Special Issue

Mineral Bone Cements: Current Status and Future Prospects

Message from the Guest Editors

Self-setting mineral bone cements, mostly based on calcium and magnesium phosphates, but also silicate phases, are important bone replacement materials, successfully used in clinics for many years. In the last decade, significant progress was achieved—for example, concerning the increase in the mechanical strength by fibre reinforcement, modification with biologically-active metal ions, improved drug loading and release capabilities, the development of novel cements with higher degradation ability, and successful utilization of such cements in additive manufacturing technologies. In addition, some composite materials were presented, e.g., by combining the advantages of fast-degrading silicates with mechanically more stable calcium phosphates or the simultaneous formation of a hydrogel and cement phase (dual-setting approach) to create ductile cement–polymer composites. Submitted manuscripts may cover all aspects, ranging from basic investigations into cement chemistry to novel processing approaches, cement modifications to adjust material and biological properties and *in vitro* and *in vivo* testing of the materials.

Guest Editors

Prof. Dr. Michael Gelinsky

Centre for Translational Bone, Joint and Soft Tissue Research, Faculty of Medicine and University Hospital, Technische Universität Dresden, 01307 Dresden, Germany

Prof. Dr. Uwe Gbureck

Department of Functional Materials in Medicine and Dentistry, Würzburg University, Würzburg, Germany

Deadline for manuscript submissions

closed (31 December 2019)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/16905

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

About the Journal

Message from the Editorial Board

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.

Editors-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

Prof. Dr. Yuguang Ma
State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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)

MDPI