

Special Issue

Additive Manufacturing of Non-ferrous Alloys

Message from the Guest Editor

Additive manufacturing (AM) of non-ferrous alloys, such as aluminum-, titanium-, nickel-based alloys, has been extensively applied in, for example, aerospace, automotive, energy industries. Non-ferrous alloy's light weight and high strength components from the AM process have received significant interest in mainstream metallography research. Recently, newly designed non-ferrous alloys specifically for AM processes have been created based on big data and materials genome engineering, which exhibit an extraordinary performance as a result of their ultra-fine grain size and special precipitated phase from high-energy beams. The development of applicable non-ferrous alloys for AM processes opens a brand-new research aspect. This Special Issue intends to highlight the recent advances in new non-ferrous alloy development, AM process optimization, lightweight topology structure design, material characterization, mechanical properties, and applications. Research and review articles are welcome.

Guest Editor

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Deadline for manuscript submissions

closed (31 May 2023)



Metals

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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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