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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 May 2003 (08.05.2003)

PCT

(10) International Publication Number
WO 03/038889 A2

(51) International Patent Classification[7]: H01L 21/66

(21) International Application Number: PCT/US02/34140

(22) International Filing Date: 23 October 2002 (23.10.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/998,858 31 October 2001 (31.10.2001) US

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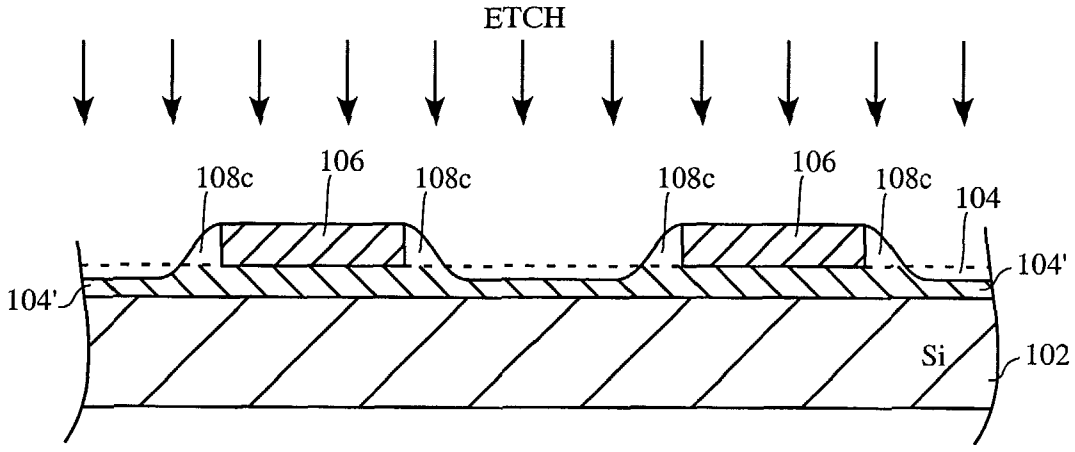
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, 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, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

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 AND APPARATUS FOR NITRIDE SPACER ETCH PROCESS IMPLEMENTING *IN SITU* INTERFEROMETRY ENDPOINT DETECTION AND NON-INTERFEROMETRY ENDPOINT MONITORING



(57) Abstract: A method for fabricating a spacer of a gate structure is provided. The method performing a first etch process implementing a first etchant gas. The first etch process is configured to implement an interferometry endpoint (IEP) detection method to detect a removal of a portion of a spacer layer having a specific thickness from over the surface of the substrate, thus leaving a thin spacer layer. The method further includes performing a second etch process for a predetermined period of time implementing a second etchant gas. The second etch process is configured to remove the thin spacer layer, leaving the spacer for the gate structure.

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