

Special Issue

Structure Design and Microstructure Control for Metal Additive Manufacturing

Message from the Guest Editor

Additive manufacturing (AM), also known as 3D printing, encompasses a series of technologies that allow components to be fabricated layer by layer. Due to its ability to produce components with high resolutions, complex geometries, and high mechanical performances, AM technologies have rapidly developed over the past decade. AM can be used for the fabrication of metals, ceramics, and polymers. Metal AM technologies mainly include direct energy deposition (DED) and powder bed fusion (PBF). In addition, a few alternative methods such as binder jetting are also recognized as metal AM by the American Society for Testing and Materials (ASTM International). Moreover, the mechanical properties of the lightweight structure depend on the bulk materials. The properties of dense parts are strongly correlated with the microstructure. Here, studies related to microstructure control are also attractive. Accordingly, this Special Issue seeks to showcase research papers, short communications, and review articles that focus on (1) novel structure design for metal AM and (2) microstructure control for metal AM via processing and post-processing.

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2022)



Micromachines

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Impact Factor 3.0
CiteScore 6.0
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