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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
15 February 2007 (15.02.2007)

PCT

(10) International Publication Number
WO 2007/019199 A1

(51) International Patent Classification:
H01L 21/768 (2006.01) *H01L 23/48* (2006.01)

(21) International Application Number:
PCT/US2006/030167

(22) International Filing Date: 2 August 2006 (02.08.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/198,338 5 August 2005 (05.08.2005) US

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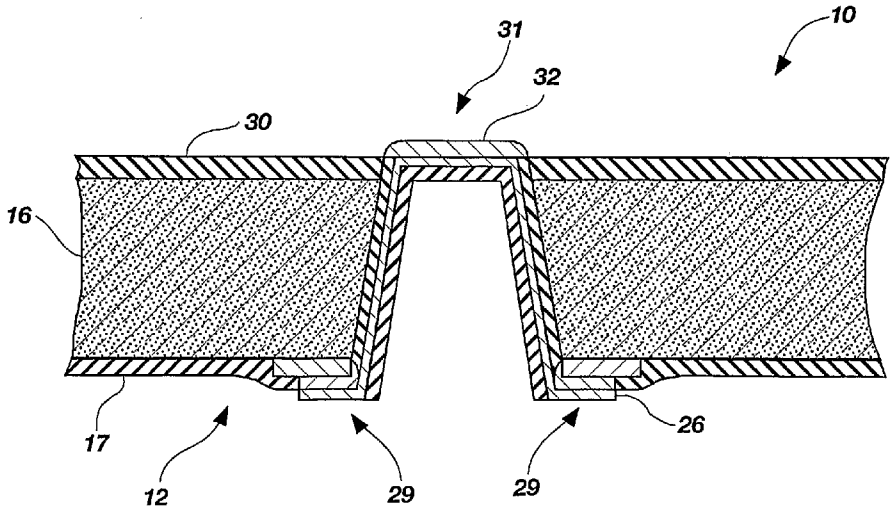
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ,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

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) **Title:** METHODS OF FORMING THROUGH-WAFER INTERCONNECTS AND STRUCTURES RESULTING THEREFROM



(57) **Abstract:** Methods for forming conductive vias or through-wafer interconnects in semiconductor substrates and resulting through wafer interconnect structures are disclosed. In one embodiment of the present invention, a method of forming a through wafer interconnect structure includes the acts of forming an aperture in a first surface of a substrate, depositing a first insulative or dielectric layer on an inner surface of the aperture, depositing an electrically conductive layer over the first dielectric layer, depositing a second insulative or dielectric layer on the inner surface of the aperture over the electrically conductive material, and exposing a portion of the electrically conductive layer through the second, opposing surface of the substrate. Semiconductor devices including through-wafer interconnects produced with the methods of the instant invention are also described.

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