







an Open Access Journal by MDPI

Development and Application of Metallic Biomaterials

Guest Editors:

Prof. Dr. Tae-Yub Kwon

Department of Dental Biomaterials, School of Dentistry, and Institute for Biomaterials Research & Development, Kyungpook National University, Daegu, Korea

Prof. Dr. Du-Hyeong Lee

Department of Prosthodontics, School of Dentistry, Kyungpook National University, Daegu, Korea

Deadline for manuscript submissions:

closed (20 September 2022)

Message from the Guest Editors

We should be aware that a number of challenges are still associated with the applications of various metallic implantable materials. A metallic biomaterial should be primarily biocompatible, which means that it does not illicit an adverse reaction when placed into services. In recent years, there has been intense emphasis on the multi-functionality of metallic biomaterials. Imparting multi-functionality on bio-inert metals is generally achieved by surface modification. In addition, 3D printing technology holds great promise for the processing of patient-specific metallic implants to create complex architectures. In the advancement of 3D printing, however, there are still a number of technological challenges including the integration of a vascular network.

With the increased need for body part replacements, it is important to be aware about the limitations of metallic biomaterials and to develop new strategies in order to overcome the limitations. This Special Issue will compile recent developments and applications in the field of metallic biomaterials. It is our pleasure to invite you to contribute your research articles, short communications, or reviews for this Special Issue.













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 svstems. 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 - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com X@Materials_Mdpi