

Abstract

PLASMA ETCHING APPARATUS UTILISING PLASMA CONFINEMENT

Plasma etching apparatus, as is shown in Figure 1, includes a stack of quartz rings that are spaced apart to form slots therebetween and that are positioned to surround an interaction space between two electrodes of the apparatus where a plasma is formed during operation of the apparatus. The dimensions of the slots are chosen to insure that charged particles of spent gases in the plasma exiting the interaction space are neutralized by wall collisions as they exit the slots. Two voltage sources of different frequencies are used to apply voltages to the electrodes in a fashion that isolates each source from the other.

Figure 1