

Special Issue

Synthesis and Application of Key Materials for Advanced Rechargeable Batteries

Message from the Guest Editors

Renewable and green energy sources, such as solar, wind, and wave, represent the most promising and effective way of addressing the critical challenges of energy shortage and environmental pollution stemming from insufficient fossil fuel supplies and increasing consumption. Visible drawbacks which result from the intermittency, instability, and uneven distribution strictly limited the wide-scale implementation of renewable energies and the exploration of advanced energy storage technologies which can efficiently store and utilize these energies at low costs. Energy storage technologies represented by lithium-ion batteries have dominated the power markets of portable electronic devices and electric vehicles. Limitations of conventional lithium-ion batteries make it difficult to meet the growing demands for high energy density, power density, safety, and low cost. Therefore, this Special Issue welcomes contributions from all researchers working on the design, preparation, characterization, mechanism, and application of key materials for advanced rechargeable batteries.

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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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