Special Issue

Advances in Concrete Material Science and Technology

Message from the Guest Editors

We are pleased to announce a *Buildings* Special Issue titled "Advances in Concrete Material Science and Technology". This issue aims to bring together cutting-edge research and innovative developments in the field of concrete materials, covering both fundamental science and practical applications. Concrete remains the most widely used construction material globally, and recent advancements in material science and technology have significantly enhanced its performance, durability, and sustainability. This Special Issue will focus on, but is not limited to, the following topics:

- Novel concrete materials (e.g., ultra-high-performance concrete, self-healing concrete, and eco-friendly mixtures);
- Advanced characterization techniques for concrete microstructure and properties;
- Durability enhancement and long-term performance under harsh environments;
- Sustainable concrete solutions, including recycled materials and carbon footprint reduction;
- Smart and multifunctional concrete for modern infrastructure.

Guest Editors

Dr. Yuching Wu

Dr. Peng Zhu

Dr. Meiyan Bai

Deadline for manuscript submissions

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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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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).