Special Issue

Research on Supercapacitors, Batteries, and New Energy Nanomaterials

Message from the Guest Editor

The global demand for high-performance sustainable energy storage solutions continues to drive significant advancements in electrochemical energy systems. This Special Issue highlights cutting-edge research in supercapacitors, rechargeable batteries, and emerging energy materials, with a focus on enhancing energy density, cycling stability, and overall device efficiency. Key areas include the development of advanced electrode architectures, novel hybrid systems, and solid-state configurations. Special attention is also given to innovative electrolyte design—such as ionic liquids, gel-based, and solid electrolytes—which plays a critical role in improving device safety, conductivity, and operational window. Contributions involving nanostructured materials like MXenes, doped carbon frameworks, and transition metal compounds are particularly welcomed, aiming to support the development of next-generation energy storage technologies for clean and sustainable energy applications.

Guest Editor

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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