Special Issue

Electrodes, Electrolytes and Interfaces for High-Performance Rechargeable Batteries

Message from the Guest Editors

Secondary batteries can accomplish efficient energy storage, providing an effective solution for the utilization of renewable energy. Lithium-ion batteries have been the most widely used secondary battery system owing to their high energy density and long lifespan. However, lithium-ion batteries have encountered problems such as increasing manufacturing costs, lithium supply chain constraints, and safety issues. Therefore, researchers are also developing various types of next-generation lithium-ion batteries and post-lithium-ion batteries with the advantages of low-cost, abundant resources and high electrochemical stability etc. The suitable design of electrode materials, electrolytes, and the interface structure have a strong impact on the structural stability, long cycling capability, and rate performance of energy storage devices. This Special Issue mainly focuses on electrode material design, electrolyte optimization, interface engineering, and electrochemical devices configuration for all kinds of post-lithium-ion batteries. Original research contributions and comprehensive, in-depth review articles highlighting recent progress are all welcome.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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