

Fabrication of Microfluidic Device using DLP Stereolithography Three-Dimensional Printing System

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Recently, 3D-printing has been utilized the fabrication process of microfluidic devices to a single step. This study shows fabrication of microfluidic device using stereolithography(SLA) three-dimensional printing system. The conventional multi-step photolithography is time-consuming and labor-intensive and also requires precise alignment for fabrication of 3D microchannel. Here, we present fabrication of microfluidic devices using a digital light processing(DLP) stereolithography three-dimensional(3D) printing system. (resin: Asiga plasclear v2) This device describes a 3D-printed microfluidic device for controlling various channel width and height. With the pixel size down to 35 μ m and 10 μ m layer thickness, precision device fabrication can be achieve by smart position system(SPS). The controllable 3D-printed microchannels can apply in drug delivery, tissue engineering, organ-on-a-chip platforms.