

Special Issue

Valorizing Waste-Derived Carbon for Advanced Battery Applications: Innovations and Sustainable Pathways

Message from the Guest Editors

Key themes include innovative methodologies for the synthesis and structural tuning of waste-derived carbons to achieve high performance and longevity in batteries. Studies investigating the role of these materials in enhancing solid-electrolyte interphase (SEI) stability, improving ionic conductivity, and advancing electrode architectures are particularly welcomed. The issue also seeks insights into environmental impact analysis, promoting a circular economy approach. This Special Issue invites researchers to showcase advances in fabrication techniques, such as hybrid electrode designs, and their integration into real-world energy applications. By bridging the gap between waste management and sustainable energy storage, this issue aims to contribute to the global transition towards greener energy systems, driving innovations that align with the United Nations Sustainable Development Goals (SDGs) and the broader push for resource conservation and carbon neutrality.

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

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