Special Issue

Accelerated Carbonation Technologies for Construction and Building Materials

Message from the Guest Editors

Our world is facing critical environmental challenges due to the extensive release of CO2, and the production and use of concrete contribute a significant portion of these carbon emissions.....To mitigate global warming and the associated environmental changes, reducing the CO2 released by construction and building materials has attracted significant interest. This Special Issue aims to discuss the new advanced accelerated carbonation technologies to reduce the carbon footprint of construction and building materials, which also have good performance. Areas to be covered in this Research Topic may include, but are not limited to:

- Low-carbon concrete.
- Carbon curing.
- Low-carbon cement.
- Carbonation mineralization materials.
- Carbonation of recycled wastes (recycled concrete, IBA, steel slag, etc.).
- Biological carbonation mineralization.
- Life cycle assessment (LCA).
- Theory and simulations on carbonation technologies.
- Other accelerated carbonation technologies.

For further reading, please follow the link to the Special Issue Website at:
https://www.mdpi.com/journal/buildings/special_issues/GR8O660XM4

Guest Editors

Dr. Peiliang Shen

Dr. Dongxing Xuan

Dr. Shipeng Zhang

Dr. Rahil Khoshnazar

Deadline for manuscript submissions

closed (30 November 2023)

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/139856

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 4.4

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).