

## Special Issue

# Fluid Dynamics Challenges in Energy Systems: High-Efficiency Design and Control

### Message from the Guest Editors

This Special Issue welcomes theoretical, computational and experimental review articles and research papers that focus on fluid dynamics and design, control and optimization of different energy systems and components. Research papers with applications to multi-physics and multi-scale thermofluid problems, such as within multifunctional heat exchangers and reactors, hybrid-renewable thermofluid and energy systems, and control, design and optimization are all welcome. Papers covering different industrial energy systems and applications where coupled fluid and energy flows take place are also welcome (renewable energy, solar energy, geothermal energy, on-shore and off-shore wind energy). Papers addressing the role of artificial intelligence (AI) and machine learning (ML) in the control, prediction and optimization of energy and thermofluid flow systems are also welcome. Research focusing on advanced optimization methods and algorithms within CFD (computational fluid dynamics) using finite volumes (FVM), finite elements (FEM) and lattice Boltzmann (LBM) methods within adjoint, shape and topology optimization techniques to solve complex energy and thermofluid problems are also welcome.

---

### Guest Editors

Prof. Dr. Talib Dbouk

CORIA, UMR 6614, CNRS, Normandy University, UNIROUEN, 76000 Rouen, France

Dr. Samer Ali

ULR 4515–LGCgE, Laboratoire de Génie Civil et géo-Environnement, University of Lille, Institut Mines-Télécom, Artois University, Junia, F-59000 Lille, France

---

### Deadline for manuscript submissions

25 September 2026



## Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/260577](https://mdpi.com/si/260577)

*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto: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)