ABSTRACT

CONTROL OF BEVEL ETCH FILM PROFILE USING PLASMA EXCLUSION ZONE RINGS LARGER THAN THE WAFER DIAMETER

A method of cleaning a bevel edge of a semiconductor substrate is provided. A semiconductor substrate is placed on a substrate support in a reaction chamber of a plasma processing apparatus. The substrate has a dielectric layer overlying a top surface and a bevel edge of the substrate, the layer extending above and below an apex of the bevel edge. A process gas is introduced into the reaction chamber and energized into a plasma. The bevel edge is cleaned with the plasma so as to remove the layer below the apex without removing all of the layer above the apex.

FIG. 1