

Special Issue

Microstructure, Fatigue and Corrosion Behavior of Additively Manufactured Alloys

Message from the Guest Editor

This Special Issue aims to review the state of the art in metal additive manufacturing. Manuscripts will focus on the latest developments and most recent data on processes based on the melting of powder and wire feedstocks as well as the structure and properties of additively manufactured alloys.

Topics of interest include the latest advances in the electron-beam additive technology, including but not limited to the following:

1. Powder-based additive manufacturing
2. Wire-based additive manufacturing
3. Printing parameter selection
4. Product geometry control
5. Product structure and properties control
6. Fatigue behavior of additively manufactured alloys
7. Corrosion behavior of additively manufactured alloys
8. Additive manufacturing multi-material components
9. Simulation of metal additive manufacturing
10. Automation, control, and management of electron-beam systems

Guest Editor

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About the Journal

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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).