



Advances in Enhancing Degradation Resistance of Metallic Implants by Surface Engineering

Guest Editor:

Dr. Bobby Kannan Mathan

Biomaterials and Engineering Materials (BEM) Laboratory, College of Science, Technology and Engineering, James Cook University, Townsville, QLD 4811, Australia

Deadline for manuscript submissions:

closed (31 January 2018)

Message from the Guest Editor

Dear Colleagues,

In today's society, the use of metallic implants to assist in the repair or replacement of damaged tissue and bone structure has become very common. These implants can be broadly classified into two categories, i.e., permanent implants and temporary implants. Titanium alloys, cobalt-chrome alloys and stainless steels are the commonly used materials for permanent implants in applications such as hip and long-bone replacements. Minor fractures generally require mini-implants in the form of screws, pins and small plates for bone repair. These implants are only required for a short-period of time, hence, they are termed temporary implants.

For this Special Issue on “Advances in Enhancing Degradation Resistance of Metallic Implant by Surface Engineering”, we are interested in original and review articles on advanced methods, e.g., surface treatments, ceramic and polymer coatings, and ion implantation, for improving the degradation resistance of metallic biomaterials such as titanium-based alloys, stainless steels, cobalt-chromium, and magnesium alloys.





an Open Access Journal by MDPI

Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Metallurgy and Metallurgical Engineering*) / CiteScore - Q1 (Metals and Alloys)

Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/metals
metals@mdpi.com
[X@Metals_MDPI](https://twitter.com/Metals_MDPI)