



US 20240213001A1

(19) **United States**

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

(10) **Pub. No.: US 2024/0213001 A1**

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

(54) **SUBSTRATE TREATMENT METHOD AND  
SUBSTRATE TREATMENT APPARATUS**

**Publication Classification**

(51) **Int. Cl.**

**H01J 37/32** (2006.01)

**H01L 21/3065** (2006.01)

**H01L 21/687** (2006.01)

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

**CPC .. H01J 37/32724** (2013.01); **H01J 37/32522**

(2013.01); **H01L 21/30655** (2013.01); **H01L**

**21/68742** (2013.01); **H01J 2237/3341**

(2013.01)

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

(72) Inventors: **Young Jo JIN**, Hwaseong-si (KR);  
**Sang Jeong LEE**, Hwaseong-si (KR);  
**Min Sung JEON**, Osan-si (KR); **Tae**  
**Hwan LEE**, Cheonan-si (KR); **Min**  
**Hee HONG**, Suwon-si (KR)

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

(21) Appl. No.: **18/542,776**

(22) Filed: **Dec. 18, 2023**

(30) **Foreign Application Priority Data**

Dec. 21, 2022 (KR) ..... 10-2022-0180834

(57)

**ABSTRACT**

Proposed are a substrate treatment method and a substrate treatment apparatus that are capable of adjusting cooling efficiency for a substrate. According to an embodiment of the present disclosure, there may be provided the substrate treatment method including a heating process in which a surface of the substrate is heated and a cooling process in which the substrate is cooled by supplying a cooling gas to a lower surface of the substrate. Furthermore, the cooling process includes a cooling condition controlling process in which a cooling condition is controlled.

