



Selective Laser Melting: State-of-the-Art 2022

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Message from the Guest Editor

Dear Colleagues,

Selective laser melting (SLM), one of the most common metal additive manufacturing (AM) processes, is a layer-by-layer fabrication process where each powder layer is melted and fused by a laser beam that traverses over the designated CAD part's geometry. Therefore, it is used to manufacture end products of intricate geometry for the automobile, aerospace, defense, and biomedical industries. The characteristics of the printed part are heavily dependent upon the optimization of these parameters, which would otherwise result in poor part properties.

This Special Issue plans to discuss the most recent advances in SLM, thereby providing a state-of-the-art platform for the dissemination of scientific and industrial research. Potential topics include, but are not limited to advances in SLM machine design and processing; novel printable and/or functional materials; modelling, simulation, and validation of SLM process characteristics and print-part properties; in situ and/or post-print processing; in-process/real-time monitoring and non-destructive evaluation; case studies on industrial applications.





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Message from the Editorial Board

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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