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Metal Powder-Based Additive Manufacturing: Powder, Properties, and Performance

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Message from the Guest Editors

Dear Colleagues,

The use of metal powder-based additive manufacturing (AM) has expanded greatly in recent years due to process flexibility and the capacity to create parts of complex geometries with reduced waste when compared to traditional manufacturing methods. These methods include both fusion-based and solid-state AM, such as powder bed fusion, the directed deposition of powders, cold spray AM, additive fraction stir, etc. These techniques are applied in a wide scope of applications given their ability to accommodate many feedstock powders with differing compositions, sizes, and morphologies.

The goal of this Special Issue is to highlight research regarding the characterization and evaluation of the microstructure and mechanical properties of additively manufactured parts and their feedstock powders. This evaluation will guide the understanding of the relationships between feedstock powder and the properties of additively manufactured parts. Publication topics may incorporate powder characterization, powder pre-processing, heat treatments, new alloy compositions, microstructural evolution, mechanical properties, and process modeling and optimization.



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Special Issue



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Message from the Editor-in-Chief

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