# Special Issue

# Corrosion and Oxidation of Metals: Mechanisms, Kinetics, and Protection

## Message from the Guest Editor

Corrosion and oxidation are major challenges in industrial environments, resulting in significant costs for the protection, replacement and maintenance of parts. These phenomena are the primary cause of degradation of the metallic parts used in machinery, infrastructure and critical components of various types. Corrosion and oxidation are complex phenomena that are highly dependent not only on the composition of the metal being corroded, but also on the environment and temperature. Therefore, research is needed to understand the mechanisms behind these phenomena and to develop highly resistant materials or protective techniques and applications. This Special Issue invites the submission of original research papers, short communications, and reviews dealing with corrosion and oxidation of metals and alloys, with a focus on mechanisms, kinetics, scale characterization, and other related topics. The scope includes metals and alloys exposed to corrosive environments of any kind, including aqueous corrosion phenomena as well as atmospheric corrosion. Studies of atmospheres that reflect modern industrial applications.

## Guest Editor

Dr. Rodrigo Da Silva

Munir Rachid Corrosion Laboratory, Department of Materials Engineering, Federal University of São Carlos, Rodovia Washington Luís, São Carlos 13565-905, Brazil

## Deadline for manuscript submissions

30 November 2025

**Metals**

**an Open Access Journal by MDPI**

**Impact Factor 2.5**
**CiteScore 5.3**

mdpi.com/si/235575

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

mdpi.com/journal/metals

# Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

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).

MDPI