Special Issue

Optimization of Metal Additive Manufacturing Processes

Message from the Guest Editors

Additive manufacturing (AM), also known as 3D printing, utilizes advanced computer algorithms and sophisticated machines to deposit materials layer by layer to form a part. The AM technique is a disruptive technology that has revolutionized manufacturing due to its many advantages, such as its low-cost and rapid prototyping, reduced waste of materials, lack of geometric limitations, freedom in design, and ability to fabricate complex and customized parts, improved product performance, and enhanced material efficiency. However, achieving high product quality and the desired properties and geometries of additively manufactured components is dependent on many different parameters, such as process parameters (i.e., alloy composition, process parameters, and geometry), and is still the common topic of research papers. This Special Issue aims to present the state-of-the-art achievements in the field of additive manufacturing and its related topics. Papers on experimental work, numerical simulation, or a combination of both are welcome.

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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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