metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.9

CITESCORE 4.4

Hot Deformation of Metal and Alloys

Guest Editor:

Dr. Zhanwei Yuan
School of Material Science and Engineering, Chang'an University, Xi'an 710061, Shaanxi, China

Deadline for manuscript submissions:
closed (30 April 2024)

Message from the Guest Editor

Dear Colleagues,

Hot working is an important forming method of metal materials, which is related to deformation flow stress, deformation mechanism, dynamic softening mechanism and hot deformation damage. With different high temperatures and strain rates, metal and alloys will have various responses at macroscale, such as flow stress. At the same time, the microstructures evolve with confrontation between hardening mechanism and softening mechanism (dynamic recovery and dynamic recrystallization). Moreover, hot deformation damage is a weakening form that should be avoided. The deep understanding of hot deformation is the basis to guide for optimization of the process and high temperature forming of materials. This Special Issue will discuss the constitutive models, microstructure evolution, plastic deformation, softening mechanism and hot processing map of metals and alloys during hot deformation.

metals

IMPACT FACTOR 2.9

CITESCORE 4.4

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 & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

Contact Us

Metals Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

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