Special Issue

Microbiologically Influenced Corrosion of Metallic and Non-metallic Materials: Mechanisms and Protection

Message from the Guest Editors

Microbiologically influenced corrosion (MIC) refers to the direct or indirect corrosion caused by microorganisms, including bacteria, fungi, archaea, and microalgae. It primarily concerns metallic materials such as steel, copper, aluminum, etc. In addition to metallic corrosion, the degradation and deterioration process of non-metallic materials, including concrete, ceramics, polymers, and composites, can also be caused by microorganisms. The MIC process is considered complex and complicated to understand. If the basic principles involved in the process are understood, it will be easier to develop effective ways to control corrosion. Based on fundamental studies, it is estimated that about 25%–40% of corrosion cost can be reduced if advanced techniques and management strategies for material protection are used. To provide an overview of recent novel views on fundamental and practical research on MIC, this Special Issue forms a collection of ongoing research in MIC of metallic and non-metallic materials. Contributions are solicited from researchers advancing the current understanding of corrosion mechanisms and techniques for material protection.

Guest Editors

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Message from the Editor-in-Chief

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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