Special Issue

Nanomaterials and Nanofabrication for Solar Cells and Energy Harvesting

Message from the Guest Editors

The advances in solar cells and energy harvesting have been enabled by the continuous development of novel nanomaterials and nanofabrication techniques. For example, textured transparent electrodes using nanowires/nanoparticles, co-doping of transparent conductive oxides, plasma treatment, or oblique angle deposition can enhance the optical path length of solar cells, leading to a higher power conversion efficiency. Similarly, energy harvesting devices require the use of piezoelectric materials (mechanical vibrations), thermoelectric materials (heat), or materials with a strong triboelectrification effect (mechanical sliding motion). This Special Issue will present comprehensive research covering the progress on nanomaterials or nanofabrication techniques for improving the performance of solar cells and energy harvesting devices. It aims to attract academic and industrial researchers to foster the current knowledge of renewable energy and present new ideas for future applications and technologies. We welcome original research articles and review articles.

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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

Prof. Dr. Eugenia Valsami-Jones
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