

Special Issue

Research on Building Materials for Structural Characterization and Applications

Message from the Guest Editors

Around ten billion metric tons of concrete using largely ordinary Portland cement (OPC) are manufactured worldwide annually. For each ton of used OPC, approximately one ton of CO₂ is produced. CO₂ emissions are related to the energy consumption of raw materials and external heat used during production. Current production rates of OPC factories are responsible for 7% of the total CO₂ emissions worldwide. Reduction of the carbon footprint and energy consumptions due to manufacturing of Portland cement is a burning need these days. The unexpected amount of cement and CO₂ emissions have elevated global awareness and prompted scientists to develop alternative sustainable concrete, which ensures the eco-friendly construction industry for future generations. It is essential to study on the characterization and application of new building materials for a greener environment and sustainable construction of building structures in the escalating demand of infrastructure development globally. This Special Issue is dedicated to current research on experimental, theoretical, computational and relevant research works on building materials in the design and construction of engineering structures.

Guest Editors

Dr. A. B. M. Saiful Islam

Department of Civil & Construction Engineering, College of Engineering, Imam Abdulrahman Bin Faisal University, Dammam 31451, Saudi Arabia

Dr. Akter Hosen

Department of Civil and Environmental Engineering, College of Engineering, Dhofar University, Salalah 211, Oman

Deadline for manuscript submissions

closed (31 October 2023)



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 3.4



mdpi.com/si/142310

Buildings

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 3.4



[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 Scopus, SCIE (Web of Science), Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Civil) / CiteScore - Q1 (Architecture)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.2 days after submission; acceptance to publication is undertaken in 3.6 days (median values for papers published in this journal in the first half of 2024).