



## Fatigue and Fracture Mechanics of Metals

Guest Editors:

**Dr. Mauro Madia**

Bundesanstalt für  
Materialforschung und -prüfung  
(BAM), Berlin, Germany

**Prof. Dr. Luis Filipe Borrego**

Department of Mechanical  
Engineering, Polytechnic  
Institute of Coimbra, Coimbra,  
Portugal

Deadline for manuscript  
submissions:

**closed (31 October 2021)**

### Message from the Guest Editors

Fatigue and Fracture Mechanics of Metals includes a vast area of knowledge of the mechanical behavior of materials, of vital importance in the safe design of machine elements and in the proper selection of materials. Despite the intense research effort developed over the years in this area of knowledge, the recent demands of the market and the issues related to environmental problems pose new challenges, which need to be addressed. Recent new materials and technologies (e.g., additive manufacturing) are being developed and increasingly used in structural components for many industries, such as aerospace, automobile, goods, and medical devices, in order to obtain safe components and low materials savings. Safe design in many of these applications needs a thorough knowledge of the fatigue and fracture response.

This Special Issue aims at providing a wide set of articles on various aspects of fatigue and fracture of metals. Articles on experimental and modelling aspects of fatigue and fracture related to the following topics are particularly welcome: 1) Additively manufactured metals; 2) Novel joining techniques of mechanical parts; 3) Surface modification technological processes.





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

## Contact Us

---

Metals Editorial Office  
MDPI, Grosspeteranlage 5  
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/Metals_MDPI)