

## 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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### Guest Editors

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### Deadline for manuscript submissions

closed (20 August 2025)



## Batteries

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