

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 November 2008 (13.11.2008)

PCT

(10) International Publication Number
WO 2008/136769 A1

(51) International Patent Classification:

G01N 21/64 (2006.01) *G01N 21/03* (2006.01)
G01N 1/36 (2006.01) *G01N 21/94* (2006.01)
G01N 21/85 (2006.01) *C02F 1/00* (2006.01)
B01D 43/00 (2006.01) *G01N 33/53* (2006.01)

(21) International Application Number:

PCT/SG2008/000156

(22) International Filing Date: 2 May 2008 (02.05.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/915,718 3 May 2007 (03.05.2007) US

(71) Applicant (for all designated States except US):
NANYANG TECHNOLOGICAL UNIVERSITY
[SG/SG]; 50 Nanyang Avenue, 639798 Singapore (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GIN, Karina Yew-Hoong** [SG/SG]; 10 Holland Hill, #01-10, Holland Hill Mansions, 278733 Singapore (SG). **GARRETT, Trevor, R.** [GB/SG]; 137 Sunset Way, #01-21, Clementi Park, 597158 Singapore (SG).

(74) Agent: **GOH, Su Lin Audrey**; Viering, Jentschura & Partner LLP, 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, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

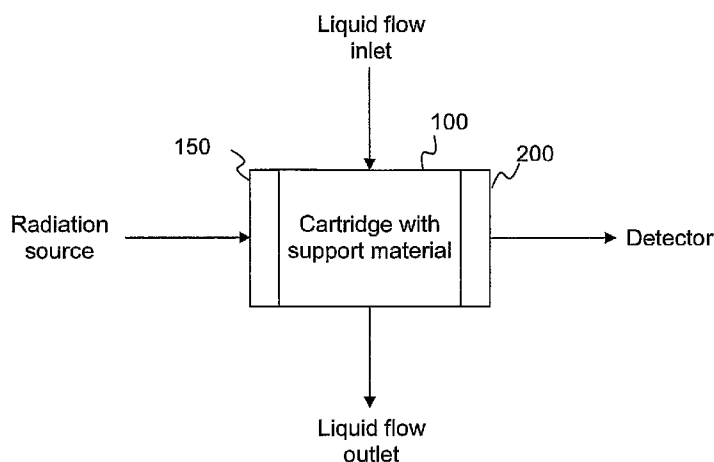
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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

(54) Title: ONLINE CONTAMINANT DETECTION AND REMOVAL SYSTEM

FIG. 1A



(57) Abstract: This invention refers to continuous flow devices for detecting and/or removal of contaminants from a liquid stream. The device comprises a cartridge with an inlet and outlet for the liquid stream, a radiation incident and emerging wall portion and optically transparent support material packed in the cartridge such that a liquid stream can pass between voids or spaces formed within the optically transparent material, as well as a radiation source and detector. The support material comprises molecules for capturing at least one contaminant on the surface of the support material and each of the capture molecules comprises at least one reporter group which emits a signal upon binding of the contaminant. Another form of the invention refers to a rotatable support within the liquid stream.

WO 2008/136769 A1