Special Issue

Toward Next-Generation Rechargeable Lithium-Ion Batteries: Current Status and Future Prospects

Message from the Guest Editor

For significant industrial areas such as electrified transportation, consumer electronics, and stationary energy storage, lithium batteries (including lithium-ion, lithium–sulfur, and lithium–air cells) are regarded as enabling technology. Therefore, it is crucial to develop next-generation rechargeable Li-ion batteries with higher energy densities, enhanced safety features, reduced costs, and longer cycle lives. In this Special Issue, we aim to address topics of interest including, but not limited to, the following:

- Novel LIB electrode materials;
- Replacing traditional liquid electrolytes—e.g., ionic liquids, high-salt-content electrolytes, and solid-state batteries;
- High-performance and functional separators;
- Advanced fabrication technologies;
- Performance improvement or mechanism under extreme environments or conditions;
- Advanced flexible lithium-ion batteries;
- Degradability or sustainability of lithium-ion batteries;
- New battery chemistry;
- Technologies and functionality of battery management system.

Guest Editor

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Take the opportunity to publish your original scientific work or a review paper concerning battery materials, battery technology or battery application within this new open access journal. Along with material science, the journal also addresses engineering and multidisciplinary research topics, such as cell and system design or storage system integration. Publishing proffers visibility for the benefit of other experts and facilitates discussion of the research results within the field. You are invited to publish your work, read published papers and to participate in topical discussions.

Editor-in-Chief

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