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Advanced In-Situ Characterization of Additive Manufactured Alloys

Guest Editor:

Prof. Dr. Yuefei Zhang

Institute of Microstructure and
Property of Advanced Materials,
Beijing University of Technology,
100 Pingleyuan, Chaoyang
District, Beijing, China

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Message from the Guest Editor

Additive Manufacturing is a novel manufacturing technique used to fabricate critical structural components for aerospace, shipbuilding, and medical and power plants. Three-dimensional components are fabricated based on correlating the digital system with the necessary equipment. The technique has the capability of reducing excessive manufacturing tooling, cost, and manufacturing time. The fabricated material/alloys' microstructure can be controlled for desired mechanical properties by defining optimized process parameters.

In this Special Issue, we welcome original research and review articles related to additive manufactured metallic materials investigated by advanced in situ characterization techniques, contributions explaining recent achievements within in situ methodologies such as upgrading the in situ setup, parameter optimization, and specimen preparation.



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Special Issue



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Editor-in-Chief

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 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.

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Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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