Special Issue

Laser-Based Additive Manufacturing of Metals and Alloys

Message from the Guest Editors

The additive manufacturing (AM) process is considered a new technology with the rapidly changing landscape of manufacturing and is part of a revolution in production industries that is currently taking place. The AM method involves several types for metals and non-metals. Laser energy that is widely used as a tool for manufacturing in industries, which is called laser materials processing, is also used in AM for processes such as selective laser melting (SLM), direct laser metal deposition (DLMD), and selective laser sintering (SLS). AM can be used for producing new parts and for repairing old ones. AM offers several benefits for automation, lowering the cost, rapid prototyping, and customization of composite and complex structures, among other things. The goal of this Special Issue is to seek high-quality manuscripts detailing research and developments related to laser-based AM. Hybrid techniques always can overcome challenges and are useful in AM. Post-processing of additively manufactured parts is another interesting area.

Guest Editors

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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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