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(81) 指定国(除另有指明, 要求每一种可提供的国家保护): 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。

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(54) Title: THIN FILM DEPOSITION DEVICE, VAPORIZATION MEASUREMENT APPARATUS, AND VAPORIZATION MEASUREMENT METHOD

(54) 发明名称: 一种薄膜沉积设备、汽化检测装置及汽化检测方法

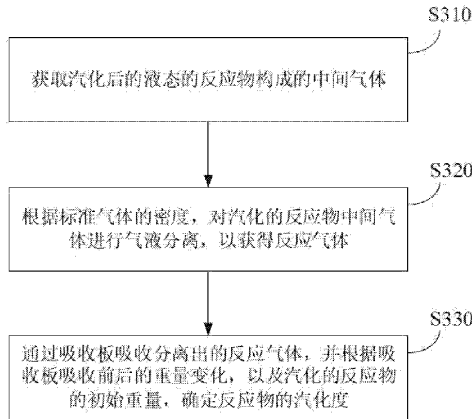


图 3

- S310 Acquire an intermediate gas formed by a vaporized liquid reactant
- S320 On the basis of the density of a standard gas, perform gas-liquid separation on the intermediate gas of the vaporized reactant to obtain a reaction gas
- S330 Absorb the separated reaction gas by means of an absorption plate, and on the basis of a change in the weight of the absorption plate before and after absorption and the initial weight of the vaporized reactant, determine the degree of vaporization of the reactant

(57) Abstract: Disclosed in the present invention are a thin film deposition device, a vaporization measurement apparatus, and a vaporization measurement method. The thin film deposition device comprises: a vaporizer, used for vaporizing a liquid reactant to form a reaction gas; a reaction cavity, connected to the vaporizer by means of a pipeline and used for acquiring the reaction gas from the vaporizer so as to carry out thin film deposition; and a vaporization measurement apparatus, arranged between the vaporizer and the reaction cavity and used for measuring the degree of vaporization of the reactant so as to allow or prevent the reactant from entering the reaction cavity. By using the thin film deposition device, the vaporization efficiency of the reaction gas which is about to enter the reaction cavity can be effectively measured, and a series of problems such as particle pollution and uneven thin film deposition in the deposition process caused by incomplete vaporization of the reaction gas are avoided.

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(AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (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)。

本国际公布：
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本发明公开了一种薄膜沉积设备、汽化检测装置及汽化检测方法。薄膜沉积设备包括: 汽化器, 用于汽化液态的反应物, 以形成反应气体; 反应腔体, 经由管道连接所述汽化器, 用于从所述汽化器获取所述反应气体, 以进行薄膜沉积; 以及汽化检测装置, 设于所述汽化器与所述反应腔体之间, 用于检测所述反应物的汽化度, 以允许或阻止所述反应物进入所述反应腔体。通过使用上述薄膜沉积设备, 能够有效检测出即将进入反应腔体内的反应气体的汽化效率, 避免反应气体汽化不完全而导致沉积过程中的颗粒污染、沉积薄膜不均匀等一系列问题。