

Special Issue

Advances in Phase Change Materials for Thermal Energy Storage in Buildings

Message from the Guest Editors

The need for energy-efficient and sustainable building solutions has driven the development and integration of advanced thermal energy storage systems. Among these, Phase Change Materials (PCMs) stand out due to their superior capability to store and release thermal energy through phase transitions, making them highly effective in regulating building temperatures and reducing energy consumption. With the growing emphasis on sustainable and green buildings, PCMs are expected to become an increasingly important element in modern building practices. This Special Issue aims to highlight the latest advancements in PCM research and application within the context of thermal energy storage in buildings. We invite original research articles, comprehensive reviews, and case studies that address various aspects of PCM development, performance, and integration in building environments to bring together the latest advancements in the use of PCMs for minimizing energy use and enhancing thermal comfort in buildings.

Guest Editors

Dr. Cagri Kutlu

Prof. Michele Bottarelli

Dr. Yuanlong Cui

Dr. Mehmet Tahir Erdingç

Prof. Dr. Yuehong Su

Deadline for manuscript submissions

30 September 2026



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



mdpi.com/si/220701

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 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).