

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number
WO 2003/107396 A3

(51) International Patent Classification⁷: **C23C 16/00**,
C23F 01/00

(21) International Application Number:
PCT/US2003/014586

(22) International Filing Date: 9 May 2003 (09.05.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/170,578 13 June 2002 (13.06.2002) US

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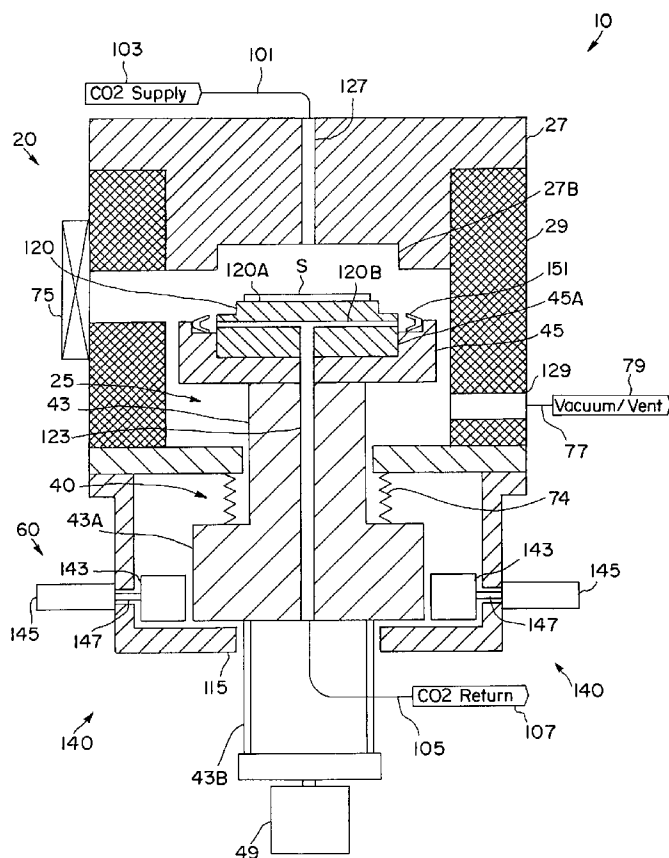
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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(54) Title: SUBSTRATE PROCESSING APPARATUS AND RELATED SYSTEMS AND METHODS



(57) Abstract: An apparatus (10) and method for processing a microelectronic substrate (S) comprises a main chamber (20) and a movable boundary (15). The main chamber comprises a main chamber wall (27, 29) enclosing a main chamber interior (25). The movable boundary is disposed within the main chamber interior, and is movable between a first position (Figure 4B) and a second position (Figure 4A). At the first position, the movable boundary at least partially defines a sub-chamber (90) in which the substrate can be processed. The sub-chamber is fluidly isolated from the main chamber interior, and provides an environment suitable for high-pressure processing of the substrate such as cleaning and surface preparation. The apparatus may be directly coupled to an external substrate handling and/or fabrication module (210, 401), such that the main chamber provides a buffer between the sub-chamber and the external module. At the second position of the movable boundary, the substrate can be loaded into or removed from the apparatus, such as by transfer to or from an external module provided.



(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
- with amended claims

(88) Date of publication of the international search report:
17 June 2004

Date of publication of the amended claims: 12 August 2004

(48) Date of publication of this corrected version:
7 April 2005

(15) Information about Correction:
see PCT Gazette No. 14/2005 of 7 April 2005, Section II

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.