Special Issue

Multifunctional Metal Alloys for Advanced 3D Printing: Microstructural, Mechanical, and Functional Properties

Message from the Guest Editors

Multifunctional metal alloys have emerged as pivotal materials for advanced 3D printing technologies. enabling innovative solutions across diverse industrial sectors such as aerospace, biomedical, automotive, and energy. The integration of novel alloy compositions with additive manufacturing techniques has the potential to significantly enhance material performance, providing improved microstructural characteristics, superior mechanical properties, and optimized functional capabilities. This Special Issue invites cutting-edge research exploring alloy development, processing strategies, microstructure-property correlations, and the resulting functional and mechanical properties of 3D-printed metallic materials. We aim to publish original research and comprehensive reviews highlighting recent advancements, technological challenges, and future trends in multifunctional alloys for additive manufacturing. Contributions focusing on novel alloy systems, advanced characterization methods, innovative processing routes, and practical applications are strongly encouraged. We look forward to your submissions.

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