

Special Issue

Advanced Nanomaterials for Photovoltaics and Solar Cells

Message from the Guest Editors

Recently, there has been a strong demand for photovoltaic technology to resolve the current issues regarding carbon neutrality. Conventional silicon (Si) solar cells provide high conversion efficiency and preferred long lifetimes. To deliver more efficient and low-cost electric power generation, emerging photovoltaic technologies such as quantum dot, organic and perovskite-based nanomaterials have revealed remarkable advances in their power conversion efficiencies. This Special Issue aims to publish original work on advanced nanomaterial synthesis and fabrication processes used in any type of emerging photovoltaic cells (quantum dot, organic and perovskite-based photovoltaic cells). Submissions on nanomaterials regarding charge transport layers as well as photo-absorber layers that have unique properties for highly efficient and stable solar cells are highly welcome. Transparent conducting nanomaterials are also very important in creating efficient conversion devices. Original research articles and reviews are welcome.

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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