ABSTRACT

METHOD AND APPARATUS FOR REMOVING PHOTORESIST

A method and apparatus remove photoresist from a wafer. A process gas containing sulfur (S), oxygen (O), and hydrogen (H) is provided, and a plasma is generated from the process gas in a first chamber. A radical-rich ion-poor reaction medium is flown from the first chamber to a second chamber where the wafer is placed. The patterned photoresist layer on the wafer is removed using the reaction medium, and then the reaction medium flowing into the second chamber is stopped. Water vapor may be introduced in a solvation zone provided in a passage of the reaction medium flowing down from the plasma such that the water vapor solvates the reaction medium to form solvated clusters of species before the reaction medium reaches the wafer. The photoresist is removed using the solvated reaction medium.

FIG. 2