

Special Issue

Recent Advances in Powder-Based Additive Manufacturing of Metals

Message from the Guest Editors

Metal additive manufacturing (AM) has rapidly evolved in the industrial field, enabling the fabrication of complex, high-performance components with design freedom and material flexibility. As the field advances, the focus is shifting toward optimization, particularly in tailoring microstructure, improving mechanical properties, and developing post-processing strategies such as heat treatment to ensure enhanced performance.

Understanding the intricate relationships between processing parameters, microstructural evolution, heat treatment effects, and final part properties remains a key challenge. This Special Issue aims to showcase recent advances in powder-based metal additive manufacturing and laser processing, with a strong emphasis on microstructure–property relationships and/or heat treatment optimization. Contributions are invited that explore fundamental mechanisms, novel processing strategies, and application-driven studies. We warmly invite submission of full research papers, short communications, and reviews.

Guest Editors

Dr. Emanuele Ghio

Department of Engineering for Industrial Systems and Technologies (DEIST), University of Parma, Via G. Usberti 181/A, Parma, Italy

Prof. Dr. Emanuela Cerri

Department of Engineering for Industrial Systems and Technologies (DEIST), University of Parma, Via G. Usberti 181/A, Parma, Italy

Deadline for manuscript submissions

30 April 2026



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/253519

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 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.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

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).