

Special Issue

Corrosion and Wear Behavior of Metals

Message from the Guest Editor

As is known to all, the corrosion of metals is a monumental issue worldwide. A considerable proportion of this metal cannot be restored due to the corrosion damage. More importantly, corrosion can lead to structural failure, resulting in sudden accidents. Therefore, it is particularly urgent to understand corrosion mechanisms, take effective protective measures, and reduce the loss caused by corrosion. Wear is another important cause of metal loss and energy consumption. According to research analysis, about 1/2–1/3 of the world's energy is consumed in various forms of friction, and about 80% of part failures are caused by various forms of wear. Therefore, reducing friction and wear has become the main measure to save energy and raw materials and reduce maintenance costs, and represents the main solution to improve product quality and accuracy, prolong service life. In this Special Issue, we welcome articles that focus on anti-corrosion and/or wear-resistant materials, coatings, or surface treatments; both theoretical and practical works are of interest. The papers should cover the methods and mechanisms of corrosion and wear controls.

Guest Editor

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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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