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(54) Title: HIGH-THROUGHPUT THIN FILM DEPOSITION APPARATUS, ETCHING APPARATUS AND ETCHING METHOD

(54) 发明名称: 一种高通量薄膜沉积设备、刻蚀设备及其方法

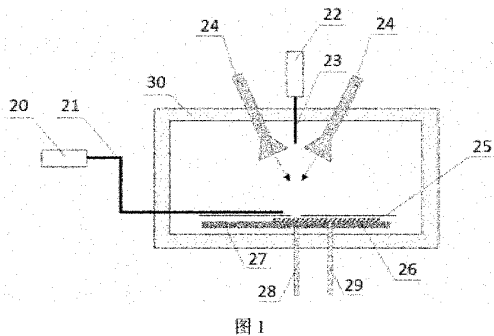


图 1

(57) Abstract: Provided in the present invention are a high-throughput thin film deposition apparatus, a high-throughput etching apparatus and an etching method. The high-throughput thin film deposition or the high-throughput etching apparatus comprises a reaction chamber, a carrying platform control device and a process isolation device, wherein the carrying platform control device comprises a substrate carrying platform and a main carrying platform, and the substrate carrying platform is located on the main carrying platform; the substrate carrying platform is configured to carry a substrate to be deposited or to be etched and drive the substrate to operate, and the main carrying platform is configured to carry the substrate carrying platform and drive the substrate carrying platform to operate; and the process isolation device is configured to provide a process isolation area located above the substrate carrying platform. Process isolation during a process is achieved by means of the process isolation area, so that the process is only carried out in the process isolation area, such that an isolation process is carried out on local areas of the substrate. In addition, combined with the operation of the carrying platform control device, an independent and uniform process for multiple local areas on the single substrate is finally achieved. The apparatus of the present invention has a simple structure and a wide applicability, is easy to

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HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL,  
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SN, TD, TG)。

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operate and capable of preparing a high-uniformity thin film and etching morphology, and has good practicability.

**(57) 摘要：** 本发明提供一种高通量薄膜沉积设备、刻蚀设备及其方法，包括反应腔室、载台控制装置及工艺隔离装置；载台控制装置包括衬底载台及主载台，且衬底载台位于主载台上，衬底载台用以承载待沉积或待刻蚀的衬底并带动衬底运行，主载台用于承载衬底载台并带动衬底载台运行；工艺隔离装置用以提供位于衬底载台上方的工艺隔离区，通过工艺隔离区实现在工艺过程中的工艺隔离，使得工艺过程仅在工艺隔离区内进行，以实现对衬底的局部区域进行隔离式工艺过程，且结合载台控制装置的运行最终实现单一衬底上多个局部区域的独立和均匀的工艺过程。本发明设备结构简单、适用性广、易于操作、可制备高均一性薄膜及刻蚀形貌，具有良好的实用性。