

# Special Issue

## Strength and Performance of Building Materials

### Message from the Guest Editors

Building materials, representing 50–80 % of the total value of the construction industry, are an essential element to achieve the anticipated capacity, safety, and performance of these infrastructures. Generally, multiple functions and multiple performances are expected from buildings and other structures. For instance, buildings and structures must resist gravity and extreme loads such as wind and earthquakes by satisfying strength and ductility requirements ..... Therefore, modern structures must satisfy multiple performance requirements, and those must be achieved through the proper selection of building materials and section sizes.

This Special Issue aims to reflect the current state-of-the-art and new developments in all topics related to the evaluation of strength and performance of all building materials, with a focus on structural capacity, off-site manufacturing, fire, thermal properties, durability, acoustics, sustainability, and circularity. For further reading, please follow the link to the Special Issue Website at:

[https://www.mdpi.com/journal/buildings/special\\_issues/Performance\\_Building](https://www.mdpi.com/journal/buildings/special_issues/Performance_Building)

### Guest Editors

Dr. Shanaka Baduge

Department of Infrastructure Engineering, The University of Melbourne, Melbourne, Australia

Prof. Dr. Priyan Mendis

Department of Infrastructure Engineering, The University of Melbourne, Parkville, VIC 3010, Australia

### Deadline for manuscript submissions

closed (31 March 2023)



## Buildings

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.1  
CiteScore 4.4



[mdpi.com/si/111574](https://www.mdpi.com/si/111574)

*Buildings*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[buildings@mdpi.com](mailto: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).