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Type: **Poster (+) Presentation**

Additive Manufacturing of open porosities: from fabrication and characterization to the application

Thursday, 3 June 2021 14:40 (1 hour)

Within the past years, Additive Manufacturing (AM) technologies could be established as a versatile complement to conventional means of manufacturing. Especially provided opportunities such as handling complex geometries and gaining control of various process parameters have become a driving force towards its use for industrial applications. Being data-based, AM technologies also allow a high degree of adaptability to customized designs. In this study, resulting novel possibilities for functionality driven designs will be investigated. Open porosities, structures that are known for being advantageous to heat transfer and flow applications, will be manufactured by Laser-Based Powder Bed Fusion (PBF-LB). The general concept of additively manufactured open porosities will be summarized. Further, the structures will be characterized by laboratory tests and simulations of their digital twin. Gained understanding will be utilized to correlate resulting functional properties to the manufacturing-input and thus to the design of future applications.

Time Block Preference

Time Block B (14:00-17:00 CET)

References

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Session Classification: Poster +

Track Classification: (MS22) Manufactured Porous Materials for Industrial Applications