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Development of New Metallic Materials via Macrodesign of Microstructure

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to present a collection of articles of cutting-edge research on the "Development of New Metallic Materials Via Macrodesign of Microstructure by Means of Additive Manufacturing (AM)", as regards improved property and performance, innovative technology, the micromechanics behind the microstructure evolution, even deformation and failure behavior. Through deep discussions and ongoing studies, the underlying microcosmic laws behind the marodesign of additive manufacturing will be better explored, which will of assistance to the additive manufacturing engineering of the materials for new properties and performances.
Original research articles and reviews with a focus on the following topics are welcome for submission.

1. New metallic materials with advanced properties and performances fabricated by AM;
2. Microstructures and/or mechanical response of materials produced by AM;
3. State-of-the-art techniques on characterization of AM materials at multiscale;
4. Theoretical and computational modeling of materials prepared by AM;
5. Experimental, theoretical, and modeling studies on the structure design of metallic materials via AM processes.

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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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