

Special Issue

Advances in Thermal Management for Batteries

Message from the Guest Editors

Lithium-ion batteries are a promising technology for achieving the net-zero goal. Some of the current battery challenges such as lifetime and safety are very dependent on batteries operating temperature. A proper pack design as well as a thermal management system can overcome some of these barriers and ensure the batteries' safe operation. **In this Special Issue, we are looking forward to contributions in the following subject areas:**

- Multi-physics modelling of batteries;
- Impact of battery internal structure on heat generation;
- Impact of battery ageing on heat generation;
- Impact of battery ageing on battery safety;
- Thermal runaway modelling of a single cell or battery pack;
- Battery pack design for mitigating/delaying thermal propagation;
- Methodologies for manufacturing faulty cells to trigger thermal runaway;
- Battery heat release rate during thermal runaway for different chemistries/capacities/form factors;
- Novel thermal management technologies, especially for fast charging/severe climate conditions;
- Battery management system for optimal battery performance;
- Energy harvesting from battery packs.

Guest Editors

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