Special Issue

Green Manufacturing for Metallic Materials

Message from the Guest Editors

The green advanced/hybrid manufacturing process has become increasingly important in industry due to carbon tax and a friendly environment. The surface quality of difficult-to-machine materials, such as Inconel, tungsten carbide, polycrystal diamond (PCD) and cermet, is affected by the conditions of cutting tools, workpieces. process parameters, lubrication, machine performance, etc. Many green advanced/hybrid manufacturing processes have been developed in recent years to enhance the machinability of these materials. In this Special Issue, the research topics of interest include the experiment and simulation of green metal cutting/milling/forming/ultrasonic-vibration-assisted milling/laser-assisted milling/minimum quantity lubrication /electrical discharge machining/wire electrical discharge machining/electrochemical machining/ultrafast laser/micro particle bombarding (MPB) surface treatment, such as micro peening and micro blasting. All papers related to increasing the manufacturing efficiency of high-performance materials with lower energy consumption and fossil lubrication via green advanced/hybrid manufacturing are welcome to this Special Issue.

Guest Editors

Dr. Fu-Chuan Hsu

Metal Industries Research and Development Centre (MIRDC), Micro/Meso Mechanical Manufacturing R&D Department (M4 Dept.), Kaohsiung 81160, Taiwan

Dr. Yixuan Feng

Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA 30332, USA

Deadline for manuscript submissions

closed (31 March 2024)



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/135450

Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34

mdpi.com/journal/ metals

metals@mdpi.com





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).

