

Special Issue

Advances in Next Generation Photoelectric Conversion Materials, Devices, and Equipment

Message from the Guest Editor

Next-generation photoelectric conversion technologies are at the center of the global effort to achieve sustainable and efficient energy systems. The advances in materials, devices, and equipment that employ these technologies represent a rapidly evolving frontier that bridges fundamental research and industrial innovation. These technologies could enable the establishment of high-efficiency, low-cost, and versatile energy conversion solutions—paving the way for a new era of clean-, decentralized-, and sustainable-energy technologies. Emerging materials such as metal halide perovskites, organic semiconductors, quantum dots, and two-dimensional transition metal dichalcogenides (TMDs) offer unique advantages such as light absorption, a tunable bandgap, and compatibility with flexible substrates. This Special Issue aims to present the most recent advances in materials, devices, and equipment employing next-generation photoelectric conversion technologies.

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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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