



US 20240213048A1

(19) **United States**

(12) **Patent Application Publication**  
**Kang et al.**

(10) **Pub. No.: US 2024/0213048 A1**

(43) **Pub. Date: Jun. 27, 2024**

(54) **SUBSTRATE PROCESSING APPARATUS**

**Publication Classification**

(71) Applicant: **SEMES CO., LTD.**, Cheonan-si (KR)

(51) **Int. Cl.**

**H01L 21/67** (2006.01)

**H01L 21/677** (2006.01)

(72) Inventors: **Jongwha Kang**, Cheonan-si (KR);  
**Sunwook Jung**, Hwaseong-si (KR);  
**Wooram Lee**, Seoul (KR); **Byoungdoo Choi**, Cheonan-si (KR); **Arah Cho**, Daejeon-si (KR); **Dongwoon Park**, Seoul (KR)

(52) **U.S. Cl.**

**CPC .... H01L 21/67051** (2013.01); **H01L 21/6719** (2013.01); **H01L 21/67225** (2013.01); **H01L 21/67742** (2013.01)

(73) Assignee: **SEMES CO., LTD.**, Cheonan-si (KR)

(21) Appl. No.: **18/391,661**

(22) Filed: **Dec. 21, 2023**

(30) **Foreign Application Priority Data**

Dec. 26, 2022 (KR) ..... 10-2022-0185009

Feb. 6, 2023 (KR) ..... 10-2023-0015730

(57)

**ABSTRACT**

A substrate processing apparatus includes a processing unit including a processing vessel with an internal space and a support unit configured to support a substrate and rotate the substrate in a first rotation direction in the internal space, and an exhaust unit configured to exhaust a gas from the internal space, wherein the exhaust unit includes an exhaust pipe providing an exhaust path for the gas exhausted from the internal space, and one or more connectors connecting the processing vessel to the exhaust pipe, and one end of the exhaust pipe is closed, and an open outlet is formed at a remaining end of the exhaust pipe to discharge the gas.

