Special Issue

Characteristics of Ultra-High-Performance Concrete: Latest Advances and Prospects

Message from the Guest Editors

Optimizing structural dimensions and increasing spanning ability, the service life of engineered structures is greatly enhanced by UHPC due to its characteristics of high strength, high toughness, excellent durability, and volumetric stability. However, high material costs, limited design specifications, complex preparation processes, and limited available resources have seriously prevented the application of UHPC in practical engineering. Therefore, we will need to establish design standards and specifications, develop sustainable and cost-effective UHPC, and improve construction equipment for UHPC material support. This will render UHPC a viable solution for improving the sustainability of buildings and other infrastructure components. We welcome papers including but not limited to:

- Definition, properties and development of UHPC
- Optimization of UHPC components and mixture design
- Eco-friendly and cost-effective UHPC materials
- UHPC composite structure
- Structural retrofitting and rehabilitation of UHPC
- Design specifications and standards of UHPC
- Applications of UHPC in civil engineering
- Further potential studies and challenges of UHPC

Guest Editors

Dr. Zhongya Zhang
Dr. Yang Zou
Dr. Jun Yang

Deadline for manuscript submissions

closed (10 June 2025)

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

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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

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

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