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Laser Powder Bed Fusion, Direct Energy Deposition and Hybrid Manufacturing of Metals and Alloys

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Laser Powder Bed Fusion (L-PBF) and Direct Energy Deposition (DED) are nowadays versatile additive manufacturing processes with the capability to produce high-quality parts at high productivity rates and can be combined with subtractive manufacturing to improve surface characteristics. The industry is exponentially adopting these additive and hybrid manufacturing processes to fabricate functional parts for structural, biomedical, aerospace, and automotive applications among others. The introduction of L-PBF and DED parts is still experiencing barriers to reach acceptable levels of product integrity, with high-performance functions and under strict service requirements. The aim of this Special Issue is to collect valuable research in different fields affecting process and product integrity in L-PBF, DED and hybrid manufacturing, focusing on surface integrity, crystallography evolution, porosity, anisotropy effects, process calibration and laser–material interaction effects. Other research fields are welcome if their approach is related to the L-PBF, DED and hybrid manufacturing processes and product enhancement.

Dr. Hector R. Siller

Guest Editor



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Special Issue



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Message from the Editor-in-Chief

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