

Special Issue

Advances in Materials for Electrochemical Energy Applications 2024

Message from the Guest Editor

Sustainable and environmentally friendly energy storage and conversion technologies are essential to satisfy the dramatically increasing global energy demand and to reduce the dependence on non-renewable fossil fuels. The development of novel materials plays a key role in improving the properties and performance of devices in a wide range of electrochemical energy applications including batteries, supercapacitors, flow batteries, fuel cells, hydrogen storage, photocatalysis and thermal energy storage. The aim of this Special Issue is to present the recent advances in materials used in all electrochemical forms of sustainable energy harvesting, conversion, storage and utilization, including but not limited to:

- Batteries;
- Supercapacitors;
- Flow batteries;
- Fuel cells;
- Electrocatalysis and electrocatalysts for energy conversion and storage;
- Photocatalysis and photocatalysts for water splitting;
- Thermochemical, piezoelectric and thermoelectric materials and devices;

Dr. Luis Fernando Arenas

Guest Editor

Dr. Claudio Mele

Department of Engineering for Innovation, University of Salento, Via Monteroni, 73100 Lecce, Italy

Deadline for manuscript submissions

5 May 2025



Energies

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.2



mdpi.com/si/137770

Energies

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 3.0
CiteScore 6.2



[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 Aerospace Engineering, University of Roma Sapienza, Via Eudossiana 18, 00184 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)