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Materials, Processing, and Post-treatment for Metal-Based Additive Manufacturing

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Message from the Guest Editors

Recently, additive manufacturing (AM) has been widely investigated because of its advantages in the fabrication of components with irregular and complex shapes. Therefore, AM has been applied to fabricate components in the aerospace, medical and automotive fields. However, the rapid fusion and solidification of feeding materials during AM always lead to the formation of metallurgical defects and influence the mechanical properties. In fact, the materials, processing parameters and post-treatments are the main factors of AM fabrication that could affect the microstructure and mechanical properties of as-fabricated components. Therefore, the exploration on the relationship between them is helpful for further improving AM fabrication.

The main aim of the Special Issue is to discuss the effects of the materials, processing and post-treatments of AM on the microstructure and mechanical properties of the components. Research on AM powder or wire, novel AM processing, post-treatments, simulation and mechanism analyses, laser cladding and remanufacturing technology, laser joining, and other related topics are welcome.



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Special Issue



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Message from the Editor-in-Chief

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