



## TECHNOLOGY

# Fabrication of Complex Three-dimensional Microfluidic Networks

## OVERVIEW

There is an increasing drive towards miniaturization of scientific and technological devices. The push began in electronics and is directed to micromechanical microfluidic devices. Microfluidic devices make it possible to miniaturize entire instruments, increasing portability while decreasing costs.

Conventional microfluidic devices contain fluid channels with cross sectional dimensions in the range of tens to hundreds of micrometers and lengths up to millimeters or centimeters. Due to current fabrication techniques these channels generally lie in a single plane or at most within two adjacent planes.

An inventor at the University of Maryland has developed a method for creating arbitrary 3-D microfluidic networks from elastomers such as Polydimethylsiloxane (PDMS) using a single master pattern and a one-step process to transfer the pattern to the elastomer.

For licensing information please contact 301 405 3947 or by e-mail [otc@umd.edu](mailto:otc@umd.edu)

## CONTACT INFO

UM Ventures  
0134 Lee Building  
7809 Regents Drive  
College Park, MD 20742  
Email: [umdtechtransfer@umd.edu](mailto:umdtechtransfer@umd.edu)  
Phone: (301) 405-3947 | Fax: (301) 314-9502

## Additional Information

### INSTITUTION

University of Maryland, College Park

### PATENT STATUS

Patent(s) pending

### LICENSE STATUS

Contact OTC for licensing information

### CATEGORIES

- Microfluidics

### EXTERNAL RESOURCES

- [US Patent 8,656,949](#)

- [US Patent 9,656,414](#)

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