

## Special Issue

# Metal Catalysts for Heterogeneous Catalytic Reactions

### Message from the Guest Editors

Hydrogen energy is known as the next generation of secondary clean energy, but the cost of hydrogen preparation has always been a bottleneck hindering the large-scale application of hydrogen energy, especially green hydrogen production. At present, the universal catalyst for hydrogen production in electrolyzed water is Pt/C, but its cost is high and it is difficult to apply on a large scale. Preparing high-performance, high-stability catalysts with inexpensive non-precious-metal catalysts is a challenge. Aiming at the major strategic goals of energy and the environment, it is necessary to deeply explore the relationship between the structure and performance of heterogeneous metal catalysts to develop new catalytic materials, from exploring key scientific issues to solving practical application problems. For this Special Issue of *Metals*, we welcome reviews and articles on the principles, theoretical calculation, material preparation and characterization, and applications of hydrogen metal catalysts.

### Guest Editors

Dr. Chao Huang

Plasma Laboratory, City University of Hong Kong, Kowloon 518057, Hong Kong

Dan Li

Plasma Laboratory, City University of Hong Kong, Kowloon 518057, Hong Kong

### Deadline for manuscript submissions

closed (31 January 2024)



## Metals

an Open Access Journal  
by MDPI

Impact Factor 2.5  
CiteScore 5.3



[mdpi.com/si/126350](https://mdpi.com/si/126350)

*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/](https://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).