Special Issue

Passivity and Localized Corrosion of Metallic Materials, 2nd Edition

Message from the Guest Editor

In recent years, the study of passivity and localized corrosion in additively manufactured (AM) alloys has gained significant momentum due to the unique microstructures of these materials compared to their wrought counterparts. Additionally, the simulation of passive behavior and localized corrosion has seen substantial advancements, with numerical methods and phase-field modeling at the forefront. This second edition of our Special Issue aims to provide an updated and comprehensive overview of current research on passivity and localized corrosion of various metals and alloys. We are particularly interested in studies on the passivity and localized corrosion of different metals and alloys, the relationship between microstructure and pitting corrosion, innovative analytical methods, and theoretical mechanisms of localized corrosion. Furthermore, we welcome contributions on multiscale modeling for localized corrosion prediction, failure analysis, and the development of corrosion inhibitors. We invite original research articles, reviews, and critical analyses of case studies from both academic researchers and industry professionals.

Guest Editor

Dr. Davood Nakhaie
Department of Materials Engineering, The University of British Columbia, Vancouver, BC V6T 1Z4, Canada

Deadline for manuscript submissions

closed (31 December 2024)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/206060

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