

Special Issue

Nanomaterials and Nanotechnology for Energy Conversion and Storage

Message from the Guest Editors

With the increasing demand for wearable sensors, flexible displays, and implantable diagnostic devices, increasing interest is being aroused in flexible energy storage units with high energy and power density. The components used in such energy systems should combine superior electrochemical properties with high mechanical flexibility. To avoid detachment or cracks of the active materials during mechanical deformation, intrinsically flexible electrodes relying on either flexible active materials or substrates are preferred. Flexible substrate-based electrodes are generally developed using polymeric and carbonaceous support materials. Polymer-based electrolytes, including gel polymer electrolyte, polymer solid electrolyte, and ceramic-polymer composite solid electrolyte, are the ideal choices for flexible electrolytes due to their flexibility and interface compatibility. This Special Issue focuses on the development or application of novel composite electrode and electrolyte materials for high-performance flexible energy storage devices such as supercapacitors, batteries, etc. In this Special Issue, original research articles and reviews are welcome.

Guest Editors

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano–alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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