

FOCUS ISSUE · JANUARY 2014

Submission Deadline-May 15, 2014

Durnal of MATERIALS RESEARCH

The Synthesis of Nanostructured Functional Oxide Materials

The driving force for research activities in the synthesis of nanostructured functional materials is the ability to control a material's properties by controlling the size and shape of the crystals and their arrangement into 1-, 2- and 3- dimensional structures extending over several length scales. These developments can lead to new applications in diverse fields including energy conversion and storage. The future of these technologies is strictly dependent on the availability of optimized synthesis routes that allow the processing and manipulation of functional metal oxides in a precise manner. Functional metal oxides represent an important class of materials with a wide spectrum of applications in energy conversion devices such as solar cells, fuel cells and photo- and photoelectrochemical cells for water splitting. This class of materials is fundamental also to the development of new storage devices, such as batteries and supercapacitors. This Focus Issue is dedicated to the most recent advances in the synthesis of nanostructured functional metal oxides and their applications in energy conversion and storage.

Contributed papers are solicited in the following areas:

- Colloidal synthesis of nanostructured functional oxide materials
- Assembly of nanostructured functional oxide materials into 1-, 2- and 3-dimensional superstructures
- Advances in morphological, structural and chemical characterization
- Applications in hydrogen generation by water splitting
- Applications in batteries and supercapacitors
- Applications in solar cells

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MANUSCRIPT SUBMISSION

To be considered for this issue, new and previously unpublished results significant to the development of this field should be presented. The manuscripts must be submitted via the JMR electronic submission system by May 15, 2013. Manuscripts submitted after this deadline will not be considered for the issue due to time constraints on the review process. Submission instructions may be found at www.mrs.org/jmr-instructions. Please select "Focus Issue: *Synthesis of Nanostructured Functional Oxides Materials*" as the manuscript type. All manuscripts will be reviewed in a normal but expedited fashion. Papers submitted by the deadline and subsequently accepted will be published in the Focus Issue. Other manuscripts that are acceptable but cannot be included in the issue will be scheduled for publication in a subsequent issue of *JMR*.



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