



Journal of Electrochemical Energy Conversion and Storage

CALL FOR PAPERS Special Issue on Lithium-ion Battery Safety

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Special Issue on Lithium-ion Battery Safety

Battery safety has attracted attention worldwide due to current trends in communication and mobilization brought about by rapidly evolving versions of smartphones, tablets, laptops, and other electronic devices, as well as the continuing increase in the number of electric vehicles. Milestone safety issues such as short circuit and thermal runaway can be triggered by mechanical abusive loading, low/high ambient temperature, as well as electric abusive usage (e.g. fast charging). Such catastrophic events are highly nonlinear and strongly multiphysics coupled problems, where more research efforts should be directed to address the safety related issues and understand the underlying fundamental mechanisms. Furthermore, safety problems can evolve and exhibit in various ways across multiscale, i.e. from active particle level (1 μm) up to the battery pack (1 m). High-level lithium-ion battery safety not only requires breakthroughs in electrochemistry and multiphysics governing theories, but a novel engineering design, along with an advanced battery management system based on this understanding.

In conjunction with this Special Issue, **Automotive & Battery Safety Conference (ABSC) 2020** will be organized (May 25-28, 2020, Haining, China) to discuss these advances. Contributors to this conference will be invited to contribute to this Special Issue. This Special Issue is envisioned to cover the entire range of electrochemistry research relevant to Li-ion cells, with equal emphasis on experimental, theoretical, and numerical simulation research.

Topic Areas

- Mechanical integrity of lithium-ion batteries (LIBs)
- Thermal safety behavior of LIBs
- Multiphysics safety behavior of LIBs
- Safety management of LIBs
- Advanced testing/characterization technology and method of LIB safety
- High safety technology of materials, cells and modulus for LIBs
- Crash safety of electric vehicles

Publication Target Dates

Special Issue open to submissions: **June 15, 2020**
Paper submission deadline: **September 1, 2020**
Initial review completed: **October 15, 2020**
Special Issue publication date: **May 2021**

Standard Submission Instructions

Papers should be submitted electronically to the Journal at journaltool.asme.org. If you already have an account, log in as author and select **Submit Paper** at the bottom of the page. If you do not have an account, select **Submissions** and follow the steps. In either case, at the **Paper Submittal** page, select the [Journal of Electrochemical Energy Conversion and Storage](#) and then select the Special Issue **Lithium-ion Battery Safety**. Papers received after the deadline or papers not selected for inclusion in the Special Issue may be accepted for publication in a regular issue.

Special Issue Editors

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