



New Perspectives for the Development of Li-Ion Batteries of the 21st Century

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Message from the Guest Editors

Lithium-ion batteries represent one of the most outstanding advances in energy storage systems of recent times. The combination of electrochemically active materials and conductive carbonaceous materials for the manufacture of nanocomposite electrodes provides lithium-ion batteries with high capacity, excellent cycling stability, power density, and lightweight. In recent years, there have been many advances related to stability, performance or durability, thanks, among other things, to the incorporation of new nanostructured materials. These include carbon nanotubes, nanowires, and two-dimensional materials such as graphene, graphitic compounds, or other layered materials, among others.

This Special Issue aims to provide significant contributions that impact on the advances in the synthesis, optimization, and characterization of nanostructured materials, with application to the development of both anodes and cathodes of high-performance lithium-ion batteries. The final goal is to have a global vision of the state-of-the-art related to the most advanced materials that could represent a significant improvement of the energy storage systems of the 21st century

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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