

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

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/040717 A3

(51) International Patent Classification⁷: **G01N 21/55**

(21) International Application Number:
PCT/US2003/034265

(22) International Filing Date: 28 October 2003 (28.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/421,917 28 October 2002 (28.10.2002) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, 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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

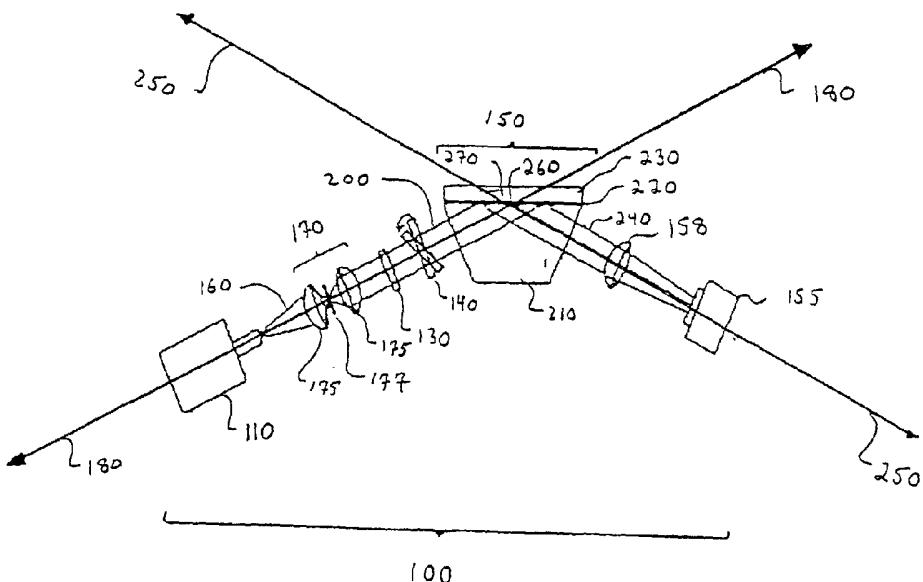
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: WAVELENGTH TUNABLE SURFACE PLASMON RESONANCE SENSOR



WO 2004/040717 A3

(57) Abstract: This invention provides methods, devices and device components for sensing, imaging and characterizing changes in the composition of a probe region. More particularly, the present invention provides methods and devices for detecting changes in the refractive index of a probe region positioned adjacent to a sensing surface, preferably a sensing surface comprising a thin conducting film supporting surface plasmon formation. In addition, the present invention provides methods and device for generating surface plasmons in a probe region and characterizing the composition of the probe region by generating one or more surface plasmon resonance curves and/or surface plasmon resonance images of the probe region.



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

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

25 November 2004

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/34265

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 21/55
US CL : 356/445

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. : 356/445, 446, 447, 448

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. |
|------------|--|---------------------------------------|
| X | WO 01/ 69209 A1 (JOHANSEN) 20 September 2001 (20.09.2001) see entire document. | 1-11, 13, 14, 16, 17, 19-22, 25-64 |
| --- | | ----- |
| Y | US 5,339,155 A (PARTRIDGE et al) 16 August 1994 (16.08.1994) see entire document. | 12, 15, 18, 23, 24 |
| Y | US 5,339,155 A (PARTRIDGE et al) 16 August 1994 (16.08.1994) see entire document. | 12, 15, 18, 23, 24 |
| A, P | US 6,573,107 B1 (BOWEN et al) 03 June 2003 (03.06.2003) see entire document. | 1-64 |
| A | US 6,330,062 B1 (CORN et al) 11 December 2001 (11.12.2001) see entire document. | 1-64 |
| A | US 5,491,556 A (STEWART et al) 13 February 1996 (13.02.1996) see entire document. | 1-64 |
| A | US 5,351,127 A (KING et al) 27 September 1994 (27.09.1994) see entire document. | 1-64 |
| A | US 5,322,798 A (SADOWSKI) 21 June 1994 (21.06.1994) see entire document. | 1-64 |

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

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Date of the actual completion of the international search Date of mailing of the international search report

07 July 2004 (07.07.2004) 08 OCT 2004

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INTERNATIONAL SEARCH REPORT

PCT/US03/34265

Continuation of B. FIELDS SEARCHED Item 3:

EAST: USPAT; US-PGPUB; EPO; DERWENT; (356/\$.ccls. and SPR) AND (polychromatic near (light adj source)), (356/\$.ccls. and SPR) and polychromatic broadband) near (light adj source). ((refractive near (index or indice)) and SPR) and (interference adj filter) ("SE100530").PN.