18 July 2012:**  
Deadline for submission of full papers to be considered for inclusion in the Proceedings Book

### THE VENUE

The Conference will take place at the "Palacio de Congresos y Exposiciones Costa del Sol-Torremolinos" (Torremolinos Congress Center). It is just 3 km away from the Malaga international airport, and 700 m away from the train station, which connects with Malaga.

Full information on the conference venue can be found on the official website <http://www.palacio-congresos.com/>



### SECRETARIAT

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<http://www.formatex.org/emr2012/>

