Special Issue

Nanoenergy Materials and Devices

Message from the Guest Editor

Efficient conversion of ambient neglected energy into electricity is advisable to achieve the self-powered operation of intelligent sensors and meet the needs for sustainable development. In particular, the nanogenerators based on the triboelectric, piezoelectric, pyroelectric, and thermoelectric effects possess incomparable superiority in scavenging micro-nano energy. As the emerging technology of nanoenergy, the nanogenerators with different materials and structures have attracted more and more attention in the past decade. Although great progress has been made in terms of output power density and energy conversion efficiency, the total electric power of nanogenerators is still limited. What is the way to further improve the output performance of these types of nanogenerators? This Special Issue focuses on the latest advancements realized in the field of nanogenerators and on their applications in the multiple energy scavenging. We invite papers on recent technical developments of nanogenerators based on the single effect or multi-effects coupling, as well as reviews and case studies relevant to show the future direction of nanogenerators.

Guest Editor

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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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