

Title (en)

METHODS AND SYSTEMS FOR MICROFLUIDIC PROCESSING

Title (de)

VERFAHREN UND SYSTEME ZUR MIKROFLUIDISCHEN VERARBEITUNG

Title (fr)

PROCEDES ET SYSTEMES DE TRAITEMENT MICROFLUIDIQUE

Publication

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Application

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- US 1452001 A 20011214
- US 7537102 A 20020215
- EP 02715213 A 20020327
- US 0209440 W 20020327

Abstract (en)

The present invention relates to a system and method for moving samples, such as fluids, within a microfluidic system using a plurality of gas actuators (168, 170, 172) for applying pressure at different locations within the microfluidic system. The system includes a substrate (130, 132) which forms a fluid network through which fluid flows, and a plurality of gas actuators (168, 170, 172) integral with the substrate (1320, 132). One such actuator (168) is coupled to the network at a first location for providing gas pressure to move a microfluidic sample within the network. Another gas actuator (170) is coupled to the network at a second location for providing gas pressure to further move at least a portion of the microfluidic sample within the network. A valve (916, 216) is coupled to the microfluidic network so that, when the valve is closed, it substantially isolates the second gas actuator from the first gas actuator.

IPC 8 full level

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Citation (applicant)

US 95392101 A 20010918

Citation (search report)

- [X] US 6168948 B1 20010102 - ANDERSON ROLFE C [US], et al
- [X] US 5863502 A 19990126 - SOUTHGATE PETER DAVID [US], et al
- [A] WO 9822625 A1 19980528 - REGENT OF THE UNIVERSITY OF MI [US], et al
- [A] MASTRANGELO C H ET AL: "MICROFABRICATED DEVICES FOR GENETIC DIAGNOSTICS", PROCEEDINGS OF THE IEEE, IEEE. NEW YORK, US, vol. 86, no. 8, 1 August 1998 (1998-08-01), pages 1769 - 1787, XP000848439, ISSN: 0018-9219, DOI: 10.1109/5.704282

Cited by

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