

APPARATUS AND METHOD FOR PLATING SEMICONDUCTOR WAFERS

ABSTRACT OF THE DISCLOSURE

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An electroplating apparatus for electroplating a surface of a wafer is provided. The wafer is capable of being electrically charged as a cathode. The electroplating apparatus includes a plating head capable of being positioned either over or under the surface of a wafer and capable of being electrically charged as an anode. The plating head is capable of
10 enabling metallic plating between the surface of the wafer and the plating head when the wafer and plating head are charged. The plating head further comprises a voltage sensor pair capable of sensing a voltage present between the plating head and the surface of the wafer, and a controller capable of receiving data from the voltage sensor pair. The data received from the voltage sensor pair is used by the controller to maintain a substantially constant
15 voltage to be applied by the anode when the plating head is placed in positions over the surface of the wafer. A method of electroplating a wafer is also provided.

Figure 5