Special Issue

Energy Modeling and Efficiency Optimization for Sustainable Building Systems

Message from the Guest Editors

The growing need to decarbonize the built environment and enhance energy efficiency in buildings has led to significant advancements in energy modeling, optimization techniques, and intelligent control strategies. As urbanization accelerates, sustainable building systems must integrate cutting-edge technologies to minimize energy consumption, reduce carbon emissions, and enhance occupant comfort. Recent developments in artificial intelligence (AI), physics-informed modeling, and digital twin technologies have opened new frontiers in optimizing energy use in buildings. This Special Issue aims to showcase state-of-the-art research in energy modeling, data-driven optimization, and intelligent building operations. This issue will focus on novel methodologies, case studies, and interdisciplinary perspectives that contribute to sustainable building design, predictive control, and resilience against climate change. We welcome submissions of original research articles, review papers, and case studies that highlight the latest innovations in building energy efficiency, modeling, and smart operational strategies.

Guest Editors

Dr. Liang Zhang

Department of Civil and Architectural Engineering and Mechanics, The University of Arizona, Tucson, AZ 85701, USA

Dr. Jianli Chen

Department of Diasater Mitigation for Structures, College of Civil Engneering, Tongji University, Shanghai 200092, China

Deadline for manuscript submissions

20 January 2026

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/233171

Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

mdpi.com/journal/energies

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

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)