

Special Issue

Innovative Approaches to Energy Efficiency in Building Design and Operation

Message from the Guest Editors

In the context of a global push towards sustainability and carbon neutrality, improving energy efficiency in buildings has become a crucial element in the fight against climate change. Buildings account for a significant share of global energy consumption, making them a prime target for energy-saving strategies that can significantly reduce greenhouse gas emissions. This Special Issue of *Applied Sciences* invites contributions that explore cutting-edge research, innovative technologies, and interdisciplinary approaches aimed at enhancing energy efficiency throughout the entire building lifecycle—from design and construction to operation and retrofitting. Key areas of interest include the development of advanced materials and systems for reducing thermal loads, the integration of renewable energy sources into building designs, and the implementation of smart technologies for energy management. Moreover, we welcome studies on passive design strategies, occupant behavior analysis, and artificial intelligence use in optimizing building performance.

Guest Editors

Dr. Gabriele Battista

Department of Industrial, Electronic and Mechanical Engineering, Roma TRE University, 00146 Rome, Italy

Dr. Emanuele De Lieto Vollaro

Department of Architecture, Roma TRE University, 00154 Rome, Italy

Deadline for manuscript submissions

closed (30 March 2026)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/215487

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

mdpi.com/journal/

[applsci](https://mdpi.com/journal/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, 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, Inspec, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)