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Additive Manufacturing of Titanium Alloys 2022

Guest Editors:

Dr. Vera Popovich

Department of Materials Science and Engineering, Delft University of Technology, Mekelweg 2, CD 2628 Delft, The Netherlands

Dr. Thorsten Becker

Centre for Materials Enigneering, University of Cape Town, Cape Town 7701, South Africa

Deadline for manuscript submissions: closed (20 May 2023)

Message from the Guest Editors

Titanium alloys have been widely adopted in many industrial applications because of their high strength, low density, and excellent corrosion resistance. Examples of their application include aircraft that require a high specific strength and excellent fatigue resistance, aero-engines that require a good creep resistance, and biomedical and chemical processing equipment where good corrosion resistance is critical.

Additive manufacturing offers the advantage of allowing for near-net-shaped part fabrication using only one fabrication step, design flexibility, near-zero material wastage, and flexibility in manufacturing different types of components using other alloys, to name a few. Thus, the AM of titanium alloys has gained significant interest over the past decade.

We welcome your contributions to the latest developments in AM titanium alloys. We invite the submission focused on (i) the development of titanium alloys for AM; (ii) the relationship between AM process parameters, the evolution of the resulting microstructure; (iii) the effect of various heat treatments; (iv) mechanical performance and environmental effects; and (v) modelling and design for performance optimisation.

Specialsue



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Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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 metallurgical field the 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, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/metals metals@mdpi.com X@Metals_MDPI