Special Issue

Recent Advances in Surface Modification of Metallic Materials

Message from the Guest Editors

Nowadays surface engineering of metallic materials has become an important tool for improving the performance, extending the life, and also enhancing the appearance of components used in many fields. Modifying the surface and the near-surface regions of the materials allows for increasing corrosion resistance, tribological properties, and fatigue resistance; changing wetting behavior; enhancing biocompatibility; and modulating the electric and magnetic properties. Surface modification techniques range from finishing processes, such as electrolytic polishing (EP), electrolytic plasma polishing (EPP), and micro- or nanotexturing, to coating processes, such as the plating and electroplating processes, electrolytic oxidation, chemical vapor deposition (CVD), physical vapor deposition (PVD), thermal spraying, and direct energy deposition (DED), up to diffusion processes, such as nitriding, carburizing, nitrocarburizing, and boriding, which can be improved using plasma or ion implantation techniques.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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