

Tentative Outline

Special Thematic Issue for Current Nanoscience

Titanium Alloys for Biomedical Applications: Processing, Technologies, Microstructure, Properties

Guest Editor: Dr. Liqiang Wang

Co-Guest Editor(s): Jia Liu & Yujin Tang

Aims & Scope:

Due to a considerable number of fascinating properties, titanium (Ti) and Ti alloys play important roles in a variety of fields, such as aviation industry, biomedical engineering, automobile manufacturing and so on. Researchers have developed hundreds of specific types to satisfy different demands. For biomedical engineering, titanium alloy has partially replaced medical stainless steel and cobalt-based alloy to become the most promising medical biological metal material. Thanks to its biological safety and biological function, titanium alloy has become an ideal medical metal material. Nowadays, titanium alloy is widely used in artificial bone, artificial joints, dentistry, plastic surgery, heart surgery, internal support frame and medical equipment and other medical fields. New techniques for preparing titanium alloys with enhanced biological functionalization are being studied. This thematic Issue focus on the "Titanium Alloys for Biomedical Applications: Processing, Technologies, Microstructure, Properties".

Subtopics:

The subtopics to be covered within this issue are listed below:

- Review on surface modification techniques and their Effects on titanium and titanium based alloys: Methods, Microstructure and Properties
- Research Progress of High Entropy Titanium alloy: Methods, Properties and Applications
- The enhanced biological response of titanium and titanium-based alloys by microstructure tailoring through severe plastic deformation methods
- Research Progress of graphene reinforced Titanium alloy: Methods, Microstructure and Properties

Schedule:

- ✧ Manuscript submission deadline: August 2020
- ✧ Final manuscripts due: March 2021

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