



- (51) **International Patent Classification:**
G03F 9/00 (2006.01)
- (21) **International Application Number:**
PCT/US2025/015514
- (22) **International Filing Date:**
12 February 2025 (12.02.2025)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
PCT/CN2024/077197
14 February 2024 (14.02.2024) CN
19/042,393 31 January 2025 (31.01.2025) US
- (63) **Related by continuation (CON) or continuation-in-part (CIP) to earlier application:**
US 19/042,393 (CON)
Filed on 31 January 2025 (31.01.2025)
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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,

(54) **Title:** FIDUCIAL PATTERN ALIGNMENT TECHNIQUES

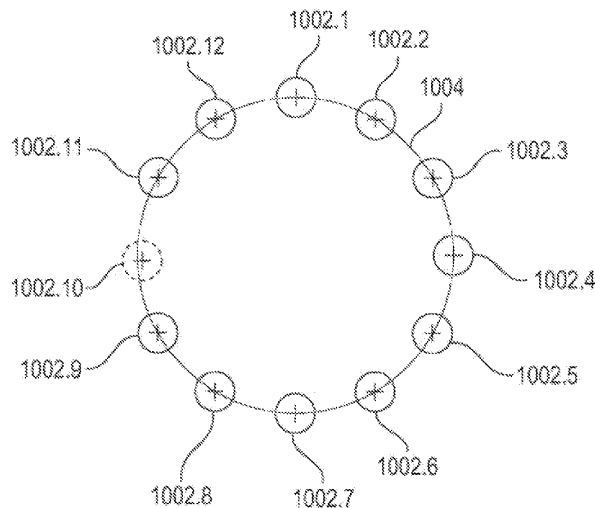


FIG. 10

(57) **Abstract:** A photolithography machine with an alignment system is described. The photolithography machine can identify a fiducial pattern provided on a substrate and use the location of the fiducial pattern to align the substrate before exposure. The fiducial pattern can include a plurality of fiducial markings arranged in a specified pattern. A model matching technique can be applied to match the respective individual fiducial markings. A shaping technique can then be used to identify the fiducial pattern based on the matched fiducial markings.

[Continued on next page]

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).

Published:

— with international search report (Art. 21(3))