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Thermal Management in Lithium-Ion Batteries: Latest Advances and Prospects

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Deadline for manuscript submissions:
closed (15 May 2025)

Message from the Guest Editors

In light of the rapid growth witnessed in the electric vehicle and rechargeable battery markets, this Special Issue presents an opportune platform to explore diverse thermal management technologies. It specifically focuses on their application in battery and electronics systems for transportation applications, aiming to address the evolving demands of the field and foster insights into effective thermal management strategies.

Topics of interest include, but are not limited to:

- Assessment of industry approaches and emerging advancements;
- Single-phase cooling/Multi-phase cooling;
- Innovative cooling materials and structures;
- Advanced sensors, thermal control, and fault detection;
- Battery materials and designs with improved thermal properties;
- Strategies to mitigate thermal runaway and propagation;
- Cutting-edge models to gain insights into thermal-related degradation mechanisms;
- New mechanistic models to understand degradation caused by thermal issues;
- Fusion of machine learning algorithms to enhance the precision and efficiency of detection and prediction;
- Extreme conditions such as extremely fast charge and low temperatures.

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Message from the Editor-in-Chief

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