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New Nanotechnological Perspectives for the Next Generation of Batteries

Guest Editor:

Prof. Tao Chen
School of Chemistry and Chemical Engineering, Nanjing University of Science and Technology, Nanjing 210094, China

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Message from the Guest Editor

Dear Colleagues,

The introduction of well-designed nanomaterials into next-generation rechargeable batteries has significantly improved the performance of these energy-storage devices by providing more chemically active interfaces, shortened ion-diffusion pathways, and improved carrier-/charge-transport kinetics, which have greatly promoted the development of nanotechnology and the practical application of rechargeable batteries.

The present Special Issue of *Nanomaterials* will focus on the main challenges of future research in rechargeable batteries, particularly addressing the urgent demand of developing new environmentally friendly material solutions to improve the energy density and safety of these storage devices. This will require a multidisciplinary approach that encompasses traditional electrochemistry and experimental solid-state physics, multiscale computational modelling, materials synthesis, and advanced characterization and testing.

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Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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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Nanomaterials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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