Special Issue

Next-Generation Smart Construction: Civil Engineering Materials and Technologies

Message from the Guest Editors

We invite original research articles, case studies, and comprehensive reviews on the topics including, but not limited, to following:

New construction materials and their properties (self-healing concrete, advanced composites, etc.);
Smart sensors and IoT solutions for construction monitoring and management;
Advances in digital fabrication techniques, including 3D printing in construction;
Sustainable and green building technologies;
Implementation of artificial intelligence and machine learning in construction management and structural health monitoring;
Life cycle assessment and optimization of new construction materials and methods;
Case studies on the use of innovative materials and technologies in modern construction;
Economic and regulatory challenges associated with adopting new technologies in civil engineering. For inquiries regarding this call for papers, please contact the at baoqcheng4-c@my.cityu.edu.hk or the Buildings editorial office at astoria.yao@mdpi.com.

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Deadline for manuscript submissions

closed (20 April 2025)

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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

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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).