metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.6

CITESCORE 4.9

Microstructure Evolution in Welded Joints

Guest Editor:

Dr. Wenjian Zheng
School of Mechanical Engineering, Zhejiang University of Technology, Hangzhou 310023, China

Deadline for manuscript submissions:
closed (31 July 2023)

Message from the Guest Editor

Dear Colleagues,

The microstructure of a weld is the connection between the manufacturing processes and mechanical properties. Thus, understanding the Microstructure Evolution of the weld during forming, welding, heat treatment, and service is very important to welding theory development and engineering applications. This Special Issue aims to collect innovative studies on welding metallurgy theory regarding the influence of welding parameters on microstructure evolution, such as dendrite growth in the welding pool, solid-state phase transformation in the cooling progress, hydrogen diffusion behavior throughout the whole welded joint's formation, and so on. Additionally, we are interested in the latest investigations into the effect of microstructure characteristics on the mechanical properties of welds in engineering applications, such as strength, toughness, fatigue, creep, corrosion resistance, friction and wear resistance.

metals

IMPACT FACTOR 2.6

CITESCORE 4.9

an Open Access Journal by MDPI

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

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.
Journal Rank: JCR - Q2 (*Metallurgy and Metallurgical Engineering*) / CiteScore - Q1 (Metals and Alloys)

Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/metals
metals@mdpi.com
𝕏@Metals_MDPI