



- (51) International Patent Classification:
C23C 14/50 (2006.01) *H01L 21/677* (2006.01)
- (21) International Application Number:
PCT/US2015/016799
- (22) International Filing Date:
20 February 2015 (20.02.2015)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/942,594 20 February 2014 (20.02.2014) US
61/943,999 24 February 2014 (24.02.2014) US
- (71) Applicant: INTEVAC, INC. [US/US]; 3560 Bassett Street, Santa Clara, CA 95054 (US).
- (72) Inventors; and
- (71) Applicants : BLUCK, Terry; 3128 Butte Street, Santa Clara, CA 95051 (US). SHAH, Vinay; 145 30th Avenue, San Mateo, CA 94403 (US). LATCHFORD, Ian; 171

Heather Lane, Palo Alto, CA 94303 (US). RIPOSAN, Alexandru; 446 Forest Avenue, Apt. 2, Palo Alto, CA 94301 (US).

(74) Agent: BACH, Joseph; NIXON PEABODY LLP, P.O. Box 60610, Palo Alto, CA 94306 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR BI-FACIAL PROCESSING OF SUBSTRATES

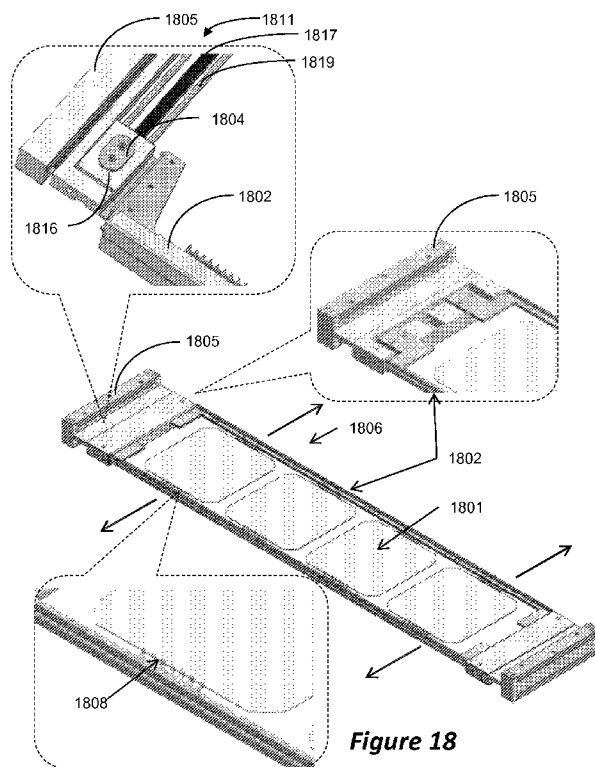


Figure 18

(57) Abstract: A system for processing substrates in plasma chambers, such that all substrates transport and loading/unloading operations are performed in atmospheric environment, but processing is performed in vacuum environment. The substrates are transported throughout the system on carriers. The system's chambers are arranged linearly, such that carriers move from one chamber directly to the next. A conveyor, placed above or below the system's chambers, returns the carriers to the system's entry area after processing is completed. The carriers are configured for supporting substrates of different sizes. The carriers are also configured for flipping the substrates such that both surfaces of the substrates may be processed.



TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*