Special Issue

Thermal Runaway Measurement and Evaluation for Lithium-Ion Batteries

Message from the Guest Editor

Thermal runaway in lithium-ion batteries (LIBs) poses serious safety risks, potentially leading to fires or explosions. This phenomenon typically occurs when the heat generated within the battery exceeds its ability to dissipate heat to the surrounding environment and is often triggered by mechanical, thermal, or electrical abuse. Accurately measuring and evaluating thermal runaway is a critical first step toward understanding the complex chemical and physical interactions that occur during this process. Moreover, real-time monitoring of the battery monitoring using various sensor technologies plays a key role in identifying significant precursors and critical events, helping to detect the onset of thermal runaway strategies. In this Special Issue, we are looking for contributions to the following:

- Consistent grading systems for evaluating the severity of thermal runaway;
- Experimental studies on the mechanisms underlying thermal runaway;
- Modeling and simulation of thermal runaway behavior;
- Early detection and prevention strategies for thermal runaway;
- Novel materials and design innovations to mitigate thermal runaway in EVs and ESSs
- .....

Guest Editor

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