Special Issue

Enhancing Performance and Stability in Perovskite Solar Cells: Materials Design and Engineering Approaches

Message from the Guest Editors

This Special Issue aims to bring together cutting-edge research focused on advancing both the efficiency and stability of perovskite solar cells through material design and engineering approaches. We invite original research articles, reviews, and perspectives that explore innovative materials, doping strategies, interface optimization, encapsulation techniques, and degradation mechanisms.

- Development of novel perovskite compositions for improved stability;
- Doping and additive engineering for enhanced device performance;
- Design of dopant-free and stable hole/electron transport layers;
- Interface and surface passivation strategies;
- Structural engineering in 2D/3D perovskites;
- Encapsulation and environmental protection techniques;
- Mechanistic studies on degradation and ion migration;
- Scalable fabrication and industrial relevance;
- Device architecture optimization (n-i-p, p-i-n, tandem);
- Stability testing protocols and standardization efforts according to ISOS.

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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