

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 January 2009 (08.01.2009)

PCT

(10) International Publication Number  
WO 2009/006445 A3

(51) International Patent Classification:  
H01L 21/00 (2006.01) G01N 35/00 (2006.01)

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(21) International Application Number:  
PCT/US2008/068857

(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.

(22) International Filing Date: 30 June 2008 (30.06.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/947,247 29 June 2007 (29.06.2007) US

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(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).

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[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR ELECTRONIC DETECTION WITH NANOFETS

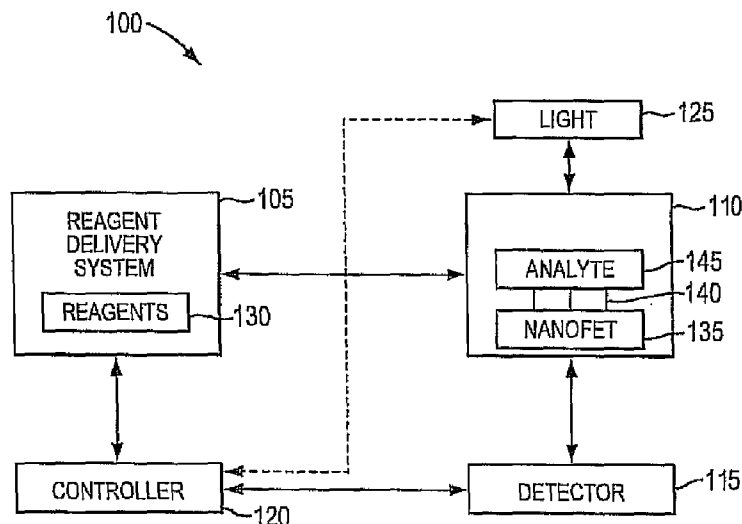


FIG. 1

(57) Abstract: There is disclosed a system for electrical charge detection comprising a nanofET device. Also disclosed is a method of electrical charge detection for single molecule sequencing. The method includes attaching a macromolecule or assemblies thereof to a gate of a nanofET device and flowing in a solution of charge tags, where a charge tag includes a nucleotide attached to a charge complex. The method also includes incorporating one charge tag into the macromolecule or assemblies thereof and cleaving the charge tags from the macromolecule or assemblies thereof. The method further includes detecting at least one of current and voltage from the nanofET device.

WO 2009/006445 A3



**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:**  
12 March 2009

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/68857

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(8) - H01L 21/00, G01N 35/00 (2008.04) USPC - 257/252, 436/43, 436/56 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) USPC -- 257/252, 436/43, 436/56 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) WEST -- PGPB,USPT,USOC,EPAB,JPAB; Dialog Classic Files ? 654, 652, 351, 349, 315, 2, 6, 35, 65; Google Patents; USPTO Web Page; Google Scholar; Search terms -- charge detection, nanoFET, DNA, enzyme, test well, charge migration, voltage, current, photocleavable tags, sequencing, primer, probe, hybridizing, binding		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/0269927 A1 (LIEBER et al.) 30 November 2006 (30.11.2006) para [0001], [0002], [0008], [0012], [0023], [0027], [0047]-[0049], [0052], [0053], [0060], [0065], [0066], [0069], [0073], [0081], [0089], [0091], [0101], [0105], [0107], [0112], [0113], [0128], [0189], [0226], [0232], Fig 6A, 6B, 8A, 8B	1-30
Y	US 2005/0085630 A1 (OLEJNIK et al.) 21 April 2005 (21.04.2005) para [0001], [0194], [0228], [0229], [023], [0300], [0337]	1-25
Y	US 6,592,821 B1 (WADA et al.) 15 July 2003 (15.07.2003) col 12, ln 51-63; col 18, ln 35-38; col 36, ln 55-57; Fig 21	6-9, 21-24
Y	US 2005/0266403 A1 (YAMAMOTO et al.) 01 December 2005 (01.12.2005) para [0011], [0119], [0122]	16, 17
Y	US 2002/0128234 A1 (HUBBELL et al.) 12 September 2002 (2.09.2002) para [0001], [0070], [0166]	26-30
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Date of the actual completion of the international search 27 October 2008 (27.10.2008)		Date of mailing of the international search report <b>02 JAN 2009</b>
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