Special Issue

Advances in Photovoltaic Materials and Devices: Preparation, Characterization and Properties

Message from the Guest Editor

New materials or new production methods for photovoltaics have been studied in recent years. Materials used in photovoltaic devices are usually based on crystalline film technology, such as silicon (monocrystalline, polycrystalline or amorphous) and gallium arsenide. Second-generation photovoltaic solar cells use thin-film technologies by reducing the material quantity and are based on copper indium gallium selenide, cadmium telluride and copper zinc tin sulfide. Third-generation photovoltaics introduce novel materials such as perovskites. The topics of interest for publication include but are not limited to the following:

- First-, second- and third-generation photovoltaic cells.
- Production methods for PV technology: wafering, etching, diffusion, ion implantation, atomic layer deposition, antireflective coating, metallization, testing.
- Characterization techniques: microwave photoconductance decay (MWPCD), quasi-steady-state photoconductance (QSSPC), external quantum efficiency (EQE), intensity–voltage (IV) curves, luminescence.
- Synthesis and structure of luminescent complexes.
- Photoluminescence measurements.
- Photophysical properties.

Guest Editor

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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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