Special Issue

Corrosion Mechanism and Protection Technology of Metallic Materials

Message from the Guest Editors

According to several studies in the last 30 years, the annual direct cost of corrosion to an industrial company is up to 3.1% of the country's gross national product. Moreover, the corrosion of metallic materials also significantly impairs human safety and the environment. To mitigate the negative effects associated with corrosion, it is of significant importance to conduct research on corrosion to discover its underlying mechanism and to develop effective and efficient methods to mitigate the corrosion process. The intent of this Special Issue is to provide an overview of the new advances in the relevant study of corrosion, ranging from fundamental studies to applications. This Special Issue covers a whole spectrum of investigations and studies on metallic corrosion, including stress corrosion cracking, soil corrosion, atmospheric corrosion, and high-temperature corrosion, which is meaningful and helpful to understand the corrosion mechanism in different media. In addition, research on novel methods to mitigate the degradation of base metals, including the development of new coatings, new corrosion inhibitors, and cathodic protection, is also welcome.

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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