

ABSTRACT OF THE DISCLOSURE

CHEMICAL DEPOSITION APPARATUS HAVING CONDUCTANCE CONTROL

A chemical deposition apparatus having conductance control, which includes a showerhead module having a faceplate and a backing plate, the showerhead module including a plurality of inlets which deliver reactor chemistries to a cavity and exhaust outlets which remove reactor chemistries, a pedestal module configured to support a substrate and which moves vertically to close the cavity between the pedestal module and an outer portion of the faceplate, and at least one conductance control assembly, which is in fluid communication with the cavity via the exhaust outlets. The at least one conductance control assembly selected from one or more of the following: a ball valve assembly, a fluidic valve, magnetically coupled rotary plates, and/or a linear based magnetic system.

FIG. 1A