(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 December 2007 (06.12.2007)

PCT

(10) International Publication Number
WO 2007/139511 A1

(51) International Patent Classification:
G01N 33/487 (2006.01) *G01N 1/10* (2006.01)
B01L 3/00 (2006.01)

(21) International Application Number:
PCT/SG2006/000137

(22) International Filing Date: 31 May 2006 (31.05.2006)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant *(for all designated States except US)*: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 20 Biopolis Way #07-01, Centros, Singapore 138668 (SG).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **AGARWAL, Ajay** [IN/SG]; 369 Holland Road #09-05, Allsworth Park, Singapore 278640 (SG). **BALASUBRAMANIAN, Narayanan** [SG/SG]; 28 Bukit Batok East Ave 2 #10-14, Hillview Regency, Singapore 659921 (SG). **GUO, Lihui** [CN/SG]; 613 Choa Chu Kang St. 62, #08-223, Singapore 680613 (SG). **WONG, Chee Chung** [SG/SG]; Block 335 Ang Mo Kio Ave. 1, #12-2001, Singapore 560335 (SG).

(74) Agent: **SCHIWECK, Wolfram**; Viering, Jentschura & Partner, P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

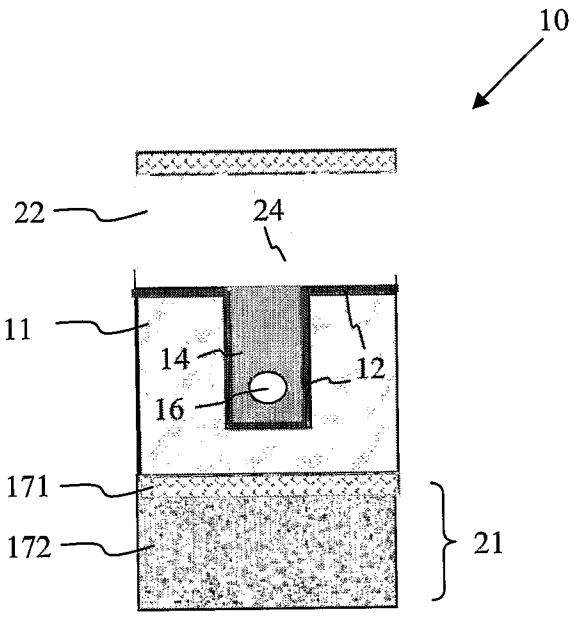
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** TRANSPARENT MICROFLUIDIC DEVICE



(57) **Abstract:** A device for analysing the status of a biological entity. The device (10) comprises a substantially transparent base substrate (11) having a recess defined therein by at least two opposing lateral walls and a base wall, a substantially transparent filler member (14) having at least a portion thereof occupying the recess, a substantially transparent separation layer (12) disposed between the filler member and the base substrate, and a channel (16) defined in the filler member, wherein the channel comprises an inlet and an outlet, the inlet being arranged on a first lateral wall of the filler member, and the outlet being arranged on a second lateral wall of the filler member, said first lateral wall of the filler member being arranged in opposing relationship with the second lateral wall of the filler member, and at least a portion of the first and the second lateral walls of the filler member being at least substantially perpendicular to the opposing lateral walls defining the recess.

WO 2007/139511 A1