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The Development of Sustainable Nanomaterials for Green Energy Applications

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Deadline for manuscript submissions:
closed (30 April 2024)

Message from the Guest Editors

Dear Colleagues,

The finite supply of fossil fuels, climate change, increasing pollution, and the growing global energy demand are great stimuli for the scientific community to develop renewable and sustainable energy solutions towards lower-carbon options and a carbon-neutral environment. Within this scenario, nanotechnology can open the way to reduce production and materials costs by maintaining a high level of performance.

The present Special Issue on *Nanomaterials* aims to present comprehensive research outlining progress in the application of sustainable nanomaterials to improve the efficiency of green energy applications. In this Special Issue, original research articles and comprehensive reviews are welcome. Potential topics include, but are not limited to:

- Electrocatalysts for electrochemical and photoelectrochemical hydrogen and oxygen evolution reaction;
- Transparent and conductive oxides for solar cell applications;
- Energy harvesting (nanogenerators, piezoelectric materials, etc.);
- Nanostructure-based electrodes for electrochemical and photoelectrochemical energy storage devices (supercapacitors, lithium-ion batteries, post-LIB solutions, etc.);

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Editor-in-Chief

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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