Special Issue

Nanomaterials for Inorganic and Organic Solar Cells

Message from the Guest Editors

This Special Issue aims to gather pioneering research on the development and application of advanced nanomaterials for organic and inorganic solar cells, a topic well-aligned with the journal's focus on the latest technological advances in materials science and energy conversion. By concentrating on emerging methods for improving photon absorption, charge transport, and device architecture, this issue will present insights that not only enhance the fundamental understanding of solar cell mechanisms but also introduce practical solutions to overcome current limitations in device performance. Research areas may include, but are not limited to the following:

- Development and characterization of high-performance inorganic and organic materials for solar cells, including Si, III-V compounds, chalcopyrite compounds, perovskites, polymers, small molecules, and quantum dots.
- Development of nanomaterials that contribute to the durability and scalability of solar cells for practical applications.
- Environmentally friendly and cost-effective methods for nanomaterials fabrication.
- Integration of novel materials into device architectures for improved efficiency and durability.

Guest Editors

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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.

Editor-in-Chief

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