

Special Issue

Advanced Metal Cutting Technology and Tools

Message from the Guest Editors

With the development of high-end equipment, difficult-to-cut materials with high strength and high hardness increasingly play an important role in the production of high load-bearing structural components. Additionally, the requirement for higher geometrical precision, better physical properties and a longer component service life has substantially increased. With that, the manufacturing industry faces the challenges of coordinating the geometrical state of machined surfaces with their physical and mechanical states, and, simultaneously, the difficulties of balancing machining quality and efficiency. Motivated by these challenges and difficulties, an increasing number of new cutting technologies are being developed. Due to the multidisciplinary characteristic of the machining process, the development of cutting technologies is enabled and accompanied by achievements in the domains of workpiece materials, tool materials, machine tools, processing conditions, fatigue and environments. This Special Issue is focused on the development and applications of new metal cutting technologies and tools.

Guest Editors

Dr. Zhiqiang Liang

School of Mechanical Engineering, Beijing Institute of Technology, Beijing 100081, China

Dr. Lijing Xie

Key Laboratory of Fundamental Science for Advanced Machining, Beijing Institute of Technology, Beijing 100081, China

Deadline for manuscript submissions

closed (31 December 2022)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/107821

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).