Special Issue

Advanced Laser Welding Technology of Alloys

Message from the Guest Editor

This Special Issue on "Advanced Laser Welding Technology of Alloys" aims to explore the latest advancements and innovations in the field of laser welding for various alloy materials. Laser welding has become a crucial technique in modern manufacturing due to its precision, efficiency, and ability to handle complex geometries. It offers numerous advantages. However, when dealing with different alloys, challenges arise in terms of material properties, joint integrity, and process optimization. This collection of papers will cover a wide range of topics including the development of novel laser welding processes tailored for specific alloys, the investigation of the microstructural evolution and mechanical properties of welded joints, and the application of advanced characterization techniques to understand the underlying mechanisms. By bringing together cutting-edge research from both academia and industry, this Special Issue seeks to provide valuable insights and solutions for improving the laser welding of alloys, ultimately contributing to the advancement of high-quality manufacturing in various sectors such as automotive, aerospace, and electronics.

Guest Editor

Dr. Yanxi Zhang

Guangdong Provincial Welding Engineering Technology Research Center, Guangdong University of Technology, Guangzhou 510006, China

Deadline for manuscript submissions

30 November 2025

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/234753

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

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).

MDPI