Special Issue

Surface Engineering and Properties of Metallic Biomaterials

Message from the Guest Editors

The surface engineering of metallic biomaterials is driven by the need to enhance performance in long-term implantation in medical applications. One of the key points is devoted to improved corrosion, wear resistance, and mechanical properties. Furthermore, novel multifunctional surfaces have demonstrated benefits in antimicrobial properties and drug delivery ability. Lastly, integrating advanced manufacturing techniques has allowed the customization and optimization of metallic biomaterials to attenuate the stress-shielding effect, and enhance corrosion and wear resistance. Overall, the demands for the surface engineering and properties of metallic biomaterials are centered around creating innovative solutions that can improve patient outcomes and advance the field of biomedical engineering. In this Special Issue, we welcome articles that focus on developing and characterizing novel metallic biomaterials with functionalized surfaces and coatings, and that exhibit enhanced mechanical, corrosion, and wear properties, biocompatibility, and bioactivity.

Guest Editors

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About the Journal

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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