

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 December 2005 (08.12.2005)

PCT

(10) International Publication Number
WO 2005/116597 A3

(51) International Patent Classification:
G01J 4/00 (2006.01)

(21) International Application Number:
PCT/US2005/016270

(22) International Filing Date: 10 May 2005 (10.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/847,754 17 May 2004 (17.05.2004) US

(71) Applicant (for all designated States except US): **MAVEN TECHNOLOGIES LLC** [US/US]; 9911 Pico Boulevard, Los Angeles, California 90034 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RASSMAN, William** [US/US]; 9911 West Pico Blvd., \$30, Los Angeles, California 90035 (US). **RALIN, David** [US/US]; 317 Monterey Road, #29, South Pasadena, California 91030 (US). **LIEBERMAN, Robert A.** [US/US]; 1309 Florwood Avenue, Torrance, California 90503 (US). **KEMPEN, Lothar U.** [NL/US]; 224 1/2 Juanita Avenue, Redondo Beach, California 90277 (US). **SHAPIRO, Herbert** [US/US]; 29021 Pompano Way, Laguna Niguel, California 92677 (US).

(74) Agent: **PARK, David S.**; MacPherson Kwok Chen & Heid LLP, 1762 Technology Drive, Suite 226, San Jose, California 95110 (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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, 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, 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).

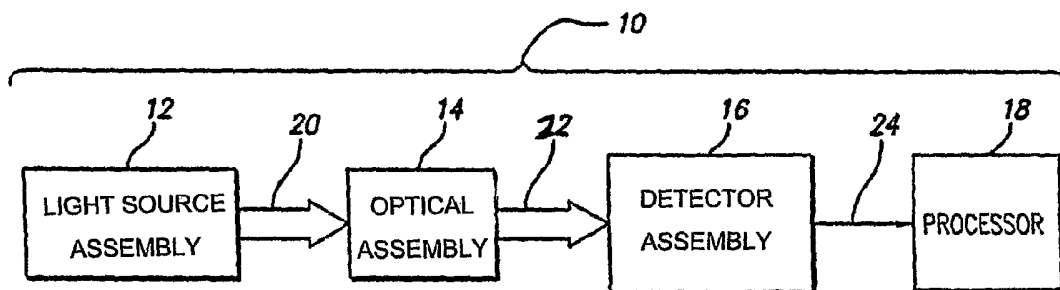
Published:

- with international search report
- 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:
17 August 2006

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: MICROARRAY SCANNING



(57) Abstract: Methods and apparatus for scanning of a microarray to provide an image of the microarray are disclosed. Data related to change in polarization state of a scanning light beam for individual points or lines or other portion of the microarray are collected and processed to image the microarray at high resolution and speed.

WO 2005/116597 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/16270

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G01J 4/00**(2006.01)

USPC: 356/369

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. : 356/364-370, 445; 436/518; 385/12, 129

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,485,277 A (FOSTER) 16 January 1996 (16.01.1996), see entire document.	1-41
A	US 5,856,873 A (NAYA et al) 05 January 1999 (05.01.1999), see entire document.	1-41
A	US 6,026,053 A (SATORIUS) 15 February 2000 (15.02.2000), see entire document.	1-41
A	US 5,229,833 A (STEWART) 20 July 1993 (20.07.1993), see entire document.	1-41
A	US 5,491,556 A (STEWART et al) 13 February 1996 (13.02.1996), see entire document.	1-41
A	US 5,437,840 A (KING et al) 01 August 1995 (01.08.1995), see entire document.	1-41
A	US 5,633,724 A (KING et al) 27 May 1997 (27.05.1997), see entire document.	1-41

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" 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
"E" earlier application or patent published on or after the international filing date	"X" 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
"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)	"Y" 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
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

Date of the actual completion of the international search 12 May 2006 (12.05.2006)	Date of mailing of the international search report 14 JUN 2006
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 JOSE G. DEES Telephone No. (571) 272-1607 

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/16270

Continuation of B. FIELDS SEARCHED Item 3:

EAST: US-PGPUB; USPAT; USOCR; EPO; JPO

search terms: (quasi\$1monochromatic with LED same (actuator)); (quasi\$monochromatic with LED); (quasi\$monochromatic with LED) and (evanescent near field); (quasi\$monochromatic with LED) and (evanescent); (("5485277" or ("5229833")).PN. and (diffuser); (("5485277" or ("5229833")).PN. and (diffus\$3); (("5485277" or ("5229833")).PN. and (diffus\$3 disperse scatter\$3); (incandescent source); (10and(356/364-370)).CCLS.; (10and(356/364-370.CCLS. and (diffus\$3 disperse scatter\$3) and (evanescent near field)