

Special Issue

Oxidation Mechanism and Behavior Analysis of Surface Coatings on Metal Materials

Message from the Guest Editor

Due to the excellent mechanical properties of metal materials such as high strength and high hardness, they are now widely used in various research fields. At present, in order to make metal materials better adapt to a variety of complex and extreme environments (such as high temperature, oxidation erosion, and hot salt mixture corrosion) in the metallurgical process, make up for the current technical shortcomings and main needs, and formulate feasible strategies to improve the wear resistance, the oxidation resistance and corrosion resistance of metal materials are necessary. This Special Issue is devoted to research on the surface properties of metal materials, the oxidation mechanism and oxidation behavior of metal surface coatings, the principles and methods of damage protection of metal materials in complex extreme environments, and the more advanced processing and manufacturing technology and the theory and application of surface interface performance control. We welcome advanced techniques that help improve the surface properties of metallic materials, as well as articles which explore the factors that affect surface properties.

Guest Editor

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Deadline for manuscript submissions

closed (20 February 2025)



Metals

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Impact Factor 2.5
CiteScore 5.3



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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.

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