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High Resolution Microfluidic Channel Fabrication via Co-phase flow Enabled Additive Manufacturing

Co-phase flow additive manufacturing enables scalable sub-100 µm microfluidic channels without costly cleanroom steps.

Researchers at Purdue University have developed a method for using additive manufacturing to fabricate sub-100 Î¼m microfluidic channels using cophase flow of an epoxy resin and a support liquid. By using a support liquid with low viscosity, the challenges associated with removing excess material from the channels are minimized, thus reducing cost and improving scalability. This technology has applications in biotechnology, drug discovery and delivery, and more throughout the life science space.

Advantages

- Sub-100 Î¼m channel width

- No removal of excess material required

- Lower cost and improved scalability compared to current methods

Applications

- Biotechnology

- Life sciences

- Drug discovery/delivery

Technology Validation:

This technology has been validated through analysis of the concept.

TRL: 2

Intellectual Property:

Technology ID
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Category
Chemicals & Advanced Materials/Materials Processing & Manufacturing Technologies

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