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(19) **United States**(12) **Patent Application Publication****KATO et al.**(10) **Pub. No.: US 2023/0230817 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **DEPOSITION METHOD AND DEPOSITION APPARATUS**(71) Applicant: **Tokyo Electron Limited**, Tokyo (JP)(72) Inventors: **Hitoshi KATO**, Iwate (JP); **Yu WAMURA**, Iwate (JP); **Yuichiro SASE**, Iwate (JP); **Yuji SAWADA**, Yamanashi (JP); **Hiroyuki KIKUCHI**, Iwate (JP)(21) Appl. No.: **18/153,008**(22) Filed: **Jan. 11, 2023**(30) **Foreign Application Priority Data**

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(57)

ABSTRACT

A deposition apparatus including: a processing chamber; a rotary table provided in the processing chamber; a first processing region provided at a predetermined position in a circumferential direction of the rotary table; a second processing region provided downstream of the first processing region in the circumferential direction of the rotary table; a third processing region provided downstream of the second processing region in the circumferential direction of the rotary table; a first heater provided above the rotary table in the second processing region; and a plasma generator. The plasma generator includes: a protrusion having a longitudinally elongated shape in a planar view extending along a radius of the rotary table in a portion of an upper surface of the processing chamber, and protruding upward from the upper surface; and a coil wound along a side surface of the protrusion and has a longitudinally elongated shape in a planar view.

