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Journal of Nanomaterials

Special Issue on
Functional Nanomaterials for Energy Applications

CALL FOR PAPERS

The 21st century is seeking for the development of innovative and improved energy technologies that have the capability to conserve/convert energy at large extent. To leap forward from the energy crisis issues and improving lifestyle, we all are looking positively toward nanomaterials or nanostructures. By tailoring the surface morphology of materials in its nanoform, the functional properties can be significantly adapted and specifically combined to produce highly potent multifunctional materials for conversion, storage, and consumption of energy in the form of solar cells, dye-sensitized solar cells, fuel cells, supercapacitors, sensors, field emitters, electrochromic smart windows, nanogenerators, light-emitting diodes, and nanoelectronics, and so forth.

This special issue is dedicated to fundamental understanding of synthesis of various nanostructures, issues associated with energy conversion, storage, and transport at nanoscale level, and advances in energy applications of nanomaterials.

We welcome reviews and original research papers (experimental, theoretical, or simulations work) on nanostructures or nanomaterials that have potential application in energy related technologies.

Potential topics include, but are not limited to:

- Synthesis of nanomaterials and nanostructures
- Techniques for synthesis and characterizations of nanomaterials for energy applications
- Nanoparticles, quantum dots, one-dimensional (1D) and two-dimensional (2D) nanostructures, and hierarchical nanostructures (in thin films or bulk form)
- Nanoporous materials
- Energy conservation, conversion and storage devices/systems, for example, solar cells, DSSCs, fuel cells, supercapacitors, field emitters, electrochromism, smart windows, display devices, nanogenerators, light-emitting diodes, laser diodes, and so on
- Sensors and nanoelectronics

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