Method and Device for Sensing Microfluidic Flow

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing an improved flow sensor for microfluidic channels.

OVERVIEW

Current approaches to sensing flow rates in microfluidic channels possess a number of disadvantages. They require expensive parts and additional machining, are limited to certain types of microfluidic channels and can be difficult to use accurately.

THE INVENTION

UW-Madison researchers have developed an improved flow sensor for microfluidic channels. A cantilever beam is placed inside the microchannel at a slight angle to the channel. The flow of fluid around the beam results in different drag forces on the two sides of the beam and causes the beam to bend. From the amount of beam bending, which can be measured optically, a flow rate is calculated.

APPLICATIONS

• Assessing flow rate in microfluidic channels

KEY BENEFITS

• Flexible – Allows for a silicon substrate and a cap made of any material
• Any microfluidic devices constructed by traditional lithographic techniques can simply and easily integrate this type of flow sensor

ADDITIONAL INFORMATION

Tech Fields
Micro & Nanotech - Microfluidics
CONTACT INFORMATION

For current licensing status, please contact Mark Staudt at mstaudt@warf.org or 608-960-9845.