



(51) International Patent Classification:

C23C 16/448 (2006.01) H01L 21/67 (2006.01)

C23C 16/455 (2006.01)

(21) International Application Number:

PCT/US2024/018320

(22) International Filing Date:

04 March 2024 (04.03.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/489,290 09 March 2023 (09.03.2023) US

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(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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))

(54) Title: MULTI-CHAMBERED CHEMICAL SOLID PRECURSOR AMPOULE

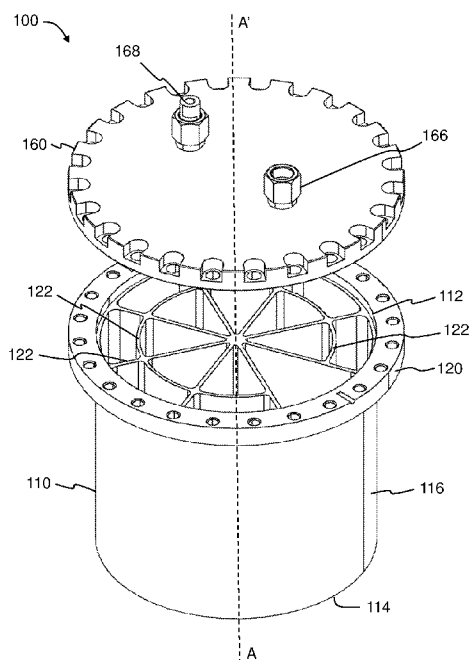


FIG. 3

(57) Abstract: A multi-chamber ampoule having a multi-chamber container and a lid is disclosed. The lid includes conduits for fluidly connecting multiple chambers of the container. The sublimation rate of each chamber is defined by a surface area of each chamber, a temperature of each chamber, and a headspace pressure of each chamber, and the sublimation rate of each chamber is substantially equal.

(88) Date of publication of the international search report:
12 September 2025 (12.09.2025)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2024/018320

A. CLASSIFICATION OF SUBJECT MATTER C23C 16/448(2006.01)i; C23C 16/455(2006.01)i; H01L 21/67(2006.01)i 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) C23C 16/448(2006.01); B01J 4/00(2006.01); B65D 8/00(2006.01); C23C 14/12(2006.01); C23C 16/455(2006.01); C23C 16/458(2006.01); H01L 21/67(2006.01); H01L 51/00(2006.01) Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: sublimation, ampoule, precursor, plural, chamber, and conduit		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2022-0352467 A1 (UNIVERSAL DISPLAY CORPORATION) 03 November 2022 (2022-11-03) paragraphs [0015], [0017], [0064], [0074]-[0077] and figures 5-7B	1-8,11-13,18-20,23- 25,27,35,36,38,40
Y		9,10,14-17,21,22,26, 28-34,37,39,41-53
Y	US 2022-0178020 A1 (APPLIED MATERIALS, INC.) 09 June 2022 (2022-06-09) paragraphs [0026]-[0033], [0040], [0044] and figures 1A-5	9,10,14-17,21, 22,28-34,41-53
Y	US 2020-0016558 A1 (VERSUM MATERIALS US, LLC) 16 January 2020 (2020-01-16) paragraphs [0011], [0057]-[0059] and figures 8-11	26,37,39
A	US 2022-0275506 A1 (ENTEGRIS, INC.) 01 September 2022 (2022-09-01) paragraphs [0030]-[0044] and figures 1-2	1-53
☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
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Date of the actual completion of the international search 08 July 2024		Date of mailing of the international search report 10 July 2024
Name and mailing address of the ISA/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon 35208, Republic of Korea Facsimile No. +82-42-481-8578		Authorized officer LEE, Eon Su Telephone No. +82-42-481-8539

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2024/018320

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT
Information on patent family members

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PCT/US2024/018320

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