

(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

(43) 国际公布日
2023 年 3 月 30 日 (30.03.2023)



(10) 国际公布号
WO 2023/045788 A1

(51) 国际专利分类号:
H01L 21/683 (2006.01) *C23C 14/50* (2006.01)
H01L 21/67 (2006.01) *C23C 14/54* (2006.01)

(21) 国际申请号: PCT/CN2022/118310

(22) 国际申请日: 2022 年 9 月 13 日 (13.09.2022)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
202111105860.8 2021 年 9 月 22 日 (22.09.2021) CN

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(84) 指定国 (除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM,

(54) Title: ELECTROSTATIC CHUCK AND SEMICONDUCTOR PROCESSING APPARATUS

(54) 发明名称: 静电卡盘及半导体加工设备

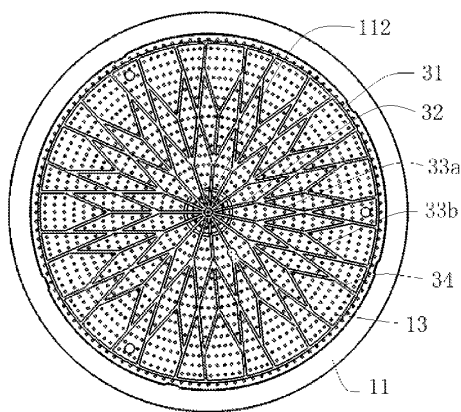


图 5

(57) Abstract: Provided in the present invention are an electrostatic chuck and a semiconductor processing apparatus. In the electrostatic chuck, a gas channel structure comprises an annular gas channel, a primary gas channel group and a secondary gas channel group, wherein the annular gas channel is located on an edge close to the upper surface of a chuck body, and is used to define a heat exchange area on the inner side thereof; the primary gas channel group surrounds a central air intake hole; the secondary gas channel group surrounds the primary gas channel group; the primary gas channel group is respectively in communication with the central air intake hole and the secondary gas channel group and is configured to be able to increase the speed of delivery of backblowing gas flowing out of the central air intake hole to the secondary gas channel group; and the secondary gas channel group is respectively in communication with the primary gas channel group and the annular gas channel and is configured to be able to uniformly distribute the backblowing gas at different locations of the heat exchange area. The electrostatic chuck and the semiconductor processing apparatus provided in the present invention can effectively reduce the ventilation time of the backblowing gas while ensuring that a backblowing gas pressure meets stability and uniformity requirements, such that the production capacity of the apparatus can be improved.

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WO 2023/045788 A1

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, 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： 本发明提供一种静电卡盘及半导体加工设备，该静电卡盘中，气道结构包括环形气道、主气道组和次气道组，其中，环形气道位于靠近卡盘本体的上表面的边缘处，用以在其内侧限定形成热交换区域；主气道组环绕在中心进气孔周围，次气道组环绕在主气道组周围；主气道组分别与中心进气孔和次气道组相连通，且设置为能够提高将中心进气孔流出的背吹气体输送至次气道组的速度；次气道组分别与主气道组和环形气道相连通，且设置为能够使背吹气体在热交换区域的不同位置处分布均匀。本发明提供的静电卡盘及半导体加工设备，其可以在保证背吹气压达到稳定性和均匀性要求的前提下，有效缩短背吹气体的通气时间，从而可以提高设备产能。