



(51) International Patent Classification:
G02B 6/10 (2006.01)

(21) International Application Number:
PCT/SG2008/000198

(22) International Filing Date:
29 May 2008 (29.05.2008)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEN, Xian Tong** [CN/SG]; Institute of Microelectronics, 11 Science Park Road, Singapore Science Park II, Singapore 117685 (SG). **TAO, Shao Hua** [CN/SG]; Institute of Microelectronics, 11 Science Park Road, Singapore Science Park II, Singapore 117685 (SG). **LO, Guo-qiang, Patrick** [US/SG]; Institute of Microelectronics, 11 Science Park Road, Singapore Science Park II, Singapore 117685 (SG). **ZHU, Shi Yang** [CN/SG]; Institute of Microelectronics, 11 Science Park Road, Singapore Science Park II, Singapore 117685 (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, 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, SV, 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 (Art. 21(3))

(54) Title: OPTICAL RESONATOR AND OPTICAL SENSING SYSTEM COMPRISING THE SAME

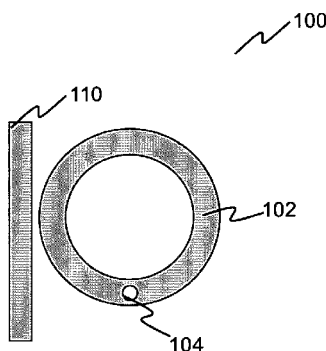


FIG. 1A

(57) Abstract: An embodiment of the invention relates to an optical resonator. The optical resonator includes an input optical waveguide and a closed loop coupled to the input optical waveguide. The closed loop is adapted to receive light from the input optical waveguide, wherein the closed loop includes at least one hole formed within a portion of the closed loop.