Special Issue

Biomaterials Surface Integrity

Message from the Guest Editors

Nowadays prostheses intended for biomedical use are manufactured by various processes such as machining, 3D printing, molding, forging. All these manufacturing processes generate a characteristic “imprint” on the prosthesis shape called surface integrity. The concept of surface integrity represents a new and preferential approach to characterize the biomaterials surface and sub-surface properties regard to the functional requirement of prosthesis. Surface integrity analysis provides a comprehensive evaluation of the surface and its impact on the performance of the prosthesis. The concept of surface integrity is made up several components such as roughness, dislocations, porosity, electrical conductivity, wettability. However, the integrity of the surface obtained, which must be suitable to meet expected clinical requirements is influenced by the manufacturing process parameters used. To assess surface integrity, a lot of characterization techniques are available depending on the observation scales including, but not limited to spectroscopy, optical imaging methods, nanoindentation, magnetic property measurements, roughness measurements, and X-Ray inspection.

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Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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