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# CALL FOR PAPERS

**ABSTRACT DEADLINE: JUNE 21, 2005**

**REMINDER:** *In fairness to all potential authors, late abstracts will not be accepted.*

## MRS Symposium O: Nanoparticles and Nanostructures in Sensors and Catalysis

The goal of this symposium is to provide a forum for scientific and technical exchange to advance the research and technology of nanoparticles and nanostructures in sensor and catalysis applications. In recent years, we have seen rapid developments of nanotechnology in catalysis and sensors. There is a need to create industrial-academic and interdisciplinary forums to discuss these developments in a much broader connection between all aspects of sensors and catalysis research and the nanomaterials research. A common theme for the emerging interests in nanostructures for chemical/biological sensors and catalysis is the exploration of the unique surface or interfacial properties of materials at nanoscale. In addition to discussing the latest innovations, challenges and opportunities for the design of experimental and technical approaches to probing various nanoscale interfacial phenomena will be addressed. The symposium will also address fundamental and practical issues involved in the preparation and characterization of sensory and catalytic nanoparticles and nanostructures.

The proposed topics include, but will not be limited to:

- Development of new nanostructured or nanocomposite materials for constructing sensor/biosensor devices
- Development of new nanostructures or methods for preparing catalysts
- Improvement of chemical/biological sensory properties by manipulating nanoscale size, shape, and interfacial properties
- Improvement of catalytic activities and selectivities by tailoring nanoscale size, shape, surface, and support properties
- Preparation and functionalization of nanoparticles and nanostructures useful for enhancement of sensing or catalytic performance
- Development of analytical techniques or methodologies for characterizing nanostructured sensing or catalytic materials
- Experimental and theoretical investigation of nanoscale phenomena responsible for new or improved sensing or catalytic mechanisms

**Invited speakers** (partial list) include: **H.D. Abr na** (Cornell Univ.), **R.M. Crooks** (Texas A&M Univ.), **H. Dai** (Stanford Univ.), **M.A. El-Sayed** (Georgia Inst. of Technology), **J. Grate** (Pacific Northwest National Lab), **R. Haddon** (Univ. of California-Riverside), **N. Halas** (Rice Univ.), **R. Hammer** (Univ. of Wisconsin), **M. Haruta** (Inst. of Advanced Ind. Science & Technology, Japan), **G.J. Hutchings** (Cardiff Univ., United Kingdom), **J. Lahann** (Univ. of Michigan), **C.J. Murphy** (Univ. of South Carolina), **R. Penner** (Univ. of California-Irvine), **M.D. Porter** (Iowa State Univ.), **D.R. Rolison** (Naval Research Lab), **V.M. Rotello** (Univ. of Massachusetts), and **G.A. Somorjai** (Univ. of California-Berkeley).

## Symposium Organizers

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