metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.6

CITESCORE 4.9

# High Performance Bainitic Steels

Guest Editors:

**Prof. Dr. Zhinan Yang**
School of Mechanical Engineering, Yanshan University, Qinhuangdao 066004, China

**Dr. Guhui Gao**
School of Mechatronics, Beijing Jiaotong University, Beijing 102603, China

**Dr. Haijiang Hu**
State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan 430081, China

Deadline for manuscript submissions:
**closed (30 June 2022)**

## Message from the Guest Editors

Bainite steel is a well-known type of high-performance steel. However, the microstructure of bainite is complex and more sensitive to chemical decomposition and heat treatment processes compared with other traditional microstructures. The morphologies, volume fraction, stability of retained austenite, and size of ferrite and the carbon content within it all play important roles in determining the mechanical properties of bainite steel. Therefore, improving the mechanical properties of bainitic steel via control of chemical composition and microstructure is one of the main research fields of bainitic steel. The transformation rate of bainite is relatively slow. Therefore, accelerating the transformation kinetics is an important aspect in the research of bainitic steel. Works that focus on developing new bainitic steels, novel heat treatment processes, novel microstructures, new methods to accelerate transformation processes, mechanical performance, and fatigue behavior of bainitic steel are especially encouraged. Moreover, works studying the performance of bainitic steel during its service lifetime are also encouraged.

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, 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