

Special Issue

Advanced Nuclear Energy Systems: Design and Engineering Innovations

Message from the Guest Editor

This Special Issue aims to provide a platform for showcasing the latest progress in nuclear system design, encouraging cross-disciplinary collaboration and supporting the development of next-generation nuclear technologies. Topics of interest include the following:

- Advanced reactor concepts (SMRs, HTGRs, MSRs, fast reactors);
- Core and fuel design innovations;
- Advanced fuel cycle strategies and reprocessing technologies;
- Passive safety systems and self-regulating mechanisms;
- Multi-physics and system-level modeling;
- Thermal-hydraulics and neutronics;
- Materials and structural design for high-performance environments;
- Digital twins and smart reactor technologies;
- Simulation-driven design and engineering methods.

Guest Editor

Prof. Dr. Jerzy Cetnar

Department of Nuclear Energy and Radiochemistry, AGH University, al. Mickiewicza 30, 30-059 Krakow, Poland

Deadline for manuscript submissions

24 November 2025



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/243145

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)