Special Issue

Advanced Characterizations in Solid-State Batteries

Message from the Guest Editors

All-solid-state batteries (ASSBs) have shown promising potential as the next-generation of energy storage devices for electric vehicles (EVs) because of their high energy densities without compromising safety. However, the development of ASSBs still faces significant challenges, such as low ion conductivity, incompatible electrode interfaces, and big gaps for commercialization. Advanced characterizations provide insights into the battery materials' working/failure mechanisms and therefore give valuable guidance to the design of future high-performance ASSBs. Therefore, this Special Issue aims to cover the latest research progress on the advanced characterizations applied in ASSBs. Potential topics include, but are not limited to, the following:

- Mechanism studies on solid-state electrolytes;
- Failure analysis on cathode and anode interfaces;
- New characterization techniques in solid-state batteries;
- Calculation, machine learning, and artificial intelligence in battery research.

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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.

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