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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/021443 A1

(51) International Patent Classification[7]: H01L 27/12, G06F 15/78

(21) International Application Number: PCT/US2003/027280

(22) International Filing Date: 29 August 2003 (29.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/233,232 30 August 2002 (30.08.2002) US

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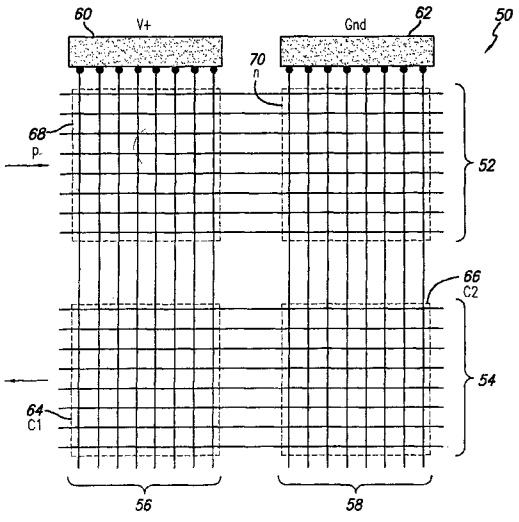
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, 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*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

[Continued on next page]

(54) Title: CONFIGURABLE MOLECULAR SWITCH ARRAY



(57) Abstract: A computing system (74) for implementing at least one electronic circuit with gain comprises at least one two-dimensional molecular switch array (50, 120). The molecular switch array (50, 120) is formed by assembling two or more crossed planes of wires (10) into a configuration of devices. Each device comprises a junction (16) formed by a pair of crossed wires (20, 22) and at least one connector species (24) that connects the pair of crossed wires (20, 22) in the junction (16). The junction (16) has a functional dimension in nanometers, and includes a switching capability provided by both one or more connector species (24) and the pair of crossed wires (20, 22) and a configurable nanoscale wire transistor having a first state that functions as a transistor (38) and a second state that functions as a conducting semiconductor wire (44). Specific connections are made to interconnect the devices and connect the devices to two structures (60, 62, 130, 132) that provide high and low voltages.

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