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Advances in Battery Management Storage for Electric Vehicles: When Models Meet Data

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Deadline for manuscript submissions:
15 September 2024

Message from the Guest Editors

Dear Colleagues,

Electric vehicles are emerging as the backbone of the sustainable development of transportation electrification. Their performance, safety, and reliability rely heavily on the energy storage system and battery management control strategies. Inappropriate battery operations may cause premature failures and catastrophic hazards. In recent decades, model-driven battery management strategies have gained considerable attention from various academic and industrial communities.

This Special Issue inspires ideas related to all aspects of recent advances in model-driven and data-driven battery management technologies, and the ideas on how to fuse model-driven and data-driven frameworks into hybrid models that combine the best aspects of both. Potential topics including but not limited to :

- Modeling, estimation, control, and optimization for lithium-ion batteries
- Battery health/aging modeling, diagnosis and prognostics
- Optimal, fast, health-aware charging, balancing control
- Failure detection and fault tolerance control in battery management
- Applications of machine learning and artificial intelligence in battery management

mdpi.com/si/132408

Special Issue

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Message from the Editor-in-Chief

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Journal Rank: JCR - Q2(*Electrical and Electronic Engineering*) CiteScore - Q2 (*Electrical and Electronic Engineering*)

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