

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 October 2006 (05.10.2006)

PCT

(10) International Publication Number
WO 2006/104863 A3

(51) International Patent Classification:
C23F 1/00 (2006.01) H01J 9/00 (2006.01)
C23C 16/00 (2006.01)

(21) International Application Number:
PCT/US2006/010682

(22) International Filing Date: 22 March 2006 (22.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/090,256 28 March 2005 (28.03.2005) US

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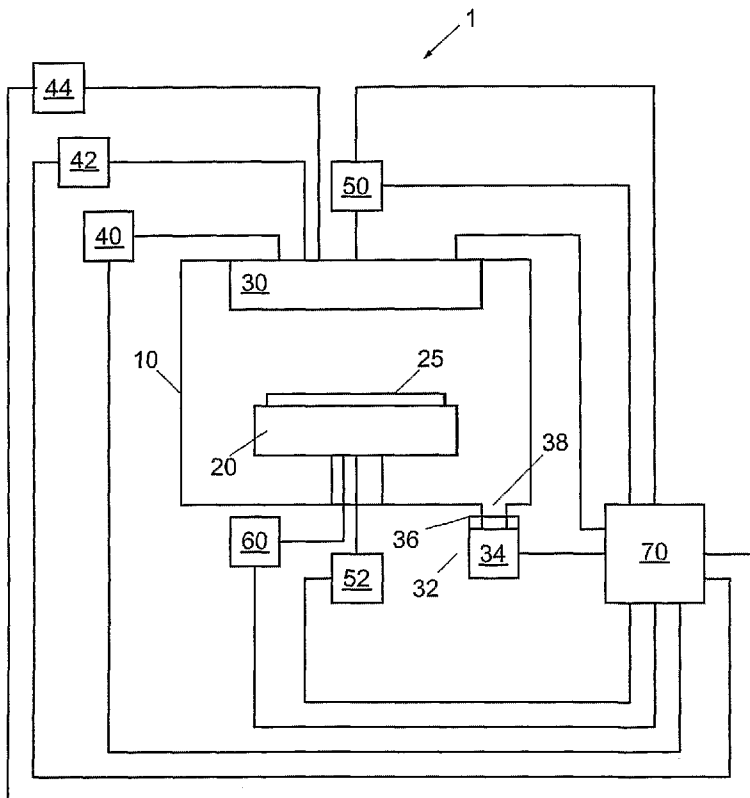
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, 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, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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,

[Continued on next page]

(54) Title: A PLASMA ENHANCED ATOMIC LAYER DEPOSITION SYSTEM



(57) Abstract: A plasma enhanced atomic layer deposition (PEALD) system includes a first chamber component coupled to a second chamber component to provide a processing chamber defining an isolated processing space within the processing chamber. A substrate holder is provided within the processing chamber and configured to support a substrate, a first process material supply system is configured to supply a first process material to the processing chamber and a second process material supply system is configured to supply a second process material to the processing chamber. A power source is configured to couple electromagnetic power to the processing chamber, and a sealing assembly interposed between the first and second chamber components. The sealing assembly includes a plurality of sealing members configured to reduce the amount of external contaminants permeating through an interface of the first and second components into the isolated processing space of the processing chamber, wherein the film is formed on the substrate by alternatingly introducing the first process material and the second process material.

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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).

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.

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

4 October 2007

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/10682

A. CLASSIFICATION OF SUBJECT MATTER

IPC: C23F 1/00(2006.01);C23C 16/00(2006.01);H01J 9/00(2006.01)

USPC: 156/345.29;118/723.00R;445/060

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 156/345.29; 118/723.00R; 445/060

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6074512 A (COLLINS) 13 June 2000, (13.06.2000) <i>see figs 17A</i>	1,7 and 8
Y	US 2003/0200929 A1 (OTSUKI) 30 October 2003, (30.10.2003) <i>see figs 1.</i>	1,7 and 8
Y	US 2004/0082251 A1 (BACH) 29 April 2004, (29.04.2004) <i>see fig. 1.</i>	1,4-8,20 and 21
Y	US 2004/0017049 A1 (FINK) 29 January 2004, (29.01.2004). <i>See figs 3,para. 0025).</i>	9-19, 26 and 27
Y	US 5,935,336 A (SANDHU et al) 10 August 1999, (10.08.1999) <i>see column 5 lines 20-25.</i>	22-25
Y	US 6,772,827 B2 (KELLER et al) 10 August 2004, (10.08.2004) <i>see figs 4.column 6,lines 56-60.</i>	2,3,4

Further documents are listed in the continuation of Box C.

See patent family annex.

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"P"	document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

Date of the actual completion of the international search

19 June 2007 (19.06.2007)

Date of mailing of the international search report

26 JUL 2007

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