Special Issue

Recent Scientific Developments in Carbon-Based Nanomaterials for Batteries and Supercapacitors

Message from the Guest Editor

Porous carbon is a promising anode material, as it possesses the advantages of low cost, high efficiency, long lifetime, and multifunctionality. By constructing a three-dimensional hierarchical structure of porous carbon electrode, the transport process of ions can be optimized to achieve satisfied magnification performance. Moreover, porous carbon can also be employed as effective carriers to receive diverse guest components in multi-active sites, thereby allowing for the full utilization of high specific capacity of active substances; additionally, the stabilizing effect of carbon-based materials help to obtain a negative electrode material endowed with both high capacity and stability. This Special Issue of *Nanomaterials* invites submissions of research papers and review articles that address the application of novel carbon materials in advanced energy storage technologies including, but not limited to, lithium/sodium/potassium/zinc/calcium ion battery, lithium-sulfur battery, zinc-iodine battery, aqueous supercapacitors, organic supercapacitors and solid electrolyte supercapacitor.

Guest Editor

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Deadline for manuscript submissions

closed (10 May 2024)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/186020

Nanomaterials
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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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