

Special Issue

Titanium Alloys: Microstructure, Mechanical Properties and Biomedical Applications

Message from the Guest Editor

Titanium alloys have been widely used in orthopedics, dentistry, and other clinical fields because of their unique advantages, such as their excellent comprehensive mechanical properties, processing and molding properties, and clinical reliability. Fracture fixation instruments, artificial joints, spinal orthosis, and dental implants are typical medical devices made of medical titanium alloys. In recent decades, the interest in microstructure, mechanical properties, biofunction, and biomedical applications of titanium alloys has been gradually increasing. This Special Issue aims to address the latest research on not only basic materials studies of titanium alloys but also clinical transformation of titanium alloy medical devices, in order to deeply understand the development of medical titanium alloys and their medical devices.

Guest Editor

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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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