

## Special Issue

# Alloy Steels—Properties and Applications

### Message from the Guest Editor

Alloy steels have a broad range of uses. Most papers on developing these steels focus on their microstructure and properties; however, interest in these alloys stems from their application. The combination of strength, ductility, wear resistance, and processing options available in alloy steels provides a large toolbox for the industrial metallurgist to use. The discovery of TRIP/TWIP mechanisms in these steels, which are not fully understood, provides a new opportunity to create innovative structures or improve performance and energy efficiency in older designs. The goal of this Special Issue is to provide an outlet for discussing alloy steel properties and their application. We are looking for papers related to the properties and applications of alloy steels. The goal is to collect a series of papers that look at the property requirements for an application and how the processing or composition must be changed to meet those applications. Papers examining the manufacturability of a new alloy system to meet a target industry are also welcome.

### Guest Editor

Prof. Dr. Robert B. Tuttle

Department of Mechanical Engineering, Saginaw Valley State University, University Center, MI, USA

### Deadline for manuscript submissions

closed (31 May 2021)



## Metals

an Open Access Journal  
by MDPI

Impact Factor 2.5  
CiteScore 5.3



[mdpi.com/si/39017](https://mdpi.com/si/39017)

*Metals*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[metals@mdpi.com](mailto:metals@mdpi.com)

[mdpi.com/journal/  
metals](https://mdpi.com/journal/metals)





# Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.3



[mdpi.com/journal/  
metals](https://mdpi.com/journal/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).