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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 September 2009 (11.09.2009)

PCT

(10) International Publication Number
WO 2009/111163 A3

(51) International Patent Classification:
G01N 21/86 (2006.01)

(21) International Application Number:
PCT/US2009/034350

(22) International Filing Date:
18 February 2009 (18.02.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/039,830 29 February 2008 (29.02.2008) US

(71) Applicant *(for all designated States except US)*: **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, NY 10504 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BUMM, Lloyd** [US/US]; 418 N. Peters Avenue, Norman, OK 73069 (US). **DAHAYANAKA, Daminda** [LK/US]; 2920 S. Chautauqua Ave., Apt. 02, Norman, OK 73072 (US). **KASZUBA, Philip, V.** [US/US]; 80 Saybrook Road, Essex Junction, VT 05452 (US). **MOSZKOWICZ, Leon** [US/US]; 39 Hunting Ridge Lane, Millon, VT 05602 (US). **SLINKMAN, James, A.** [US/US]; 882 North Street, Montpelier, VT 05602 (US).

(74) Agent: **LESTRANGE, Michael**; International Business Machines Corporation, Intellectual Property Law 972E, 1000 River Street, Essex Junction, VT 05452 (US).

(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, ST, 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, MK, 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))*

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DETECTING LOCAL MECHANICAL STRESS IN INTEGRATED DEVICES

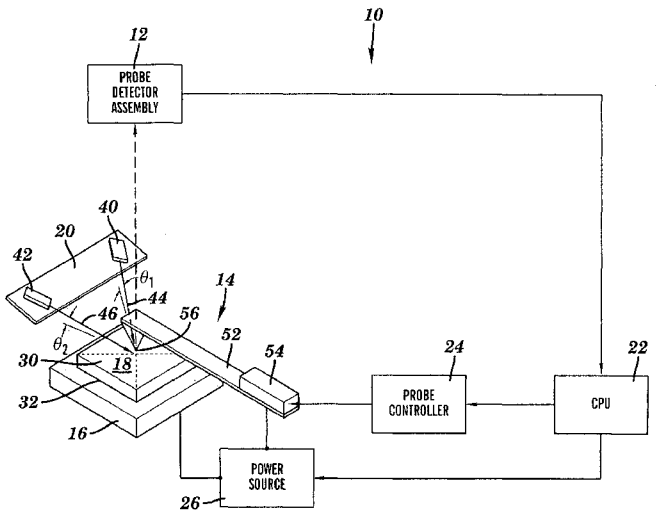


FIG. 1

(57) Abstract: A method of detecting local mechanical stress in integrated devices is provided, the method comprising: enabling the detection of a photo voltage difference between a scan probe device (14) and a surface portion (30) of an integrated device (18), the scan probe device (14) being configured to deflect in response to the photo voltage difference; measuring the deflection of the scan probe device (14) in response to the photo voltage difference between the scan probe device (14) and the surface portion (30) of the integrated device (18); and calculating a local stress level within the integrated device by determining a local work function of the surface portion (30) of the integrated device (18) based upon the deflection of the scan probe device (14).

WO 2009/111163 A3

(88) Date of publication of the international search report:
21 January 2010

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 09/34350

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01N 21/86 (2009.01)
USPC - 250/559.13
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)
USPC- 250/559.13

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC- 250/550; 250/559.01; 702/42 (keyword limited - see terms below)
IPC (8)- G01N 21/86 (2009.01) (keyword limited - see terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PUBWEST (USPT, PGPB, EPAB, JPAB); GooglePatents, GoogleScholar
Search Terms Used: mechanical stress, integrated devices, photovoltage, scan probe, laser, optical controller, angle of incidence, Brewster angle, stress level, deflection, topographic image, scanning kelvin photovoltage microscopy (SKPVM)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/0267622 A1 (Lagowski et al.) 30 November 2006 (30.11.2006) Fig. 1, Fig. 2a, para [0011], [0013], [0015], [0036], [0038], [0044]-[0046], [0048]-[0050], [0057]	1-25
Y	US 2003/0175945 A1 (Thompson et al.) 18 September 2003 (18.09.2003) Abstract, para [0010], [0033], [0066]	1-25
Y	US 2001/0028460 A1 (Maris et al.) 11 October 2001 (11.10.2001) Abstract, Fig. 3b, Fig. 6, Fig. 7, Fig. 10, para [0025], [0035], [0040], [0066], [0076], [0080]-[0083], [0087], [0094], [0096], [0109]	2-7, 9-17, 22, 23

☐ Further documents are listed in the continuation of Box C. ☐

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
07 April 2009 (07.04.2009)	29 APR 2009
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: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)