

Special Issue

Advances in Titanium Alloy: Surface Modification and Biomedical Applications

Message from the Guest Editors

Metals is launching a new Special Issue entitled "Advances in Titanium Alloy: Surface Modification and Biomedical Application". This Special Issue will offer an opportunity to showcase the most recent experimental and theoretical progress in this progressive field. Metallic materials constitute approximately three-quarters of biomedical implant materials. Thanks to their excellent combination of chemical, mechanical, and electrochemical properties, starting from the middle of the last century, Ti and its alloys have been widely used for various biomedical applications, along with a wide range of industries and applications. Despite the numerous advantages of titanium-based biomaterials, several clinical issues remain, including low tribocorrosion resistance resulting in the release of metallic ions and wear debris, an elastic modulus mismatch between implants and bone leading to bone resorption, bio-inertness that can hinder osteointegration, and lack of antimicrobial activity that can increase the risk of infection.

Guest Editors

Dr. Alexandra C. Alves

DEMec—Department of Mechanical Engineering, Faculdade de Engenharia da Universidade do Porto, Porto, Portugal

Dr. Fatih Toptan

Izmir Institute of Technology, Department of Materials Science and Engineering, Urla, 35430 Izmir, Turkey

Deadline for manuscript submissions

closed (20 June 2024)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/169469

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

[mdpi.com/journal/
materials](https://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](https://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)