

Special Issue

Nanoparticles for Photovoltaics

Message from the Guest Editor

Over the past several decades, photovoltaic (PV) technologies have demonstrated continuous progress and cost reduction. Nevertheless, PV technologies currently only provide for approximately 1% of the global energy consumption, and considerable gains can be achieved when the solar panels become more efficient and much cheaper. Therefore, producing highly efficient solar cells with low-cost materials and techniques is highly desirable. Novel methods should be able to increase the efficiency of solar cells made of conventional and new materials in a realistic manner. This makes bottom-up methods such as the use of nanoparticles realistic and important. Nanoparticles can be used as constituent, such as quantum dots, for light management structures, such as plasmonic and Mie scatterers, and light budgeting with up/down converters. With this Special Issue, we aim to cover all of these promising topics related to the use of nanoparticles to increase solar cell performance.

Guest Editor

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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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