

Special Issue

Casting Process, Processing Deformation and Microstructure Optimization of Advanced Metallic Materials

Message from the Guest Editors

Metal casting, as a traditional foundational technology, can directly manufacture various complex components required in the automotive, aerospace and other fields. However, problems such as pores and coarse grains that may occur during the metal casting process affect the performance of materials. In addition, some special metals are processed and deformed to satisfy the needs of industrial applications. However, specific microstructure evolution also occurs during the process of processing and deformation, which affects the quality of the product. Therefore, understanding and controlling the microstructural evolution of metals and alloys during casting or deformation processes will be able to effectively control the mechanical properties of the material. Optimizing and regulating the casting process and deformation ability of metals is one of the important directions for the future development of metal materials. All articles concerning high-strength titanium alloys, nickel-based superalloys, high-entropy alloys, aluminum alloys, magnesium alloys, and their new casting methods or deformation technologies are welcome.

Guest Editors

Dr. Guohuai Liu
Prof. Dr. Zhaodong Wang
Dr. Yanmei Li

Deadline for manuscript submissions

closed (31 July 2025)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/194321

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, 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 18.7 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).