Special Issue

Corrosion Behavior of Alloys in Water Environments

Message from the Guest Editor

Corrosion is the deterioration of a material as a result of its interaction with corrosive environments. Water environments are the most common corrosive media in both natural and industrial conditions. This Special Issue aims to compile recent progress in the corrosion behaviour of alloys in water environments, which covers the sea water environment, river/lake/ground water environments, various chemical aqueous environments in industry, and so on. The developments of new corrosion-resistant alloys used in water environments, new understanding of corrosion mechanisms, corrosion simulation using first principles, molecular dynamics, and phase-field and finite-element analysis are also welcome.

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Deadline for manuscript submissions

20 March 2026

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/226939

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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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