



Key Functionalities in Battery Management Systems for Transportation Electrification

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Message from the Guest Editors

Dear Colleagues,

Advanced key functionalities in battery management systems can potentially improve not only the usage of batteries but also the manufacturing based on positive feedback in field operation. With this in mind, this Special Issue aims to develop advanced key functionalities in battery management systems for electric vehicles. Original and high-quality research, reviews, and perspectives are invited for publication. Potential topics include, but are not limited to, the following:

- Battery modelling with physics-based modelling and artificial intelligence;
- State estimation in electrode, cell, module, and pack level;
- Battery degradation diagnosis, prognosis, and optimization;
- Battery thermal monitoring, management design, and control strategy;
- Safety mechanisms, early warning, diagnosis, and prediction;
- Advanced experiment and characterization;
- Emerging sensor technologies for battery management;
- Series/parallel analysis and cell balancing for battery pack;
- Advanced energy management for electric vehicle.





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Message from the Editor-in-Chief

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