



metals



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Innovative Surface Modification Techniques for Increasing the Wear Resistance of Metallic Materials

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Message from the Guest Editor

Dear Colleagues,

The interest in understanding the wear behavior in mechanical components has been gradually increasing. Severe wear can produce problems such as dimensional changes, which produce vibration and misalignment. Although it is rarely catastrophic, it may cause crack propagation and, ultimately, fracture. As a result, several surface modification techniques have been used in industrial applications to increase the wear resistance of metallic materials in the last several decades.

This Special Issue aims to address the latest research about wear behavior and friction in metallic materials with surface modification techniques such as surface treatments, thermal spraying, PVD thin-film deposition, laser surfacing, hardfacing deposits, cold working processing, among others. Different types of wear will be studied, including abrasion and hard-particle erosion, cavitation erosion and sliding wear. Computational simulations and the synergy between wear and corrosion will also be considered in this Special Issue.



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Special Issue



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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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