

## Special Issue

# Novel Insights into Fatigue and Fracture Behavior of Metallic Materials

### Message from the Guest Editor

Recently developed new materials and technologies (e.g., additive manufacturing) being applied in structural components across many industries, like aerospace, automobile, goods, and medical devices, in order to obtain safe components and low materials savings. In many of these applications, safe design requires thorough knowledge of the fatigue and fracture response characteristics of a material. This Special Issue aims at providing a wide set of articles on various aspects of fatigue and fracture mechanics of metals. It is intended that this open access Issue will provide a place to get comprehensive information about the current state-of-the-art for fatigue and fracture behavior of new materials and manufacturing processes. Articles on experimental and modelling aspects of fatigue and fracture related to the following topics are particularly welcome: additively manufactured metals; novel joining techniques of mechanical parts (e.g., adhesive bonding, laser and friction stir welding); surface modification technological processes (e.g., shot peening).

### Guest Editor

Prof. Dr. Luis Filipe Borrego

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

### Deadline for manuscript submissions

closed (28 February 2025)



## Metals

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## About the Journal

### 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.

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### Editors-in-Chief

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#### Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /  
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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).