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3D Printed Multi-layer Microfluidic Devices[1] NATHAN BISHOP, KATHRYN SHIRK, None — Microfluidic devices are increasingly important to the field of bioanalysis for their ability to quickly process a sample in the microliter and picoliter scale. It has been shown that single-layered microfluidic devices can be produced quickly and inexpensively using a 3D printer, PDMS, and shrinking material. This research will expand these methods to create multi-layered microfluidic devices. This research will focus on two main obstacles when creating multi-layer microfluidic devices: layer alignment, and surface roughness. The development of multilayer microfluidic devices allows for more compact microfluidic chip design.

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