Method of Forming a Multi-layer Microfluidic Device

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a simple and inexpensive method for fabricating a multi-layer microfluidic device.

OVERVIEW

Creating multiple layers of interconnected microfluidic channels is important for the further development of commercial microfluidic devices. However, current methods for creating layered systems are expensive and require that layers be fabricated independently and then assembled together in stacks.

THE INVENTION

UW-Madison researchers have developed a simple and inexpensive method for fabricating a multi-layer microfluidic device on a base. The method allows stacking of multiple layers and forming of microfluidic channels and components inside the layers during the fabrication process. Each layer can be connected to other layers during polymerization of the top layer. Separate layers that do not connect to any previous layer can also be formed.

APPLICATIONS

• Microfluidics

KEY BENEFITS

• No limit to the number of layers that can be formed
• Inexpensive - does not require traditional microfabrication techniques involving etching
• Layers do not require thermal bonding in high temperature annealing ovens.
• More adaptable than current methods
• Device can be easily and economically customized for a particular application.
• Layers are not pre-formed, so each layer can be patterned after the top layer is
assembled on the other layers.

ADDITIONAL INFORMATION

Tech Fields
Micro & Nanotech - Microfluidics

CONTACT INFORMATION

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846.