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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 May 2008 (08.05.2008)

PCT

(10) International Publication Number
WO 2008/054326 A1

(51) International Patent Classification:
H01L 21/68 (2006.01) *H01L 21/50* (2006.01)

(21) International Application Number:
PCT/SG2006/000330

(22) International Filing Date:
3 November 2006 (03.11.2006)

(25) Filing Language: English

(26) Publication Language: English

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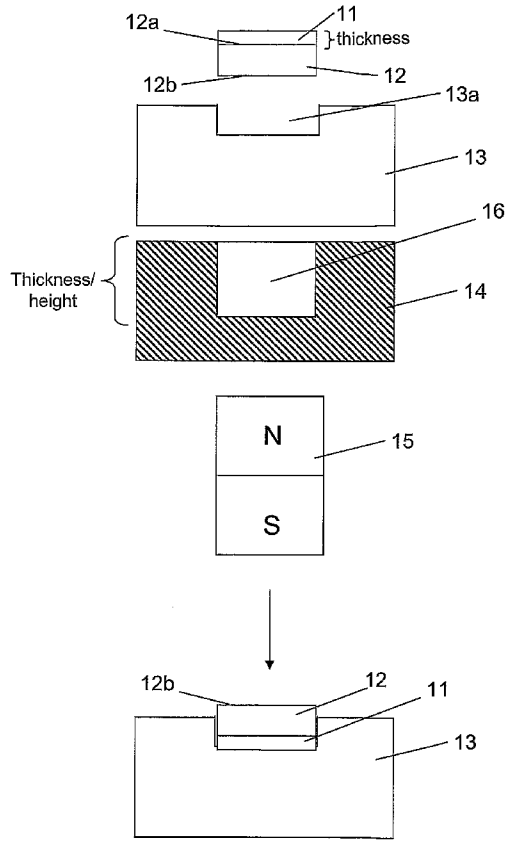
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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,

[Continued on next page]

(54) Title: DEVICE, UNIT, SYSTEM AND METHOD FOR THE MAGNETICALLY-ASSISTED ASSEMBLING OF CHIP-SCALE, AND NANO AND MICRO-SCALE COMPONENTS ONTO A SUBSTRATE



(57) Abstract: A magnetically-assisted chip assembly unit for assembling at least one chip having a mounting surface and an attachment surface, wherein the attachment surface supports a magnetisable layer thereon and opposes said mounting surface, onto a substrate that has a corresponding chip mounting surface. The unit comprises a template wafer having at least one recess adapted to accommodate therein said chip; and a master wafer having at least one magnetisable element; wherein the template wafer is mounted on the master wafer and said magnetisable element is located at least proximate to the at least one recess such that the magnetisable element is capable of manipulating the chip into the recess, via its magnetisable layer when the magnetisable element is magnetized and generates a magnetic field. Once in the recess, the attachment surface of the chip faces at least a portion of the recess and the mounting surface of the chip faces an opening of the recess.

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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.

(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, LV, 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*