Enhancing Strength of 3D Printed Objects Through Composite Mesh Reinforcement

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This research article addresses the common issue of anisotropic strength inherent in standard 3D printing by investigating a method to enhance the mechanical strength of 3D printed objects using composite mesh materials. The process involved manually modifying the G-codes generated by slicer software to account for the thickness of the mesh material, automatic pause at desired layer and address concerns related to the optimal adhesion between layers, to increase object strength, I utilized two types of mesh materials, fiberglass, and fine steel wire, and adjusted the number of mesh layers and infill percentages.

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