Special Issue

Directed Energy Deposition of Metal Alloys

Message from the Guest Editor

Metal deposition technologies (i.e., directed energy deposition and wire arc additive manufacturing) enhances material utilization by enabling the manufacture of high-precision near-net shape components from wire and powders. The metal deposition parts have very complex thermal histories, which depend on process variables. The influence of process parameters on the microstructure is complex with a strong dependence on the material system. A current concern with metal deposition is that it is very hard to predict the properties of these components since there are so many process variables involved in the process. This Special Issue on metal deposition technologies intends to offer a dedicated platform for sharing new findings, communicating views about the accomplishments, and future directions in metal deposition research. We welcome reviews and original research articles in the areas of metallurgy, process monitoring, and control, as well as associated topics of metal deposition, achieved through either experimental techniques or theoretical calculations.

Guest Editor

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Deadline for manuscript submissions

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About the Journal

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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