

ABSTRACT OF THE DISCLOSURE

COMPONENTS SUCH AS EDGE RINGS INCLUDING CHEMICAL VAPOR DEPOSITION (CVD) DIAMOND COATING WITH HIGH PURITY SP³ BONDS FOR PLASMA PROCESSING SYSTEMS

A pedestal for a plasma processing system includes a substrate supporting surface. An annular edge ring is arranged around a periphery of the substrate supporting surface. A chemical vapor deposition (CVD) diamond coating is arranged on a plasma-exposed surface of the annular ring. The CVD diamond coating includes sp³ bonds. A purity of the sp³ bonds in the diamond coating is greater than 90%.

FIG. 3