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Nanotechnological Aspects in Materials for Supercapacitors and Batteries

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Message from the Guest Editors

Currently, green energy is becoming increasingly important due to the energy crisis. Energy storage and conversion regarding green energy, such as solar, wind, tidal, etc., and electricity are the most critical aspects to such a big change in the national infrastructure of each country.

This Special Issue covers research on the state-of-the-art techniques used in supercapacitors and batteries from the nanotechnological perspective. It aims to reveal the intrinsic mechanisms that have an effect on the electrochemical performances of nanostructured materials and their properties. Submitted work can investigate materials of supercapacitors and batteries either regarding morphology control or electronic structure tuning via experimental studies or theoretical calculations or a combination of these two approaches. Reviews that discuss the nanotechnological aspects of materials for supercapacitors and batteries are also welcomed. This Special Issue targets the use of advancements in techniques to benefit the fast growth of the application of functional nanostructured materials in the energy storage and conversion.

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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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