Special Issue

Microstructure and Properties of Laser Welded Metal Composite Materials

Message from the Guest Editor

Metal composite materials can greatly improve the thermal stability, strength, fracture toughness, impact toughness, wear resistance, electrical properties, magnetic properties, and many other properties of single metal materials, so they are widely used in petroleum, chemical industry, ship, metallurgy, mining, machinery manufacturing, electric power, water conservancy, transportation, environmental protection, pressure vessel manufacturing, food, brewing, and pharmaceutical and other industrial fields. With the progress of laser technology, laser welding technology has become an important method of metal composite material connection, which promotes the development and engineering application of metal composite material. Aiming at typical metal composites, the laser welding process and microstructure and properties analysis of welded joints are carried out, while attention is paid to the matching characteristics of the interface welding zone of the metal composites material, the inhomogeneity of the microstructure and mechanical properties, and the influence of welding process parameters on the microstructure and properties.

Guest Editor

Prof. Dr. Jianxun Zhang State Key Laboratory for Mechanical Behavior of Materials, Xian Jiaotong University, Xi'an 710049, China

Deadline for manuscript submissions

closed (10 November 2021)



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/80114

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



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).