

Special Issue

Corrosion and Surface Treatment of Metallic Aviation Materials in Marine and Low-Altitude Environments

Message from the Guest Editor

Corrosion in marine and low-altitude environments poses a significant challenge in enhancing the reliability and service life of aerospace materials. To address this issue, the high-quality surface modification of aerospace equipment and the meticulous design of its internal microstructure are imperative. This involves employing corrosion-resistant materials, adding inhibitors, metal surface modifications, protective coatings, electrochemical protection, alloy design, and microstructural control, among other methods. In this Special Issue, we focus on introducing corrosion prevention mechanisms to aerospace materials, as well as on the prospects and development trends of their surface treatment technologies, supported by advanced surface modification techniques, service life assessment, corrosion simulation, electrochemistry, and high-resolution microstructural characterization methods.

Guest Editor

Dr. Jiantao Qi
College of New Energy, China University of Petroleum (East China),
Qingdao 266580, China

Deadline for manuscript submissions

closed (30 November 2024)



Metals

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 5.7



mdpi.com/si/199312

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

[mdpi.com/journal/
metals](https://mdpi.com/journal/metals)





Metals

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 5.7



[mdpi.com/journal/
metals](https://mdpi.com/journal/metals)



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

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, CAPus / 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 15.3 days after
submission; acceptance to publication is undertaken in 2.9
days (median values for papers published in this journal in
the first half of 2026).