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# United States Patent [19]

Batcheldor et al.

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- [54] APPARATUS AND METHOD FOR SPIN COATING SUBSTRATES
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- [52] U.S. Cl. .... **427/240; 118/52; 427/336; 427/385.5; 437/231**
- [58] Field of Search ..... **427/240, 385.5, 427/336; 437/231; 118/52**

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### [57] ABSTRACT

Disclosed is an apparatus and method for spin coating chemicals over a substrate. The apparatus includes a bowl having a raised support for holding the substrate. The bowl includes curved walls that define a cavity capable of holding a fluid near an outer region of the bowl. The apparatus further includes a lid configured to mate with the curved walls. The lid preferably has a substantially flat underside that is positioned in close proximity to a top surface of the substrate. Further, the apparatus includes fluid injector holes defined along an ejection ring that is defined under the substrate. The fluid injector holes are directed at an underside of the substrate that is near the outer diameter of the substrate. The apparatus also includes a plurality of drain holes that are defined on a floor region of the bowl. The plurality of drain holes are spaced apart from the outer region of the bowl to enable the cavity to hold a fluid while the bowl is spinning, and to drain the fluid when the bowl begins to come to a substantial stop.

27 Claims, 9 Drawing Sheets

