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Mechanical response of a triply periodic minimal surface cellular structures manufactured by selective laser melting

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Highlights

- A material model based on the SLM-built porous materials was proposed.
- The detailed stress and strain distribution were predicted from the FE results.
- The fracture can be predicted and was verified by the experimental testing.
- The predicted mechanical responses match well with the experimental results.
- The Gibson-Ashby formulations were obtained from the FE analysis.

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