

Special Issue

Solid-State High-Temperature Electrochemical Devices: Fabrication, Characterization, Operation

Message from the Guest Editor

This Special Issue of *Energies* will focus on novel approaches to cell and stack designs of the various solid oxide cell, including both oxygen and high-temperature protonic conducting. Additionally, it will cover the characterization of the electrochemical units and issues, including those elements related to degradation.

- Design of the cells, single repeating units and stacks.
- Characterization of the electrochemical performance of the cells.
- Electrochemical degradation of the cells in SOFC, PCFC, SOEC, PCEC, and SOFEC modes.
- Characterization and degradation of the interfaces in single repeating unit, including anode and cathode electric contacts as well as possible impact of the sealing.
- Novel and unusual application of solid oxide cells like electrocatalytic reactors, etc.

This Special Issue aims to publish the results, obtained on macro cells (with active surfaces of 10 cm² or higher) in conditions approaching those expected in electrochemical devices.

Guest Editor

Dr. Yevgeniy Naumovich

CTH2—Center for Hydrogen Technologies, Institute of Power Engineering—National Research Institute, Augustówka 36, 02-981 Warsaw, Poland

Deadline for manuscript submissions

closed (31 March 2025)



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/177489

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)