

Special Issue

Corrosion Behavior of Carbon Steels in Natural and Industrial Environments—3rd Edition

Message from the Guest Editor

Dear colleagues, Carbon steel degradation upon exposure to natural environments is a major issue with regard to the cost of metallic corrosion in all sectors of engineering. This Special Issue, entitled “Corrosion Behavior of Steels in Natural and Industrial Environments”, addresses all relevant aspects of carbon steel corrosion, including basic corrosion mechanisms in atmospheric conditions or aqueous media, kinetic studies under quiescent and hydrodynamic conditions, different forms of corrosion, instrumental analysis for corrosion product characterization, surface morphology corrosion rate determination, biocorrosion characterization, and industrial applications under exceptional conditions where carbon steel exhibit high corrosion resistance. Articles regarding corrosion prevention are also welcome, particularly corrosion inhibition by natural products, cathodic protection in the form of either impressed currents or sacrificial anodes, and results from long-lasting corrosion studies regarding different corrosion prevention techniques for carbon steel structures in rural areas, industrial infrastructure, and pilot experiments.

Guest Editor

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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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