Special Issue

Electrochemical Energy Storage in Metal-Ion Batteries and Supercapacitors

Message from the Guest Editor

Batteries and supercapacitors are at the forefront of energy storage technologies, where their diverse power capabilities enable effective time-shifting of bulk energy from the production of renewables to time being spent on energy demands. We are particularly interested in articles and reviews that explore all features of metal-ion and metal-air batteries (including lithium/sodium/potassium/magnesium/aluminum/zinc-based batteries, solid-state batteries, and advanced lead-acid batteries), electrochemical capacitors (ECs), and their energy storage mechanisms and electric components. Topics of interest include the following:

- Electrode/electrolyte materials' synthesis, characterization and performance validation, as well as their fundamental understanding.
- Experimental techniques for testing, characterization, monitoring and diagnosis.
- Modelling and experimental validation of devices.
- Performance analysis and operational management of devices under different conditions.
- Optimal integration with other storage technologies to improve the overall performance of energy systems.
- Sizing and optimization algorithms.
- ESS prognostic and health management.

Guest Editor

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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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