



an Open Access Journal by MDPI

Advances in Ultra-High-Performance Fiber-Reinforced Concrete

Guest Editors:

Dr. Peng Gao

School of Civil Engineering, Hefei University of Technology, Hefei 230009, China

Dr. Zheng Dong

College of Civil Engineering, Zhejiang University of Technology, Hangzhou 310023, China

Dr. Tan Wang

School of Civil Engineering, Wuhan University, Wuhan 430072, China

Deadline for manuscript submissions: **20 January 2026**

Message from the Guest Editors

This Special Issue is dedicated to exploring the latest advancements in FRC technology, aiming to push the boundaries of its application and performance. Key topics will include fiber reinforcement strategies to improve performance, strategies for reducing the carbon footprint, and innovations in the curing process that enhance the hydration and overall performance of FRC. This Special Issue will also explore the behavior of FRC under extreme conditions, its structural applications, and the interface properties crucial for its performance. Furthermore, it will delve into mix ratio optimization and the constitutive relations of FRC to provide deeper insights into its capabilities and design. Importantly, contributions are not limited to these topics alone.

- fiber reinforcement strategy
- low-carbon UHPC
- curing environment
- hydration process of FRC
- extreme environment
- UHPC structure
- FRC interface
- mix ratio optimization
- constitutive relation





mdpi.com/si/207895





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials. materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. Materials provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank: JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

Contact Us

Materials Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com X@Materials_Mdpi