Special Issue

Advances in Solar Cell Materials and Structures

Message from the Guest Editors

Currently, silicon solar cells are the most popular devices for converting light energy to electricity, but thin-film solar cells comprise competitive, efficient, and cheap photovoltaic devices and are expected to replace traditional Si panels in the future. The layers of thin-film solar cells are up to 200 times thinner than the layers of traditional silicon solar cells. And they have great potential to reduce both their material consumption and production costs. They are lighter in weight so they can be deposited on flexible substrates and integrated with many devices. Therefore, we welcome review and research papers on the development of thin-film photovoltaic materials and solar cells. The scope of the Special Issue includes but is not limited to:

- Thin-film solar cells
- Perovskites and Perovskite Solar Cells
- Nano-structured PV cells
- Quantum dot solar cells
- Organic PV materials and devices
- New materials for photovoltaic structures
- New concepts and device architectures for next generation solar cells
- Nanotechnology for improvement of PV devices
- New materials and contact concepts

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Deadline for manuscript submissions

closed (20 February 2024)

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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