



*energies*



an Open Access Journal by MDPI

## Element 1 for Sustainable Decarbonization and Net-Zero Economy: Progress in Generation, Storage, Distribution and End-Use Technologies

Guest Editor:

**Dr. Praveen Cheekatamarla**  
Oak Ridge National Laboratory, 1  
Bethel Valley Rd., Oak Ridge, TN  
37830, USA

Deadline for manuscript  
submissions:

**31 December 2024**

### Message from the Guest Editor

This Special Issue aims to focus on recent technology advancements in the key areas of production, storage, distribution and utilization. Economically producing, safely distributing and efficiently utilizing hydrogen are critical to realizing its potential in achieving global carbon reduction targets. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following:

- Electrolyzer technologies such as PEM, alkaline and solid oxide, including the reversible SOCs;
- Sorption-based hydrogen storage materials; traditional high pressure and cryogenic storage solutions; hydrogen embrittlement;
- Hydrogen-enabling harsh environment materials;
- Hydrogen leakage detection and suppression;
- Hydrogen combustion engines and fuel cells for passenger, long-haul and heavy-duty transportation; hydrogen-based heating and cooking equipment in the building industry;
- Hydrogen-fueled cogeneration and trigeneration technologies;
- Integrated microgrid technologies involving hydrogen;
- Techno economics of hydrogen technologies.

I look forward to receiving your contributions.



[mdpi.com/si/162134](https://mdpi.com/si/162134)

# Special Issue



# energies



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Enrico Sciubba**

Department of Mechanical and  
Aerospace Engineering,  
University of Roma Sapienza, Via  
Eudossiana 18, 00184 Roma, Italy

## 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.

## 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 (*Engineering (miscellaneous)*)

## Contact Us

---

*Energies* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/energies](http://mdpi.com/journal/energies)  
[energies@mdpi.com](mailto:energies@mdpi.com)  
[X@energies\\_mdpi](https://twitter.com/energies_mdpi)