Special Issue

Recent Advancements in Energy Storage Technology

Message from the Guest Editor

This Special Issue will compile cutting-edge research on energy storage technology, addressing the intermittency and volatility challenges associated with the large-scale integration of renewable energy, thereby supporting the global energy transition and decarbonization goals. Currently, energy storage technologies are undergoing diversified breakthroughs, including improvements in the energy density, charging speed, and cycle life of lithium-ion batteries; the maturation of non-lithium technologies such as solid-state batteries, sodium-ion batteries, and flow batteries; and the development of long-duration storage solutions such as hydrogen storage, thermal storage, and gravity storage. These advancements collectively enhance grid stability and reduce reliance on fossil fuels. Topics of interest for publication include, but are not limited to, the following:

- Distributed energy systems;
- Energy and climate change;
- Carbon emission and utilization;
- Recycling of material and energy streams;
- Energy storage and applications;
- Batteries, fuel cells, capacitors;
- Phase change materials for energy storage;
- Thermodynamics;
- Exergy analysis;
- New working fluids for energy applications.

Guest Editor

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About the Journal

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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