Special Issue

Advances in Enhancing Degradation Resistance of Metallic Implants by Surface Engineering

Message from the Guest Editor

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 factures 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.

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

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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About the Journal

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.

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

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