International Journal of Energy Research

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Special Issue on
Energy Harvesting and Conversion Technologies

CALL FOR PAPERS

Energy harvesting and conversion technologies generated through tapping into solar, wind, thermal, and kinetic energy are important areas of research and hold the potential to combat climate change, diminish fossil fuel reliance, and secure a sustainable energy future. It is important that novel research explores advancements in photovoltaics, wind turbines, piezoelectric devices, and thermoelectric generators.

The challenges within energy harvesting and conversion technology research include low efficiency, energy storage, and intermittency of energy supply. Researchers are improving energy efficiency through enhancements of design and materials, devising superior energy storage solutions, and addressing intermittency of energy supply. Researchers are also pursuing cost-effective scalability, with interdisciplinary cooperation, materials science, and progress being critical. Exploring emerging technologies such as perovskite solar cells and nanomaterials holds promise, and highlights the continued need for research to advance sustainable and efficient energy solutions.

This Special Issue's objective is to advance energy generation by showcasing cutting-edge research and innovations. Submissions are encouraged that contribute to the understanding and development of energy harvesting and conversion technologies, with an emphasis on material design and devices. Original research articles presenting novel findings, methodologies, and advancements in renewable energy technology design and implementation are particularly welcomed. Additionally, comprehensive review articles focusing on specific subfields or technologies related to sustainable energy, including photovoltaics, wind energy, piezoelectric devices, thermoelectric generators, smart grid integration, materials science, and emerging technologies like perovskite solar cells, and OPVs, are highly encouraged. The goal of this Special Issue is to foster interdisciplinary collaboration.

Potential topics include but are not limited to the following:

- Advancements in photovoltaics
- Piezoelectric energy harvesting
- Thermoelectric generators in energy harvesting and conversion
- Eco-friendly materials for energy harvesting and conversion
- Metamaterial-based energy conversion
- Energy harvesting devices towards commercialization
- Perovskite solar cells energy harvesting and conversion
- Optoelectronic devices for energy harvesting
- Nanomaterials in energy harvesting and conversion
- Organic materials and devices in harvesting and conversion

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.wiley.com/submit?specialIssue=653148.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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