

Additive Manufacturing by Laser Printing

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Laser printing can be applied for additive manufacturing of complex 3D structures by printing very small and delicate objects like nanoparticles, living cells, and microorganisms. We will discuss a few examples of this technology for printing of metasurfaces, 3D scaffolds, and biological test systems.

For arranging cells in 3D patterns, laser-assisted bioprinting (LAB) based on the laser induced forward transfer process is used. Different cell types, including primary cells, stem cells, and iPS cells embedded in hydrogels as extra-cellular matrix, have been printed. Our current progress in laser printing of microorganisms will be also discussed.