Special Issue

Recent Advances in Energy Harvesting Technologies: Innovations and Applications

Message from the Guest Editor

Recent advances in energy harvesting systems leverage nanoscale material engineering, mechanical tuning, and hybrid integration to convert ambient energy into usable power, addressing global energy sustainability challenges. These systems align with the interdisciplinary goals of optimizing efficiency, scalability, and application diversity while reducing environmental footprints. In this regard, the suggested themes for this proposed Special Issue include diverse energy harvesting technologies spanning multiple scientific and research disciplines:

- PFAS-free triboelectric nanogenerators for wearables;
- Triboelectric nanogenerators (TENGs);
- Flexible piezoelectric harvesters for structural health monitoring;
- Hybrid electromagnetic–piezoelectric harvesters for IoT devices;
- Energy harvesting for autonomous roadway systems;
- The integration of energy storage with harvesting in wearables;
- Magnetic energy harvesting with reverse flux desaturation;
- The optimization of energy management in EH-enabled sensor networks;
- Nanogenerators based on polyvinylidene fluoride (PVDF);
- Energy harvesting for smart building envelopes;
- The life cycle assessment of energy harvesting devices and systems.

Guest Editor

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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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