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3D Printed Functional Lattice Structures

Guest Editor:

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Message from the Guest Editor

The advent of 3D printing brings about the possibilities of designing functional materials based on their structures as opposed to their chemistry. Specifically, these materials are cellular and designed with the introduction of architected pores. A new class of porous material, known as lattice structure, manifests from this. They often display properties not commonly found in traditional bulk materials, such as being lightweight, with a usually low/high specific stiffness and strength, deforming with a stress plateau region, having a high specific surface area, with unique flow properties, and with meta-mechanical behaviors. They are widely adopted as energy-absorbers, artificial bone implants, electrochemistry, membranes, filters, and acoustic metamaterials.

This Special Issue welcomes all articles related to the 3D printing of lattice structures, including to but not limited to their design, materials processing, applications and performance, and mechanisms. This Special Issue also aims to help to advance the scientific and technical understandings of 3D-printed functional lattice structures.



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Special Issue



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Message from the Editor-in-Chief

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