

Special Issue

Efficient Building Energy Systems: Simulation, Optimization and Renewable Energy Integration

Message from the Guest Editors

Buildings account for a substantial share of global energy consumption and greenhouse gas emissions, and improving their energy performance is essential for achieving international decarbonisation and resilience goals. This Special Issue, titled “Efficient Building Energy Systems: Simulation, Optimization and Renewable Energy Integration”, aims to gather cutting-edge research that advances the theoretical foundations, computational methods, design approaches, and practical applications related to building performance and energy system integration. Topics of interest include, but are not limited to, the following:

- Building energy simulation and model validation;
- Optimization of building envelopes, HVAC systems, shading, and passive design;
- Integration of renewable energy systems into buildings and districts;
- Energy storage and demand-side management strategies;
- Data-driven energy modelling, machine learning, and digital twins;
- Smart façade systems, dynamic envelopes, and advanced materials;
- Life-cycle assessment and embodied energy analysis;
- Nearly zero and net-zero energy buildings.

Guest Editors

Dr. Shahryar Habibi

1. Department of Architecture, University of Ferrara, Via Ariosto, 35, 44121 Ferrara, Italy

2. Faculty of Engineering, Free University of Bozen-Bolzano, NOI Techpark, Bruno-Buozzi-Straße 1, Via Bruno Buozzi, 39100 Bozen-Bolzano, Italy

Dr. Martina Ferrando

Dipartimento di Energia, Politecnico di Milano, 20156 Milan, Italy

Deadline for manuscript submissions

15 June 2026



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/266407

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)