

Special Issue

Preparation and Optimization of Solid Oxide Fuel/Electrolysis Cells (SOFCs/ SOECs)

Message from the Guest Editor

The solid oxide fuel cell (SOFC) is considered one of the most promising alternative techniques for using hydrogen to produce electricity. Further, as the reverse process of the SOFC, the solid oxide electrolysis cell (SOEC) has been considered an effective technology for producing hydrogen at a low cost, with high efficiency and environmental friendliness. The SOEC can use waste heat from nuclear power plants and other industrial processes for high-temperature electrolysis of water, which can reduce the amount of electricity needed to produce hydrogen. The key topics covered by this Special Issue include but are not limited to the following:

- New SOFC/SOEC structures;
- Low-temperature SOFC/SOEC techniques;
- Synthesis and characteristics of the SOFC/SOEC anode, electrolyte, interconnects, and cathode materials;
- Microstructural improvement of the SOFC/SOEC supporting layers;
- Novel fabrication methods and stack design techniques;
- Numerical studies and diagnostic methods;
- Other methods to use or produce hydrogen.

Guest Editor

Dr. Tao Wei

School of Energy and Power, Jiangsu University of Science and Technology, Zhenjiang 212003, China

Deadline for manuscript submissions

closed (20 May 2025)



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/147024

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)