



Advances in Additive Manufacturing of Ti-Based Alloys: Processing and Simulation

Guest Editor:

**Prof. Dr. Menachem
Bamberger**

Department of Materials Science
and Engineering, Technion -
Israel Institute of Technology,
Haifa, Israel

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Message from the Guest Editor

Titanium alloy has broad application prospects in various industrial fields, including shipbuilding, aerospace, and automobile manufacturing, due to its excellent physical and chemical properties such as low density, high-temperature resistance, and corrosion resistance. The additive manufacturing (AM) technology of titanium alloy solves the machining problem of precision structural parts and further increases the application range of titanium alloy.

In the Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following: Atomization processing; Powder properties and characterization; AM technologies: laser/E-beam interaction with the powder; effect of processing parameters; on-line monitoring and control; process simulation and processing optimization; temperature field-cooling rate-strain-stress-component distortion; surface quality improvement; Post-processing: heat treatment; HIP; surface roughness reduced by mechanical-electrochemical treatment, welding, and assembly; post-processing microstructure and properties.





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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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Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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