Special Issue

Development of Thermodynamic Storage Technology

Message from the Guest Editor

This research topic aims to address the issues existing in the development of thermodynamic energy storage. Attention will be paid to compressed air energy storage, compressed CO2 energy storage, and Carnot batteries, including system construction, numerical modeling, and experimental research. Investigations of system components for enhancing system performance are also welcome.

We welcome original research articles, review articles, and other papers. Suggested topics are as follows, but are not limited to:

- Compressed air energy storage;
- Compressed CO2 energy storage;
- Brayton Carnot battery;
- Heat pump and Rankine cycle;
- The thermodynamic analysis and optimization of energy storage;
- The dynamic modeling of energy storage;
- Experimental tests of thermodynamic energy storage;
- Key component investigations of thermodynamic energy storage.

Guest Editor

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Deadline for manuscript submissions

closed (10 June 2025)

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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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