Special Issue

Innovative Materials and Technologies for Sustainable Structural Engineering

Message from the Guest Editors

The Special Issue *"Innovative Materials and Technologies for Sustainable Structural Engineering"* aims to present the latest advancements in sustainable practices and material innovations that address new construction and the pressing need to preserve and upgrade existing infrastructure. Adopting advanced technologies and eco-conscious materials becomes essential as the construction industry transitions toward greener and more efficient systems. This Issue welcomes contributions focused on developing and applying novel materials such as fiber-reinforced polymers, self-healing and ultra-high-performance concrete, bio-based composites, recycled aggregates, and low-carbon binders. Topics include innovative construction approaches such as 3D printing, modular systems, and digital fabrication. Emphasis is placed on AI-driven design and optimization methods that support material efficiency and long-term structural sustainability. Particular attention is given to strategies for the sustainable rehabilitation, strengthening, and extension of service life in existing infrastructure, aiming to reduce resource consumption and environmental impact.

Guest Editors

Dr. Violetta K. Kytinou
Dr. Adamantis Zapris
Dr. Ali Ghamari

Deadline for manuscript submissions

31 August 2026

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 5.6

mdpi.com/si/237616

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

mdpi.com/journal/buildings

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 5.6

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).