



High Energy Additive Manufacturing of Advanced Materials

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Message from the Guest Editor

Dear Colleagues,

High energy additive manufacturing (HEAM) provides a promising technology to build the layer-wise near-net-shape freeform components, with applied energy sources covering laser beam, electron beam, high energy arc/plasma, etc. One of the major problems of HEAM is the manufacturing of advanced materials and its application in industry. It is urgently needed to work on advanced materials, manufacturing processes, pre/post processing design with numerical simulation, which vitally influences the component quality of HEAM. The HEAM of advanced materials will accelerate the materials wheels of the high performance and functionality for the worldwide technologies.

1. High energy additive manufacturing technologies on advanced materials, such as laser, arc, electron beam additive manufacturing;
2. Pre/post processing technologies of HEAM components (including heat treatment, surface and shape modification, etc.);
3. Functional materials using HEAM;
4. Numerical simulation in HEAM;
5. High-throughput materials design and intelligent control for additive manufacturing;
6. Microstructure, phase transformation and mechanical properties of the AM parts.





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Message from the Editor-in-Chief

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