







an Open Access Journal by MDPI

Durability and Mechanical Properties of Sustainable, High-Performance and Multi-Functional Concrete Materials

Guest Editors:

Prof. Dr. Yongchang Guo

School of Civil and Transportation Engineering, Guangdong University of Technology, Guangzhou 510006, China

Dr. Yu Zheng

School of Environment and Civil Engineering, Dongguang University of Technology, Dongguan 523808, China

Dr. Yulei Bai

Faculty of Architecture, Civil And Transportation Engineering, Beijing University of Technology, Beijing 100000, China

Deadline for manuscript submissions:

closed (10 May 2023)

Message from the Guest Editors

Dear Colleagues,

Since its invention, concrete has become one of the most commonly used construction materials in the world. In recent decades, as awareness of environmental protection has grown and construction demands have increased, a number of new highly sustainable, high-performance and multifunctional concrete technologies and materials have emerged. As a result of these new concrete technologies, UHPC, ECC, geopolymer concrete, recycled waste concrete, self-healing concrete and other newly developed concrete materials have been developed with improved mechanical and green properties, resulting in a variety of new features and functions that have contributed to the development of new concrete structures.

This Special Issue focuses on new concrete materials' durability and mechanical properties, which are key factors in their application in engineering with regard to sustainability, high performance and multifunctionality. We intend to highlight new developments in concrete materials, including but not limited to the design and preparation, durability, mechanical properties, microstructure characterization and structural applications of new concrete materials.













an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, OC H3A 0C7, Canada

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and systems. 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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us