

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 August 2020 (13.08.2020)



(10) International Publication Number
WO 2020/163427 A1

(51) International Patent Classification:
H01J 37/32 (2006.01) *H01L 21/3065* (2006.01)

(21) International Application Number:
PCT/US2020/016710

(22) International Filing Date:
05 February 2020 (05.02.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/801,804 06 February 2019 (06.02.2019) US
62/835,907 18 April 2019 (18.04.2019) US
62/886,100 13 August 2019 (13.08.2019) US

(71) Applicant: **LAM RESEARCH CORPORATION**
[US/US]; 4650 Cushing Parkway, M/S CA-1, Fremont, California 94538 (US).

(72) Inventors: **XU, Lin**; 216 Buck Court, Fremont, California 94539 (US). **SRINIVASAN, Satish**; 6209 Escallonia Drive, Newark, California 94560 (US). **KOSHY, Robin**; 5359 Nordica Avenue, Fremont, California 94536 (US). **YASSERI, Amir A.**; 930 Schoolhouse Road, San Jose, California 95138 (US). **TANG, Justin**; 232 N. Terry Avenue, Clovis, California 93612 (US). **ZHANG, Jie**; 1620 Turn-

berry Village Drive, Centerville, Ohio 45458 (US). **WETZEL, David Joseph**; 699 Cypress Avenue, San Jose, California 95117 (US).

(74) Agent: **CHEN, Tina**; BEYER LAW GROUP LLP, P.O. Box 51887, Palo Alto, California 94303-1887 (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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, 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,

(54) Title: TEXTURED SILICON SEMICONDUCTOR PROCESSING CHAMBER COMPONENTS

(57) Abstract: Textured silicon components of a semiconductor processing chamber having hillock-shaped or pyramid-shaped structures on its surface, and a method of texturing such silicon components. The silicon component can be selectively textured using chemical means to form the hillock-shaped structures to increase the surface area of the silicon component to improve polymer adhesion.

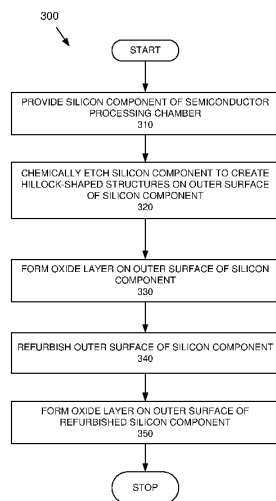


FIG. 3

WO 2020/163427 A1

[Continued on next page]

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))*