

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 December 2007 (27.12.2007)

PCT

(10) International Publication Number
WO 2007/149724 A3

- (51) International Patent Classification:
G02B 6/10 (2006.01)
- (21) International Application Number:
PCT/US2007/070901
- (22) International Filing Date: 11 June 2007 (11.06.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/812,863 12 June 2006 (12.06.2006) US
- (71) Applicant (for all designated States except US): **PACIFIC BIOSCIENCES OF CALIFORNIA, INC.** [US/US]; 1505 Adams Drive, Menlo Park, CA 94025 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **FOQUET, Mathieu** [BE/US]; 1003 16th Avenue, Redwood City, CA 94063 (US). **PELUSO, Paul** [US/US]; 25200 Carlos Bee Boulevard, Apt. 167, Hayward, CA 94542 (US). **TURNER, Stephen** [US/US]; 356 Stanford Avenue, Menlo Park, CA

94025 (US). **ROITMAN, Daniel, Bernardo** [US/US]; 700 College Avenue, Menlo Park, CA 94025 (US). **OTTO, Geoffrey** [US/US]; 681 Woodhams Road, Santa Clara, CA 95051 (US).

(74) Agents: **MANN, Jeffrey, S.** et al.; Morgan Lewis & Bockius LLP, Two Palo Alto Square, 3000 El Camino Real, Suite 700, Palo Alto, CA 94306 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, 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,

[Continued on next page]

(54) Title: SUBSTRATES FOR PERFORMING ANALYTICAL REACTIONS

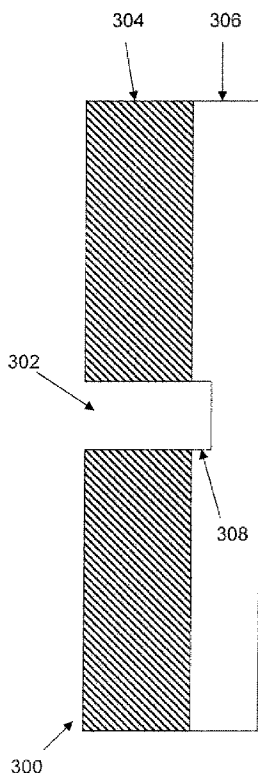


FIG. 3

(57) Abstract: Substrates, including zero mode waveguide substrates that have been fabricated to provide additional functional elements and/or components including increased volumes for positioning of active surfaces and or components for the mitigation of negative electrochemical properties of the underlying substrates.

WO 2007/149724 A3



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, MT, 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*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

31 July 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/70901

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G02B 6/10**(2006.01)

USPC: 385/129

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 385 / 129, 130, 131

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO EAST: search term = ((zero adj mode adj waveguide) or ZMW) with anode

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7,013,054 B2 (LEVENE et al.) 14 March 2006 (14.03.06), see figures 3C and 3D and column 5, lines 14-26, column 7, lines 11-12 and column 17, lines 5-14).	8-12
---		-----
A		1-7, 13
A	US 6,917,726 B2 (LEVENE et al.) 12 July 2005 (12.07.05), see entire document	1-13

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T"</p> <p>"X"</p> <p>"Y"</p> <p>"&"</p>	<p>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>document member of the same patent family</p>
---	---	---

Date of the actual completion of the international search

09 May 2008 (09.05.2008)

Date of mailing of the international search report


22 MAY 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Jennifer Doan 
 Telephone No. (703) 308-0956