Journal of Nanomaterials

Hindawi

Special Issue on

Photocatalytic Nanomaterials for Solar Energy Harvesting and Environmental Detoxification

CALL FOR PAPERS

Nanostructured materials have drawn tremendous attention in recent years due to their ability of harvesting, storage, and conversion of solar energy. Their unique nanoscale properties have been exploited to address the two key issues of the current world: clean energy production and environmental detoxification. Photocatalysis is one of the most attractive, inexpensive, and ecofriendly avenues. In this sense, a lot of new materials have been reported with interesting photocatalytic applications. However, the photoactivity of each material is strongly related to their size and morphology.

The purpose of this special issue is to publish original high-quality research papers as well as review articles addressed to highlight, recent trends, and future perspective of the heterogeneous photocatalysis and their applications with special reference to solar fuels production and control of organic pollutants. The themes covered in this issue include various aspects from very basic of the nanomaterials to sophisticated technological advancement in the field. Therefore, we are pleased to invite prospective authors to submit manuscripts that have not been previously published and are not being considered for publication elsewhere.

Potential topics include, but are not limited to:

- Synthesis and characterization of photocatalytic nanomaterials
- Visible/solar light active nanomaterials as photocatalysts for the removal of organic and pharmaceutical pollutants
- Plasmonic and upconversion induced photocatalysts
- Production of H2 by photocatalytic processes
- Nanomaterials for CO2 reduction via photocatalysis
- Photoanode/photocathode materials for PEC solar water splitting
- Nanostructured materials for solar cells
- Recent advances and challenges in heterogeneous photocatalysis

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/jnm/pnano/.

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