

Special Issue

Advanced Energy Storage Technologies for Low-Carbon Buildings

Message from the Guest Editors

This Special Issue aims to showcase the latest advancements in low-carbon energy storage materials and relevant systems, the performance of clean energy storage, and multi-energy supply systems integrated with energy storage systems, highlighting their potential to revolutionize building energy consumption and carbon emissions and contribute to more energy-efficient and environmentally friendly buildings. Topics of interest include, but are not limited to, the following:

- Development and performance characterization of low-carbon thermal energy storage materials, including sensible heat storage materials, phase-change materials, and thermochemical heat storage materials.
- Latest review of design, formulation, and performance characterization of low-carbon energy storage materials.
- Innovative application methods of low-carbon energy storage materials.
- Theory and methods of energy storage systems integrated with multi-energy supply systems.
- Innovative manufacturing technologies.
- Case studies and applications.

For more information about the special issue, please visit the following link:

https://www.mdpi.com/journal/buildings/special_issues/RA4PF640KG

Guest Editors

Prof. Dr. Yaxuan Xiong

Prof. Dr. Cancan Zhang

Prof. Dr. Chun Chang

Deadline for manuscript submissions

31 December 2025



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



[mdpi.com/si/243485](https://www.mdpi.com/si/243485)

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

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