

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



(10) 国际公布号
WO 2023/103695 A1

(43) 国际公布日
2023 年 6 月 15 日 (15.06.2023)

- (51) 国际专利分类号:
H01L 21/68 (2006.01) *B08B 1/02* (2006.01)
G01P 3/64 (2006.01) *G03F 7/20* (2006.01)
- (21) 国际申请号: PCT/CN2022/130777
- (22) 国际申请日: 2022 年 11 月 9 日 (09.11.2022)
- (25) 申请语言: 中文
- (26) 公布语言: 中文
- (30) 优先权:
202111472231.9 2021 年 12 月 6 日 (06.12.2021) CN
- (71) 申请人: 杭州众硅电子科技有限公司(HANGZHOU SIZONE ELECTRONIC TECHNOLOGY INC) [CN/CN]; 中国浙江省杭州市临安区青山湖街道创业街 88 号 1 幢一层吴雨, Zhejiang 311300 (CN)。
- (72) 发明人: 殷骐(YIN, Qi); 中国浙江省杭州市临安区青山湖街道创业街 88 号 1 幢一层吴雨, Zhejiang 311300 (CN)。 陈阳阳(CHEN, Yangyang); 中国浙江省杭州市临安区青山湖街道创业街 88 号 1 幢一层吴雨, Zhejiang 311300 (CN)。
- (74) 代理人: 杭州凯知专利代理事务所(普通合伙)(HANGZHOU KAIZHI PATENT AGENCY (GENERAL PARTNERSHIP)); 中国浙江省杭州市余杭区南苑街道迎宾同济中心 1 幢 403-4 室邵志, Zhejiang 311199 (CN)。
- (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, 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,

(54) Title: POSITION FINDING APPARATUS FOR WAFER, POSITION FINDING METHOD, AND WAFER SPEED COUNTING METHOD

(54) 发明名称: 一种用于晶圆的寻位装置、寻位方法及晶圆计速方法

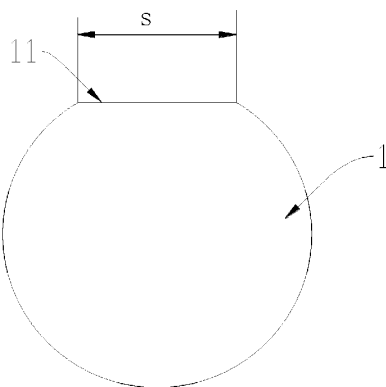


图 1

(57) Abstract: Disclosed is a position finding apparatus for a wafer. The wafer is in a rotating state, and the outer edge of the wafer is provided with a notch part. The position finding apparatus at least comprises: a signal transmitting mechanism used for transmitting a signal to a direction where the wafer is located, the signal being able to pass through the notch part, and the signal being blocked by the wafer when passing through the wafer; and a signal receiving mechanism used for receiving the signal transmitted by the signal transmitting mechanism so as to determine whether the notch part passes through the signal transmitting path or determine the number of times that the notch part passes through the signal transmitting path. Further disclosed is a wafer position finding method. Further disclosed is a wafer rotating speed counting method. According to the present invention, wafer positioning is realized, the position of the notch part of the wafer can be determined, the wafer taking/placing reliability in the processes is improved, the space of a device is saved, and the wafer rotating speed measurement reliability is improved.

[见续页]



WO 2023/103695 A1

SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。

(84) 指定国 (除另有指明, 要求每一种可提供的地区
保护): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW,
MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚
(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: 本发明公开了一种用于晶圆的寻位装置, 晶圆处于转动状态, 其外边缘带有缺口部; 寻位装置至少包括, 信号发送机构, 用于向晶圆所在方向发送信号, 该信号可从缺口部通过, 信号经过晶圆时被其阻挡; 信号接收机构, 用于接收信号发送机构发送的信号, 以判断缺口部是否经过信号发送的路径, 或者, 判断缺口部经过信号发送路径的次数。本发明又公开了一种晶圆寻位方法。本发明还公开了一种旋转晶圆计速方法。本发明实现晶圆定位, 可确定晶圆缺口部位置, 提高了工艺过程晶圆取放可靠性, 节省了设备的空间; 提高了晶圆转速检测可靠性。