Special Issue

Studies on the Surface Modification of Metal Materials

Message from the Guest Editor

The most common failure forms of materials are wear, corrosion and fracture. In the actual application process, the failure of parts is usually down to the surface. In order to improve the strength, hardness, rigidity, wear resistance, corrosion resistance and other properties of metal materials, it is generally necessary to modify and strengthen the metal surface. The surface modification technology of metal materials usually includes conversion film treatment, electroplating, ion deposition, anodic oxidation, micro arc oxidation, cold spraying, thermal spraying, and so on. Each of these methods has its own advantages and disadvantages in practice. There are still many academic and technical problems which need to be investigated in the range of different alloy systems. Therefore, this Special Issue is looking forward to receiving articles related to the surface modification of steel materials, aluminum alloys, magnesium alloys, titanium alloys and other metal materials, hoping to uncover the representative research results in the field of metal surface modification, to enable readers to understand the latest progress in this field.

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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