



an Open Access Journal by MDPI

Ti-Alloys: Microstructures, Mechanical Properties, Deformation Mechanisms, and Thermodynamics

Guest Editor:

Dr. Jinyong Zhang

School of Material Science and Engineering, China University of Mining and Technology, Xuzhou 221008, China

Deadline for manuscript submissions:
closed (20 January 2023)

Message from the Guest Editor

Dear Colleagues,

As we all know, Ti and Ti-alloys offer a wide range of properties such as high strength, low density, and good corrosion resistance. These properties are advantages for Ti-alloys to be used in various engineering fields, such as aerospace, biomedical, automotive, etc.

At present, all countries are developing new Ti-alloys with low cost and high performance. New applications of Ti-alloys require significant improvements in their physical and mechanical properties, which can be achieved through the use of new technologies (laser processing, additive manufacturing, nanotechnology). Traditionally, alloy design is based on physical metallurgy, in particular an understanding of structural evolution and property relationships. On the other hand, the rapid development of digital technologies has enabled intelligent engineering and design systems (eg, finite element simulations, neural networks.) to play a huge role in the development of advanced materials and technologies.

This Special Issue of Materials aims to present recent original research on the design, mechanical properties, and micromechanisms of Ti-alloys.

Dr. Jinyong Zhang

Guest Editor



mdpi.com/si/117078

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, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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.

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](https://twitter.com/Materials_Mdpi)