



metals



Special Issue Reprint

Additive Manufacturing of High Temperature Alloys

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ISBN 978-3-7258-4287-2 (Hardback)

ISBN 978-3-7258-4288-9 (PDF)



This Special Issue reprint aims to immerse readers in the forefront of research and innovation in additive manufacturing (AM) of high-temperature alloys—materials critical to aerospace, energy, and high-performance engineering applications. These alloys, including superalloys, are increasingly produced via AM due to its ability to fabricate complex geometries with minimal material waste and enhanced design flexibility.

Despite its promise, AM still faces challenges such as residual stresses, microstructural defects, and variability in mechanical performance. This reprint brings together cutting-edge studies addressing these issues through process optimization, advanced heat treatments, novel and sustainable alloy and powder designs.



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