







an Open Access Journal by MDPI

# Mechanics, Fatigue and Fracture of Metallic Materials (Second Edition)

Guest Editors:

## Dr. Zbigniew Marciniak

Department of Mechanics and Machine Design, Opole University of Technology, 45-271 Opole, Poland

#### Dr. Rui F. Martins

Department of Mechanical and Industrial Engineering, NOVA School of Science & Technology, Universidade NOVA de Lisboa, 2829-516 Caparica, Portugal

Deadline for manuscript submissions:

closed (20 May 2024)

# **Message from the Guest Editors**

Metallic materials are one of the largest groups used to produce machine components and structures. Moreover, the development of technology enables the creation of new alloys of these materials that also affect their individual characteristics depending on their production method. Therefore, the impact of these features on durability and mechanical strength requires knowledge of the damage mechanisms and their development under static and cyclic loadings.

Experimental research allows for understanding the damage mechanism, analyzing it in depth and providing information for computer simulations.

The Special Issue is devoted to the development of experimental and theoretical methods of evaluation and a description of the behavior of metallic materials subjected to fatigue loads, including but not limited to the following topics:

- Uniaxial and multiaxial fatigue;
- Damage mechanisms;
- Damage accumulation models;
- Fatigue crack growth;
- Mixed-mode fracture;
- Fatigue life assessment;
- Failure analysis;
- Metal composites.













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 iournal covers twenty-five comprehensive biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and systems. 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 - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

#### **Contact Us**