

Special Issue

State-of-the-Art Research in Advanced Materials for Energy Storage Applications

Message from the Guest Editors

The need for the development of alternative energy conversion and storage systems has increased dramatically due to rapid global economic growth, environmental issues, and the depletion of fossil fuels. As two kinds of pollution-free clean energy, light and electricity have attracted increasing interest from the scientific community. Advanced materials are of interest from the perspectives of both scientific research and mechanical manufacturing fields, especially for energy storage applications. Their suitability for such applications is attributed to their unique properties, such as their composition and large surface area, as well as their tunable porous structure, particle size, and surface chemistry. Depending on the methodology used for their synthesis, advanced materials will continue to play a critical role in dealing with global challenges. The articles presented in this Special Issue will cover various topics, including, but not limited to, photoelectrocatalysis materials, solar cells, solar photoelectrocatalysis degradation, energy storage devices (batteries and electrochemical supercapacitors), and these materials' synthesis, properties, and applications.

Guest Editors

Prof. Dr. Ding Chen

Dr. Zeyan Zhou

Dr. Shuaiming He

Dr. Guozhi Ma

Deadline for manuscript submissions

closed (31 January 2025)



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/135267

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)