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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 September 2025 (18.09.2025)

WIPO | PCT

(10) International Publication Number
WO 2025/189294 A1

(51) International Patent Classification:
C30B 29/08 (2006.01)

(21) International Application Number:
PCT/CA2025/050347

(22) International Filing Date:
13 March 2025 (13.03.2025)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/565,599 15 March 2024 (15.03.2024) 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,

(54) **Title:** COMPUTER SYSTEM AND METHOD FOR MANUFACTURING A GERMANIUM MEMBRANE

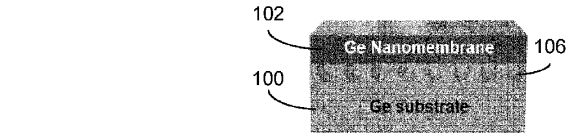

Fig. 1B

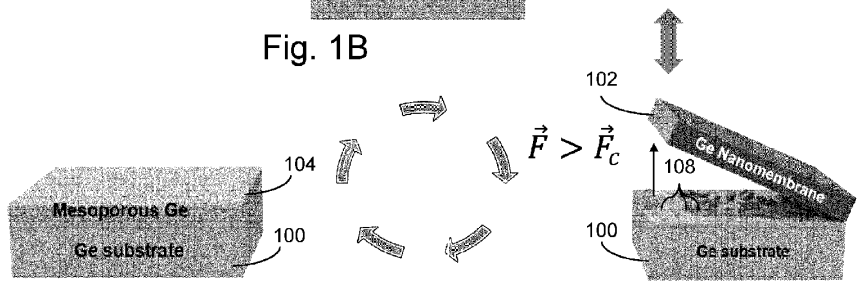

Fig. 1A

Fig. 1C

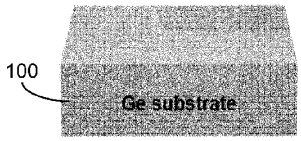

Fig. 1D

(57) **Abstract:** There is described a method of manufacturing a germanium membrane on a germanium substrate. The method generally has: selecting a coupling strength indicator, the coupling strength indicator indicative of a force which when applied to the germanium membrane uncouples the germanium membrane from the germanium substrate; determining a set of manufacturing parameters based on the coupling strength indicator using reference data associating a plurality of reference sets of manufacturing parameters with corresponding reference coupling strength indicators, the set of manufacturing parameters including at least a first deposition temperature and a second deposition temperature higher than the first deposition temperature; and manufacturing the germanium membrane on the germanium substrate based on the set of manufacturing parameters, the germanium membrane requiring an uncoupling force greater than the force to uncouple the germanium membrane from the germanium substrate.

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RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UY, 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).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

— *with international search report (Art. 21(3))*
— *with amended claims (Art. 19(1))*
— *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*