



an Open Access Journal by MDPI

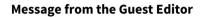
Magnesia-Phosphate Cement (MPC) and MPC-Based Functional Materials

Guest Editor:

Dr. Hongyan Ma

Department of Civil, Architectural and Environmental Engineering, Missouri University of Science and Technology, Rolla, MO, USA

Deadline for manuscript submissions: closed (10 October 2023)



Dear Colleagues,

Magnesia-phosphate cement (MPC) is one of the alternative cements in the high-performance track. It can set quickly even at very low temperatures, and produce high-strength concrete with little shrinkage and superior durability. Because of these technical merits, MPC has been used in the fast repair of pavement and structures, the encapsulation of nuclear waste and toxic substances, and a series of other functional applications.

To promote the application of MPC as well as to leverage its technical merits to improve the durability and sustainability of infrastructure, future studies are thus needed to: (1) improve the eco-efficiency and lower the cost of MPC by identifying and investigating alternatives to dead-burnt MgO and supplementary cementitious materials for MPC; (2) develop high-efficiency admixtures (e.g., composite retarder) for MPC; (3) address the water-/moisture-stability of MPC-based materials; and (4) prove the compatibility of MPC with steel and other reinforcements.

Dr. Hongyan Ma

Guest Editor









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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com X@Materials_Mdpi