

METHODS AND APPARATUS FOR MINIMIZING EXCESS ALUMINUM ACCUMULATION IN CVD CHAMBERS

ABSTRACT OF THE DISCLOSURE

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A method and apparatus for minimizing excess aluminum deposition that can build up inside a substrate processing chamber during an aluminum CVD substrate processing operation. The method of the present invention periodically introduces nitrogen into the processing chamber after aluminum CVD processing of
10 at least a single wafer in order to minimize unwanted aluminum accumulation in various parts of the chamber. According to one embodiment, the present invention provides a method of minimizing excess metal deposition inside a substrate processing chamber after a substrate processing operation. The method includes the steps of introducing a nitrogen-containing passivating gas into a chamber after the
15 substrate processing operation, and maintaining at least a portion of the chamber at a second temperature during the introducing step thereby reducing excess metal build up within the chamber. In preferred embodiments, the method is performed after removal of the substrate from the processing chamber. In other preferred embodiments, the second temperature ranges from about 200-300°C.

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