

Special Issue

Fatigue and Fracture Mechanics of Metals

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.

Guest Editors

Dr. Mauro Madia

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

Dr. Luis Filipe Borrego

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

Deadline for manuscript submissions

closed (31 October 2021)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/47276

Metals

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

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





Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



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



About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Metals and Alloys)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.7 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).