

## Special Issue

# Next-Generation Energy Conversion and Advanced Thermal Storage Technologies for a Sustainable Energy Future

### Message from the Guest Editor

This Special Issue aims to showcase cutting-edge research, innovative designs, and system-level analyses that advance the performance, scalability, and environmental sustainability of energy conversion and thermal storage systems. The topics of interest for publication include, but are not limited to, the following:

- Advanced thermal energy storage materials and systems (e.g., phase-change, thermochemical, sensible heat);
- Integration of thermal storage with renewable energy sources (solar, wind, geothermal, and bioenergy);
- Hybrid and multi-functional energy storage systems combining electrical, thermal, and chemical storage;
- High-efficiency energy conversion technologies for power and heat applications;
- Modeling, simulation, and optimization of energy conversion and storage processes;
- Smart control strategies and digital twins for thermal energy storage systems;
- Life cycle assessment (LCA), techno-economic analysis, and sustainability evaluation of energy conversion and storage solutions;
- Applications in district heating/cooling, industrial waste heat recovery, and building energy systems.

### Guest Editor

Dr. Ehsan Baniasadi

Energy and Bioproducts Research Institute (EBRI), College of Engineering and Physical Science, Aston University, Birmingham B4 7ET, UK

### Deadline for manuscript submissions

5 March 2026



## Energies

an Open Access Journal  
by MDPI

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/255097](https://mdpi.com/si/255097)

*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto: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)