# Special Issue

# Advances in Compressive Strength of Cement-Based Materials

## Message from the Guest Editors

Since the advent of Portland cement in 1824, cement-based materials have become the most extensively utilized and consumed building material. However, although the durability of concrete has a great impact on the safety and usability of the structure, compressive strength is still recognized as an extremely important property and significantly affects the structural performance of a building. Compressive strength is the first factor to be considered in structural design and quality inspection. A correct understanding of the mechanism and factors that affect strength is of great significance to the accurate design of concrete and ensuring the quality of the structure. In structural design, it is the first factor to be considered during quality inspection. Thus, this Special Issue focuses on advances in the compressive strength of cement-based materials. We welcome the submission of scientific works addressing the compressive strength of concrete, such as strengthening mechanisms, strength modeling and prediction, ultimate strength, and improvement techniques (not limited to the above topics).

## Guest Editors


Dr. Shuai Bai
Harbin Institute of Technology, Harbin, China

Dr. Ze Chang
The Mechanical Engineering department at Eindhoven University of Technology (TU/e), Eindhoven, The Netherlands

Dr. Tao Du
Department of Chemistry and Bioscience, Aalborg University, Aalborg 9100, Denmark


## Deadline for manuscript submissions

closed (20 April 2025)


# Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/201570

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

mdpi.com/journal/materials

# Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

# About the Journal

## Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, 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.

## 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, QC H3A 0C7, Canada

## 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)