

Special Issue

Optimized Thermal Energy Storage Technology Based on Phase Change Material

Message from the Guest Editors

This Special Issue aims to demonstrate the advancements and applications of optimized thermal-energy storage (TES) technology centered around phase change materials (PCMs). TES systems are crucial for efficiently managing and utilizing thermal energy across various sectors, including buildings, industrial processes, and renewable energy systems. PCMs, with their ability to store and release large amounts of latent heat during phase transitions, have emerged as promising candidates for enhancing TES performance. Contributions to this Special Issue cover a wide range of topics, including the following:

- Novel PCM Development;
- Enhanced TES-System Design;
- Modeling and Simulation;
- Applications and Case Studies;
- Integration with Renewable Energy Sources.

Overall, this Special Issue provides valuable insights into the latest developments, challenges, and opportunities in optimized thermal-energy storage technology based on phase change materials, contributing to the advancement of sustainable energy solutions and the transition towards a low-carbon future.

Guest Editors

Dr. Sarvenaz Sobhansarbandi

Department of Mechanical Engineering, College of Engineering and Computer Science, California State University, Sacramento, CA 95819, USA

Dr. Tugba Turnaoglu

Oak Ridge National Laboratory, Buildings and Transportation Science Division, 1 Bethel Valley Road, Oak Ridge, TN 37830, USA

Deadline for manuscript submissions

5 June 2026



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/201240

Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)





Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)



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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)