



Mineral Bone Cements: Current Status and Future Prospects

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

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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.





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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

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Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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