# Special Issue

# Research on Electrochemical Corrosion of Metals and Alloys

# Message from the Guest Editors

Corrosion is an electrochemical process involving the exchange of electrons. Hence, understanding the underlying electrochemical phenomena is fundamental to elucidating the mechanism of corrosion. Complex processes that occur in pitting and crevice corrosion as well as in different forms of mechanically assisted corrosion (e.g., stress corrosion cracking, hydrogen embrittlement, and wear-induced corrosion) can be discussed by electrochemical principles and methods. This Special Issue provides a forum for discussing (a) the advancements in understanding the localized electrochemical corrosion of corrosion-resistant alloys, (b) the mechanically assisted corrosion of corrosionresistant alloys, and (c) hydrogen and sulfide stress cracking of high-strength low-alloy steels. Manuscript submissions that include critical discussions, novel experimental findings, localized corrosion mechanisms of exotic corrosion-resistant alloys, and environmentally assisted cracking in H2S-containing conditions are welcome.

## **Guest Editors**

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## Deadline for manuscript submissions

closed (30 April 2022)



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# **About the Journal**

# Message from the Editor-in-Chief

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.

#### Editor-in-Chief

## Prof. Dr. Yong Zhang

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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).

