Special Issue

Advances in Prognostics and Health Management for Battery Energy Storage Systems

Message from the Guest Editors

This Special Issue aims to present and disseminate cutting-edge research and innovative developments in the field of PHM for battery energy storage systems. We seek contributions that address the challenges of state estimation, fault diagnosis, remaining useful life (RUL) prediction, and health-conscious management, with a particular emphasis on data-driven and artificial intelligence (AI) techniques.

Topics of interest for publication include, but are not limited to:

- AI and machine learning for battery state estimation (SOC, SOH, RUL);
- Digital twin technologies for BESSs;
- Advanced fault diagnosis and failure prognosis algorithms;
- Data-driven and model-based fusion approaches for PHM;
- Thermal runaway prediction and safety management;
- Cloud-based and edge-computing solutions for BESS management;
- Optimal charging strategies informed by health status;
- Novel sensors and embedded monitoring systems;
- Lifetime prediction and ageing mitigation techniques;
- Other cross-disciplinary research in the field of batteries;
- Other cross-disciplinary research in the field of PHM.

We look forward to receiving your high-quality contributions.

Guest Editors

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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