Special Issue

Latest Achievements and Perspectives of Perovskite Solar Cells and Photovoltaics

Message from the Guest Editors

Perovskite solar cells have emerged as one of the most promising photovoltaic technologies of the past decade, owing to their exceptional power conversion efficiencies, tunable bandgaps, low fabrication costs, and compatibility with flexible and tandem architectures. Rapid advancements in material composition, interface engineering, and device stability have brought PSCs closer to commercial viability. Despite this remarkable progress, challenges related to their long-term operational stability, large-scale manufacturing, and environmental sustainability remain active areas of research. The field continues to evolve rapidly, driven by interdisciplinary efforts spanning chemistry, physics, materials science, and engineering. Topics of interest for publication include, but are not limited to, the following:

- High-efficiency device architectures optimized for energy output;
- Long-term operational stability and performance under outdoor conditions;
- Scalable fabrication techniques and industrial upscaling;
- Tandem solar cells for enhanced energy harvesting (e.g., perovskite–silicon, perovskite–CIGS);

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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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