Special Issue

Materials for Organic and Perovskite Solar Cells

Message from the Guest Editor

In recent years, extensive research efforts have been devoted to organic photovoltaics (OPVs) and perovskite solar cells (PSCs) emerging technologies. Both have the potential advantages of being low-cost, lightweight, bendable, and aesthetically attractive. While OPVs commercialization has already been recently launched, the younger yet more efficient PSCs technology still needs some critical concerns, namely the toxicity of lead (Pb) and the mediocre stability of PSCs, to be overcome before they can enter the market. Both still need further development from the materials perspective and device processing point of view to enhance their performance up to the theoretical limit, to boost their environmental stability, and to replace their toxic constituents with less harmful alternatives.

- Organic semiconductors
- Pb-based and Pb-free perovskites
- Charge selective contacts
- Electrodes and substrates
- Photovoltaic architectures
- Computational modeling and machine learning
- Advances in synthesis, thin-film deposition, and characterization
- Structure-property relationships
- Metal oxides
- Perovskite nanocrystals
- Electronic interactions at the photovoltaic interfaces

Guest Editor

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Deadline for manuscript submissions

closed (31 August 2021)

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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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