

Special Issue

Corrosion and Tribocorrosion Behavior of Ti Alloys

Message from the Guest Editor

Ti and its alloys present a set of more attractive properties than other metallic materials, such as high biocompatibility, good mechanical properties, and excellent corrosion resistance.

Ti and its alloys' excellent corrosion behavior is due to spontaneous compactification and protective nanometric oxide layer formed at its surface, mainly TiO₂, when in contact with air. However, the low wear resistance of that layer is a concern.

Tribocorrosion is defined as a combined action between corrosion and mechanical actions, and it affects a large number of engineering systems such as biomedical devices, cutting/drilling tools or transportation industries. Thus, tribocorrosion plays an important role on the lifetime of these systems.

The Special Issue aims to provide the state-of-the-art findings on corrosion and tribocorrosion behavior of Ti alloys ranging from biomedical to automotive or aerospace applications. Accordingly, the Special Issue will gather papers dealing with novel and progressive research, together with review papers giving an overview and new insights into corrosion, fretting, and tribocorrosion behavior of Ti Alloys.

Guest Editor

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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

Prof. Dr. Yong Zhang

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