

PROCESSING TUNING GAS INJECTION FROM THE SUBSTRATE EDGE

ABSTRACT OF THE DISCLOSURE

[33] Broadly speaking, the embodiments of the present invention provides an improved plasma processing mechanism, apparatus, and method to increase the process uniformity at the very edge of the substrate. In an exemplary embodiment, a plasma processing chamber is provided. The plasma processing chamber includes a substrate support configured to receive a substrate. The plasma processing chamber also includes an annular ring having a plurality of gas channels defined therein. The annular ring is proximate to an outer edge of the substrate support and the annular ring is coupled to the substrate support. The plurality of gas channels is connected to an edge gas plenum surrounding the substrate support. The edge gas plenum is connected to a central gas plenum disposed within and near the center of the substrate support through a plurality of gas supply channels.

Figure 1