

## Special Issue

# Surface Treatment and Functionalization of Metal Materials: Electrochemical, Catalytic, Bioactivity, Corrosion and Wear Behaviour

### Message from the Guest Editors

The development of new processes of functionalization and treatment of metallic surfaces seeks to meet demands for improvement and optimization of properties such as wear and corrosion resistance for increasingly challenging applications in various areas that employ metallic material. Furthermore, when properties such as improved biocompatibility are required for biomedical applications, surface treatment allows the modification of the alloy surface to optimise the performance of the material according to the required characteristics (this is dependent on the application). Surfaces with photocatalytic properties supported on metallic materials have also been developed, and environmentally friendly processes are being proposed, observing issues related to sustainability and cost of the raw materials. This Special Issue of *Metals* focuses on surface treatment and functionalization of metal materials and intends to collect the latest developments in electrochemical, catalytic, bioactivity, corrosion, tribocorrosion and wear behaviour of metal materials, as well as environmentally friendly processes to treat or recover metal materials.

### Guest Editors

Prof. Dr. Célia de Fraga Malfatti

Department of Metallurgy, Laboratório de Pesquisa em Corrosão (LAPEC), Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil

Dr. Claudia Beatriz Dos Santos

Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Stuttgart, Germany

### Deadline for manuscript submissions

closed (30 April 2024)



## Metals

an Open Access Journal  
by MDPI

Impact Factor 2.6  
CiteScore 4.9



[mdpi.com/si/122181](https://mdpi.com/si/122181)

*Metals*

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 2.6  
CiteScore 4.9



[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, CAPIus / 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 16.5 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 2024).