Special Issue

Advances in Titanium and Titanium Alloys: Processing, Properties and Additive Manufacturing

Message from the Guest Editors

Titanium and its alloys belong to the material groups used in many applications in areas such as automotive, aviation or biomedical engineering. The development of manufacturing technology and engineering indicate the need to develop new materials with better mechanical and functional properties. The advanced design and modeling of new titanium alloys should be carried out with the help of multiscale microstructure analysis including SEM and TEM microscope observations, numerical methods, mechanical experiments, the application of machine learning to the prediction of materials properties, as well as the optimization of process conditions. The application of the mentioned experimental methods should ensure the development of material engineering. This Special Issue aims to provide an overview of new solutions in the area of processing and additive manufacturing of advanced titanium and its alloys, focusing on their microstructural and mechanical properties.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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