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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
1 March 2007 (01.03.2007)

PCT

(10) International Publication Number
WO 2007/024433 A3

(51) International Patent Classification:
H01L 21/762 (2006.01) *H01L 27/12* (2006.01)

(21) International Application Number:
PCT/US2006/030171

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

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/712,022 26 August 2005 (26.08.2005) US

(71) Applicant *(for all designated States except US)*: **MEMC ELECTRONIC MATERIALS, INC.** [US/US]; 501 Pearl Drive, P.O. Box 8, St. Peters, MO 63376 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **JONES, Andrew, M.** [US/US]; c/o MEMC Electronic Materials, Inc., 501 Pearl Drive, P.O. Box 8, St. Peters, MO 63376 (US). **FEI, Lu** [US/US]; c/o MEMC Electronic Materials, Inc., 501 Pearl Drive, P.O. Box 8, St. Peters, MO 63376 (US).

(74) Agents: **ALLEN, Derick, E.** et al.; Senniger Powers, #1 Metropolitan Square, 16th Floor, St. Louis, MO 63102 (US).

(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).

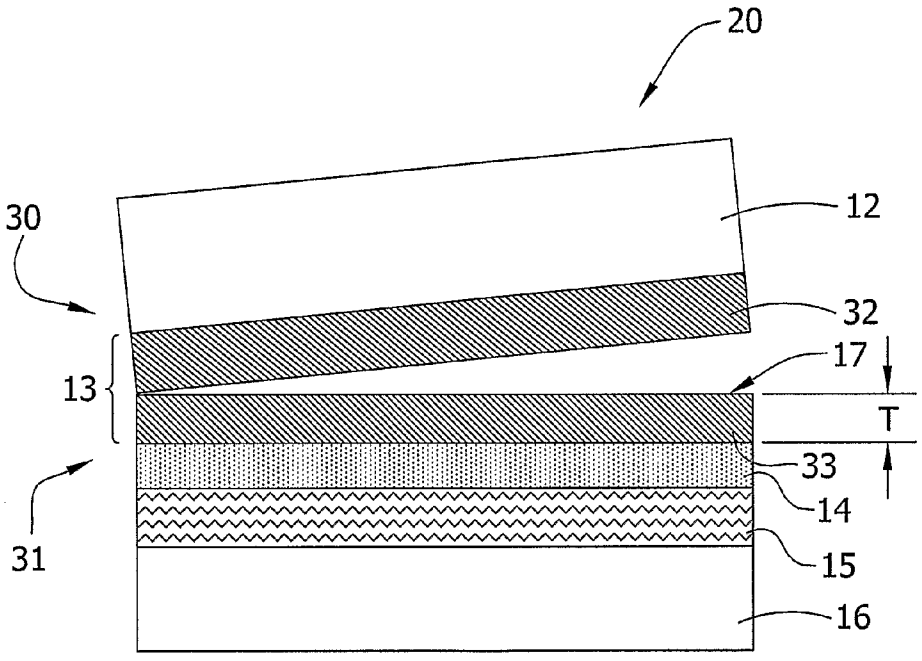
Published:
— *with international search report*
— *with amended claims*

(88) Date of publication of the international search report:
3 May 2007

Date of publication of the amended claims: 14 June 2007

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: METHOD FOR THE MANUFACTURE OF A STRAINED SILICON-ON-INSULATOR STRUCTURE



(57) Abstract: The present invention is directed to a strained silicon on insulator (SSOI) structure having improved surface characteristics, such as reduced roughness, low concentration of LPDs, and lower contamination, and a method for making such a structure.

WO 2007/024433 A3