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Development of Advanced Nanomaterials and Electrolytes for Batteries and Supercapacitors

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Electrochemical energy conversion and storage is a solution to overcome the drawbacks and limitations of existing fossil-fuel-based technologies. The development of electrochemical energy conversion and storage devices has two main directions: the development of high-energy batteries and of high-power supercapacitors. The former has high-energy densities through the faradaic lithium redox reaction, while the latter exhibit high-power densities and a long cycling life owing to the fast physical adsorption/desorption of electrolyte ions on the electrode surface. The exploration of advanced electrode nanomaterials, as well as the electrolyte's composition, determines the crucial electrochemical device parameters.

This Special Issue will attempt to cover the most recent advances in electrolytes for batteries and Supercapacitors, concerning not only the design, synthesis, and characterization of such electrode materials and electrolytes but also reports of their functional and smart properties to be applied in energy-storage devices.

Dr. Jiangmin Jiang
Guest Editor



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Special Issue



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Message from the Editor-in-Chief

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