Special Issue

Laser Processing and Additive Manufacturing of Metallic Materials

Message from the Guest Editors

Laser processing and additive manufacturing are revolutionary techniques for the advanced manufacturing of a broad range of materials, especially metallic materials used in structural applications. This Special Issue aims to provide a platform for appreciating state-of-the-art advances, inspiring and promoting the new development and applications of laser processing and the additive manufacturing of metallic materials. Topics include but are not limited to the following areas:

- Laser welding;
- Laser cladding;
- Laser cutting;
- Laser-arc hybrid welding and additive manufacturing;
- Laser-based additive manufacturing;
- Wire arc additive manufacturing (WAAM);
- Electron beam-based additive manufacturing;
- Modelling and simulation of laser processing and additive manufacturing;
- AI and machine learning for laser processing and additive manufacturing;
- Monitoring and control of laser processing and additive manufacturing;
- Quality inspection of laser processing and additive manufacturing;
- Micro and nano laser welding and additive manufacturing.

Guest Editors

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Dr. Tao Zhang
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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.7 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).

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