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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 August 2006 (10.08.2006)

PCT

(10) International Publication Number
WO 2006/084263 A2

(51) International Patent Classification:
G01N 29/02 (2006.01) *G01N 29/22* (2006.01)
G01N 29/036 (2006.01) *G01F 23/296* (2006.01)
G01H 13/00 (2006.01)

(21) International Application Number:
PCT/US2006/004231

(22) International Filing Date: 3 February 2006 (03.02.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/650,010 4 February 2005 (04.02.2005) US

(71) Applicant *(for all designated States except US)*: **SYMYX TECHNOLOGIES, INC.** [US/US]; 3100 Central Expressway, Santa Clara, California 95051 (US).

(72) Inventors; and

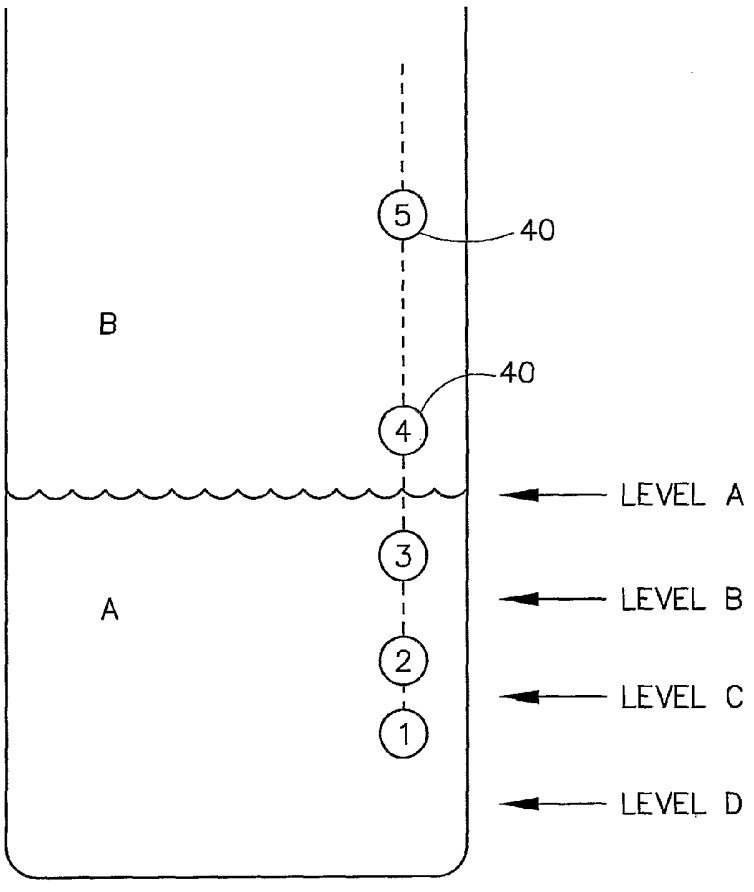
(75) Inventors/Applicants *(for US only)*: **KOLOSOV, Oleg** [GB/US]; 1045 Arlington Lane, San Jose, California 95129 (US). **SPITKOVSKY, Mikhail** [US/US]; 1363 Zurich Terrace, Sunnyvale, California 94087 (US). **BENNETT, James** [US/US]; 1196 Phillips Court, Santa Clara, California 95051 (US). **MATSEIV, Leonid** [RU/US]; 1060 Alderbrook Lane, San Jose, California 95129 (US). **GAMMER, Vladimir** [UA/US]; 601 Masonic Avenue, Apt. 7, San Francisco, California 94117 (US).

(74) Agents: **KRASNOW, Ronald, A.** et al.; SYMYX TECHNOLOGIES, INC., 3100 Central Expressway, Santa Clara, California 95051 (US).

(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.

[Continued on next page]

(54) Title: MULTI-POSITION FLUID SENSORS AND METHODS



(57) Abstract: Fluid monitoring methods, sensors and systems are disclosed. Preferred embodiments comprise two or more mechanical resonators, preferably two or more flexural resonators configured for sensing, monitoring or evaluating one or more fluids at multiple positions within one or more fluidic systems. In the methods, sensors and systems of the invention, signals generated in response to stimulation of the mechanical resonators are communicated by multiplexing over a common communication path, and then deconvoluted with respect to the position of the resonators.

WO 2006/084263 A2