Special Issue

Mechanical Structure Damage of Metallic Materials

Message from the Guest Editor

With the rapid development of materials science, computational mechanics, and intelligent monitoring technology, how to accurately diagnose structural damage, reveal failure mechanisms, and improve performance through multi-scale optimization design have become the focuses of common concerns in both the academic and engineering fields. We focus on theoretical methods and technologies related to the damage mechanism of mechanical structures, life prediction methods, and structural performance optimization and encourage interdisciplinary exchanges of recent achievements. Our goal is to provide theoretical support and technical solutions for mechanical equipment in fields such as aerospace, energy equipment, and rail transportation. This Special Issue aims to compile articles focused on theoretical and experimental research progress in the static and fatigue damage of metallic materials and mechanical structures, with potential topics ranging from the damage evolution to performance optimization of metallic materials and mechanical structures.

Guest Editor

Prof. Dr. Guoqin Sun

Faculty of Materials and Manufacturing, Beijing University of Technology, Beijing 100124, China

Deadline for manuscript submissions

31 December 2025



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/238741

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

mdpi.com/journal/ metals





Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



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, CAPlus / 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 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).

