

ABSTRACT OF THE DISCLOSURE

Apparatus for plasma processing of semiconductor substrates. Aspects of the apparatus include an upper shield with a gas diffuser arranged at a center of the upper shield. The gas diffuser and upper shield admit a process gas to a processing chamber in a laminar manner. A profile of the upper shield promotes radial expansion of the process gas and radial travel of materials etched from a surface of the substrates. Curvatures of the upper shield direct the etched materials to a lower shield with reduced depositing of etched materials on the upper shield. The lower shield also includes curved surfaces that direct the etched materials toward slots that enable the etched materials to exit from the process chamber with reduced depositing on the lower shield.

[Figure 2B]