



## Titanium Alloys 2017

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### Message from the Guest Editor

Dear Colleagues,

Significant developments in the titanium industry occurred in the middle of the 20th century. Since that time, the aerospace sector has dominated worldwide titanium use; the metal has applications in both engines and airframe structures. Titanium has a highly desirable combination of properties: these include excellent corrosion resistance, a high strength to weight ratio, and good fatigue resistance. Such qualities enable extensive applications; only high extraction and processing costs restrict further implementation.

Although the aerospace industry faces challenges related to increasing operating temperatures and the development of polymer based composites, innovative solutions, including metal matrix composites and titanium aluminides, provide pathways for future development. Furthermore, improvements in extractive metallurgy and processing methods have made titanium-based alloys more accessible to alternative industries.

As more traditional applications are supplemented by exciting new opportunities, it is clear that extensive research opportunities are likely to exist in the titanium industry for the foreseeable future.





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## Message from the Editorial Board

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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