Special Issue

Advances in Multiaxial Fatigue and Metallurgical Characterization of Metals

Message from the Guest Editors

This Special Issue aims to bring together the latest research on the fundamental aspects of multiaxial fatigue, metal characterization, and metallurgical phenomena that shape fatigue behavior. We invite original research articles, reviews, and theoretical studies that provide new insights into fatigue damage mechanisms, the role of microstructure in fatigue performance, and advanced characterization techniques. Emphasis will be placed on fatigue behavior across various metallic systems, including ferrous and non-ferrous alloys, transition metals, and advanced metal compounds. Topics of interest include (but are not limited to) the following:

- Multiaxial fatigue in metals
- Microstructural influences on fatigue behavior
- Metallurgical aspects of fatigue
- Fatigue performance of ferrous and non-ferrous metals
- Advanced characterization techniques
- Cyclic deformation and fracture mechanisms
- Environmental effects on fatigue

We look forward to your valuable contributions to this important field of research.

Guest Editors

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Deadline for manuscript submissions

30 September 2025

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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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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).

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