



metals



an Open Access Journal by MDPI

Development and Performance Optimization of High-Strength Steels

Guest Editors:

Dr. Zhenli Mi

Institute of Engineering
Technology, University of Science
and Technology Beijing, Beijing
100083, China

Dr. Yonggang Yang

Institute of Engineering
Technology, University of Science
and Technology Beijing, Beijing
100083, China

Deadline for manuscript
submissions:

closed (30 November 2022)

Message from the Guest Editors

Dear Colleagues,

The development and performance optimization of high strength steels (HSS) have been a research focus since the mid-1970s when the HSS evolved. Design strategies, such as solution strengthening, precipitation hardening, grain refinement strengthening, and working hardening, are adopted to elevate the mechanical properties of HSS. Some novel conceptions, for example, Transformation-Induced Plasticity, are also included in order to meet the requirements of structural materials design. This Special Issue aims to provide a broad forum for the latest results in the development and performance optimization of HSS. This includes fundamental questions regarding the microstructure-property relationship, phase transformations, strain partitioning, strain hardening mechanisms and hydrogen embrittlement. Topics related to the processing, testing, characterization, and applications of HSS are invited.

I am very honored to be invited to serve as a Guest Editor of the journal of Metals and provide academic exchange opportunities for colleagues from all over the world to support the research and development of HSS.



mdpi.com/si/108659

Special Issue



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 26
4052 Basel, Switzerland

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

mdpi.com/journal/metals
metals@mdpi.com
[X@Metals_MDPI](https://twitter.com/X@Metals_MDPI)