



## Fatigue Behavior Analysis of Metals and Alloys

Guest Editors:

**Dr. Abílio M. P. De Jesus**

Department of Mechanical  
Engineering, Faculty of  
Engineering, University of Porto,  
4200-465 Porto, Portugal

**Prof. Dr. Filippo Berto**

Department of Chemical  
Engineering, Materials and  
Environment, Sapienza University  
of Rome, 00184 Rome, Italy

Deadline for manuscript  
submissions:

**closed (30 November 2022)**

### Message from the Guest Editors

Understanding the fatigue behavior of metals and their alloys still is a major concern when applications subjected to dynamic loadings are envisaged. Challenges are raised either from materials side, with new alloys and processing technologies being continuously developed, as well as from the loadings side, where multiaxiality, mechanical-thermal interactions, complex variable amplitude loading, extreme cyclic loadings become very often in real applications. The understanding of the physics of the fatigue phenomena in the referred background and its accurate modeling are essential factors for the safe, efficient and resilient design of new mechanical components of structures. This Special Issue intends to gather original contributions aiming the investigation on the fatigue behavior of metals and alloys covering the related topics.





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 & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

## Contact Us

Metals Editorial Office  
MDPI, St. Alban-Anlage 26  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/metals](http://mdpi.com/journal/metals)  
[metals@mdpi.com](mailto:metals@mdpi.com)  
[X@Metals\\_MDPI](https://twitter.com/X@Metals_MDPI)