Special Issue

Synthesis and Self-Assembly of Nanocrystals, Nanoparticles and Thin Films for Sustainable Energy

Message from the Guest Editor

This Special Issue aims at collecting a compilation of review articles and original research papers illustrating the latest developments in the synthesis and self-assembly of nanomaterials whose combined physical and chemical properties can be efficiently exploited for clean energy production, conversion, and storage. Contributions regarding nanomaterials for sustainable energy falling within the following topics:

- Nanomaterials for solar cells, fuel cells, hydrogen production and storage, new generation batteries, supercapacitors, thermoelectric devices, and solid-state lighting systems;
- Combinations of different classes of nanomaterials in rationale-designed nanocomposites;
- Nanocatalysis;
- Electrochemical energy production and storage;
- Green self-assebly-based nanofabrication;
- Photocatalytic, thermoelectric, photoelectrochemical, piezoelectric, piezotronic, and artificial photosynthetic nanomaterials;
- Nanostructured devices for energy-efficient buildings;
- Cutting-edge techniques for the quantitative characterization of morphological, structural, chemical, optical, electrical, magnetic, etc., properties of nanostructures.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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