

Special Issue

Advanced Nanomaterials for High-Performance Lithium Batteries

Message from the Guest Editors

Lithium batteries are believed to be an advanced technology enabling the ongoing transition from traditional fossil energy to renewable energy. Since the first commercial Li-ion batteries were developed in the late 1980s, a variety of efforts have been devoted to developing materials with high performance for lithium batteries. Using nanostructured and nanosized materials presents new avenues in rechargeable lithium batteries for an exceptionally high rate of charge and discharge, excellent energy density, and extended cyclability. For this present Special Issue entitled “Advanced Nanomaterials for High-Performance Lithium Batteries”, we encourage both academic and industrial researchers to present recent advances in all aspects of nanomaterial-based lithium batteries, especially in novel design and preparation strategies of nanomaterials for lithium batteries regarding electronic structure modification and morphology regulation based on theoretical calculations or experimental studies or their combinations, advanced characterizing techniques as well as studies on the mechanisms of energy storage process, etc.

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.

Editor-in-Chief

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