

Title (en)

Microfluidic system for controlled displacement of a liquid

Title (de)

Mikrofluidisches System zur kontrollierten Verdrängung eines Flüssigkeits

Title (fr)

Dispositif microfluidique de déplacement contrôlé de liquide

Publication

**EP 2143949 A3 20150708 (FR)**

Application

**EP 09164657 A 20090706**

Priority

FR 0854597 A 20080707

Abstract (en)

[origin: EP2143949A2] The device has a microchannel (10) i.e. microtube, partially filled with electrically conductive liquid (F1) and dielectric fluid (F2) e.g. silicone oil. The dielectric fluid is situated in downstream of the liquid in a longitudinal direction of the microchannel, and forms interfaces (I1) and another interface with the liquid and the fluid, respectively. A displacement unit displaces the liquid by electrowetting. A control system is provided with a capacitive measurement device to control displacement of the liquid based on a measured capacity value.

IPC 8 full level

**B01L 3/00** (2006.01); **F04B 19/00** (2006.01)

CPC (source: EP US)

**B01L 3/50273** (2013.01 - EP US); **B01L 3/502784** (2013.01 - EP US); **B01L 3/502792** (2013.01 - EP US); **F04B 19/006** (2013.01 - EP US); **B01L 2200/10** (2013.01 - EP US); **B01L 2300/0645** (2013.01 - EP US); **B01L 2300/0819** (2013.01 - EP US); **B01L 2400/0421** (2013.01 - EP US); **B01L 2400/0427** (2013.01 - EP US)

Citation (search report)

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- [Y] WO 2008055256 A2 20080508 - UNIV CALIFORNIA [US], et al
- [A] WO 2006098700 A1 20060921 - UNIV NANYANG [SG], et al
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- [I] REN H ET AL: "Automated on-chip droplet dispensing with volume control by electro-wetting actuation and capacitance metering", SENSORS AND ACTUATORS B: CHEMICAL: INTERNATIONAL JOURNAL DEVOTED TO RESEARCH AND DEVELOPMENT OF PHYSICAL AND CHEMICAL TRANSDUCERS, ELSEVIER S.A, CH, vol. 98, no. 2-3, 15 March 2004 (2004-03-15), pages 319 - 327, XP004493694, ISSN: 0925-4005, DOI: 10.1016/J.SNB.2003.09.030

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

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DOCDB simple family (application)

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