

Special Issue

Energy Efficiency and Sustainability in Construction and Building Materials

Message from the Guest Editors

With growing concerns over climate change and the depletion of natural resources, the construction industry has recognized the urgent need for energy-efficient and environmentally friendly practices. This Special Issue delves into the latest advancements, challenges, and opportunities in the realm of energy-efficient and sustainable construction and building materials. With a strong emphasis on energy-efficient practices and environmental responsibility, this Special Issue explores key topics such as phase change materials (PCMs), sustainable building materials, concrete innovations, and thermal insulation. The selected articles and studies within this Special Issue highlight recent research and developments in energy-efficient building design, showcasing the potential of phase change materials (PCMs), proper thermal insulation, and innovative building envelope design to optimize thermal performance and reduce energy consumption. Furthermore, the importance of sustainable building materials derived from renewable sources, recycled materials, and low-carbon alternatives are also emphasized in this Special Issue.

Guest Editors

Dr. Mohammad Hajmohammadian Baghban
Department of Manufacturing and Civil Engineering, Norwegian
University of Science and Technology, Trondheim, Norway

Dr. Davoud Tavakoli
Department of Civil Engineering, KU Leuven University, 3001 Leuven,
Belgium

Deadline for manuscript submissions

closed (10 December 2024)



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



mdpi.com/si/176684

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

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





Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



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



About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

Prof. Dr. David Arditi

Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

Author Benefits

High Visibility:

indexed within SCIE (Web of Science), Scopus, Ei Compendex, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Construction and Building Technology) /
CiteScore - Q1 (Architecture)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).