Special Issue

Recent Advances in Battery Mechanism

Message from the Guest Editor

Lithium-ion batteries (LIBs) have become the most popular and important energy storage devices for 3C electronics, electric vehicles and large-scale energy storage systems. Meanwhile, sodium-ion batteries (SIBs), solid-state lithium-ion batteries (SSLIBs) and other novel ion batteries are also attracting more and more attention as next-generation energy storage devices. To further improve performance and safety, it is quite important to understand the mechanisms in the batteries. The development of novel materials and advanced techniques also greatly promotes the exploration of the underlying mechanism. Therefore, this Special Issue is focused on mechanisms in batteries and characterization methods. Potential topics include, but are not limited to, the following:

- Failure analysis on LIBs and SIBs;
- Property and evolution of interfaces in SSLIBs;
- Design and development of novel materials for LIBs, SIBs and other novel ion batteries;
- DFT and MD modeling on electrolyte and electrode materials;
- Advanced experimental and theoretical characterization methods for battery analysis.

Guest Editor

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Message from the Editor-in-Chief

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.

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