

## Special Issue

# Battery Thermal Performance and Management: Advances and Challenges

### Message from the Guest Editors

The implementation of battery thermal management strategies holds significant theoretical value and provides application guidance for the safe and reliable operation of battery systems; these strategies include cooling/heating methods, which ensure uniformity in the thermal–electrical field, and early warning systems that monitor behavior and offer protection against thermal hazards. Topics included in the Special Issues are as follows:

- Thermal decomposition reaction for electrode and electrolyte;
- Thermal management design (heating/ cooling by liquid, air, etc.);
- Electric vehicle or battery energy storage system integration thermal management strategies (battery, motor, HVAC, etc.);
- Thermal–electrical field uniformity control;
- Thermal runaway tests and behavior;
- Failure battery venting characteristics;
- Battery fire risk assessment and tests;
- Thermal hazard protection design and method;
- Battery thermal runaway modeling method and simulation.

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### Guest Editors

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### Deadline for manuscript submissions

closed (17 March 2025)



## Batteries

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## About the Journal

### Message from the Editor-in-Chief

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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