



Advanced Modeling, Control and Emerging Application of Energy Storage Systems

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Message from the Guest Editors

Energy storage systems (ESSs) are essential for achieving intelligent transportation electrification and are considered fundamental assets integrated into modern power systems. Emerging applications of ESSs with various entities can accelerate the paradigm shift towards sustainable transport and power systems. Therefore, this Special Issue aims to provide timely solutions for emerging scientific and technical challenges in energy storage for intelligent transportation systems and smart grids.

Topics of interest include but are not limited to:

- Advanced models for batteries, supercapacitors, and fuel cells etc.;
- Energy storage systems integration and performance optimization;
- Multi-physics field modeling, simulation, and experiments of ESSs;
- Online parameter identification and joint state estimation of ESSs;
- Lifetime prediction/analysis and fault diagnosis of HESSs;
- Innovative data analysis and energy management strategies of ESSs;
- Advanced battery safety and thermal runaway warning technology;
- AI-enabled decision making and operation and maintenance.





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Message from the Editor-in-Chief

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