Special Issue

Advances in Structure, Characterization and Failure Mechanism of Key Materials for High-Energy Density Rechargeable Batteries

Message from the Guest Editor

Rechargeable batteries have become one of the necessities in our daily life. Continuously developing electrical devices for energy storage, transportation, communication, etc. pushes one to increase the energy density and safety of rechargeable batteries, which relies on the revolution of the key materials used in batteries. Of particular significance is probing the structure and failure mechanism of the electrode and electrolyte materials and interphases by using different characterization tools, and to correlate the materials design with the performance of batteries. This fundamental understanding is important to improve the performance of current batteries and to develop the next-generation high-energy density batteries for practical use. In this Special Issue, advances in structure, characterization, and failure mechanism of key materials for high-energy density rechargeable batteries, are highlighted and discussed. It is my pleasure to invite you to submit a manuscript to this Special Issue. Full papers, communications, and reviews are all welcome.

Guest Editor

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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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