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(54) Title: ELECTROPLATING DEVICE AND SUBSTRATE CLEANING METHOD

(54) 发明名称: 电镀装置及基板清洁方法

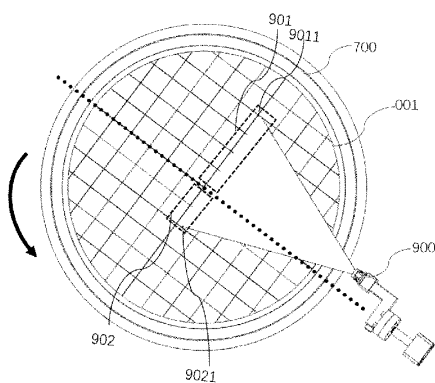


图 6

(57) Abstract: The present invention belongs to the technical field of semiconductor apparatuses. Provided are an electroplating device and a substrate cleaning method. The electroplating device comprises: a chuck for holding a substrate horizontally; a driving device for driving the chuck to rotate; and a nozzle for spraying a cleaning fluid to clean the substrate held by the chuck, wherein the coverage range of the cleaning liquid sprayed by the nozzle to the substrate includes: a forward rotating speed region and a reverse rotating speed region, the forward rotating speed region being larger than the reverse rotating speed region; and the forward rotating speed region is a region in which the cleaning fluid sprayed out from the nozzle has a velocity component along the rotating direction of the substrate, and the reverse rotating speed region is a region in which the cleaning fluid sprayed out from the nozzle has a velocity component against the rotating direction of the substrate. In the electroplating device and the substrate cleaning method of the present invention, the nozzle is positioned in a targeted manner, enabling more cleaning fluid sprayed from the nozzle to fall into the forward rotating speed region, thereby facilitating effective discharge of the cleaning fluid into a water retaining cover and preventing a large amount of cleaning liquid from falling into a cathode chamber to dilute a cathode electroplating solution and affecting the stability of the electroplating solution.

[见续页]

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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本国际公布:

— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本发明提出一种电镀装置及基板清洁方法, 属于半导体设备技术领域。包括: 卡盘, 用于保持基板水平设置; 驱动装置, 用于驱动卡盘旋转; 喷嘴, 用于喷出清洗液以清洗卡盘保持的基板; 其中, 喷嘴向基板喷射清洗液的覆盖范围包括: 顺转速区域和逆转速区域, 顺转速区域大于逆转速区域; 顺转速区域为喷嘴喷出的清洗液具有顺着基板转速方向的速度分量的区域; 逆转速区域为喷嘴喷出的清洗液具有逆着基板转速方向的速度分量的区域。本发明的电镀装置及基板清洁方法, 针对性的设置喷嘴的位置, 使喷嘴喷射的清洗液较多落在顺转速区域, 以便于能够更好的甩到挡水罩中, 防止大量的清洗液落入阴极腔室内对阴极电镀液稀释, 影响电镀液的稳定性。