

Box III Text of the abstract

Novel methods for extending electrostatic chuck lifetimes are provided. The methods involve providing a chuck having a metal cooling plate attached to a first ceramic plate via a bond, and after a period of use, debonding the first ceramic plate from the metal cooling plate by heating, replacing the first ceramic plate with a second unused ceramic plate, applying bonding material between the second ceramic plate and the metal cooling plate, and solidify the bonding material to form an electrostatic chuck, wherein the metal cooling plate comprises a plurality of protrusions extending from a planar portion and the bonding material is applied to the planar portion of the metal cooling plate up to the height of the protrusions.