

Special Issue

Battery-Based Energy Storage Systems: Latest Results on Design, Safety and Performance

Message from the Guest Editors

The market presence of products integrating Lithium-Ion-based battery packs is showing a steady increase, and in recent years, this phenomenon has also started to arise in sectors typically characterized by a high use of fossil fuels. Nevertheless, challenges related to the safety, monitoring and performance improvement of these systems remain highly relevant. The aim of this Special Issue is to collect the most recent and notable findings in these research fields, with the included outcomes providing both theoretical groundwork and practical insights to support advancements in battery system technologies. The topics covered by this Special Issue include, but are not limited to, the following:

- Mechanical Safety Structures of Battery Packs.
- Battery Systems Monitoring and Diagnostic Techniques.
- Battery Management Strategies.
- Battery Management System Architectures.
- Thermal Management Strategies.
- Thermal Runaway Prediction and Mitigation.
- Li-Ion Cell State Estimation.
- Safety and Reliability of Battery Systems.
- Mechanical Strength of Li-Ion Cells.
- Environmental Impact of Battery-Based Energy Storage Systems.

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