

#### US005803970A

# United States Patent [19]

## Tateyama et al.

# [11] Patent Number: 5,803,970

## [45] **Date of Patent: Sep. 8, 1998**

# [54] METHOD OF FORMING A COATING FILM AND COATING APPARATUS

# [75] Inventors: Kiyohisa Tateyama; Kimio Motoda, both of Kumamoto; Kenji Sekiguchi, Yamanashi-ken; Tsutae Omori,

Kumamoto, all of Japan

[73] Assignees: Tokyo Electron Limited, Tokyo; Tokyo Electron Kyuchu Limited,

Tosu, both of Japan

[21] Appl. No.: 753,768

[22] Filed: Nov. 29, 1996

#### Related U.S. Application Data

[62] Division of Ser. No. 512,018, Aug. 7, 1995, Pat. No. 5,695,817.

#### [30] Foreign Application Priority Data

| Mar.<br>Mar. | g. 8, 1994<br>15, 1995<br>15, 1995<br>12, 1995 | [JP] Japan<br>[JP] Japan |                                | 7-083206<br>7-083207  |
|--------------|--|--------------------------|--------------------------------|-----------------------|
| [51]         | Int. Cl. <sup>6</sup>                          |                          | <b>B05B 13/02</b> ; B05        |                       |
| [52]         | U.S. Cl.                                       |                          | B0<br>118/ <b>319</b> ; 118/52 | 08B 3/00<br>: 118/72: |
| []           |  |                          |                                | 3. 15/302             |

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Primary Examiner—Laura Edwards
Assistant Examiner—Calvin Padgett
Attorney, Agent, or Firm—Oblon, Spivak, McClelland,
Maier & Neustadt, P.C.

#### [57] ABSTRACT

A method of forming a coating film, in which the coating film is formed by supplying a coating liquid onto a surface of a substrate, while the substrate housed in a processing vessel is rotated together with the processing vessel, includes the steps of coating the surface of the substrate with a solvent, supplying the coating liquid to the substrate, rotating the substrate and the processing vessel at a first rotation speed to diffuse the coating liquid on the surface of the substrate, closing the processing vessel with a lid to seal the substrate in the processing vessel, and rotating the processing vessel with the lid and the substrate at a second rotation speed to uniform a film thickness of the coating film.

# 38 Claims, 32 Drawing Sheets

