Claims:

1. A component of a plasma processing chamber, comprising:

a first layer of a non-metal material, the first layer having first and second opposing surfaces, the first surface exposed to plasma in the plasma processing chamber and the second surface not exposed to plasma in the plasma processing chamber;

a second layer of an electrically conductive material, the second layer bonded to the second surface of the first layer;

a void space extending through the entire first and second layers is open to an interior of the plasma processing chamber; and

a tubular sleeve fitted in the void space in the second layer such that the second layer is not exposed in the void space,

wherein one end of the tubular sleeve is coplanar with facing surfaces of the first layer and the second layer and another end of the tubular sleeve is coplanar with a lower surface of the second layer and wherein the tubular sleeve has an exposed inner surface with an inner diameter equal to an inner diameter of the void space in the first layer.

2. The component of Claim 1, wherein the tubular sleeve is made of the same material as the first layer; or the tubular sleeve is made of a material with a dielectric constant lower than that of the second layer; or the tubular sleeve is made of plastic or ceramic; or the tubular sleeve is a coating.

3. The component of Claim 1, wherein the tubular sleeve is affixed on an interior surface of the void space with at least one of adhesive, anchors, and threads on an exterior surface of the tubular sleeve.

4. The component of Claim 1, wherein the first layer is made of at least one of alumina, aluminum nitride, undoped silicon, silicon nitride, silicon oxide, silicon oxynitride and yttria; and wherein the second layer is made of at least one of metal, graphite and doped silicon.

5. The component of Claim 1, wherein the tubular sleeve has an upper outwardly extending flange or a lower outwardly extending flange received in a mating recess in the second layer.

6. The component of Claim 1, wherein the tubular sleeve has a wall thickness of at least 0.01 inch.

7. The component of Claim 1, wherein a relative permittivity of the electrical conductive material at radio frequencies present in the plasma processing chamber is at least 20 times of a relative permittivity of the non-metal material at the radio frequencies.

8. The component of Claim 1, wherein the second layer has a thickness from 0.5 to 5 mm.

9. The component of Claim 1, further comprising at least one heater in thermal contact with the second layer.

10. The component of Claim 9, wherein the at least one heater is a thin film heater embedded in the second layer or attached to a bottom surface of the second layer.

11. The component of Claim 1, wherein the component is an upper electrode or a substrate support; or wherein the void is at least one of a gas hole, a lift pin hole, a helium passage, a conduit and a plenum.

12. The component of Claim 1, wherein the second layer is bonded to the second surface by an adhesive.

13. The component of Claim 1, further comprising at least one embedded ESC electrode.

14. The component of Claim 1, wherein the inner diameter of the void space is from 0.02 to 0.08 inch.

15. The component of Claim 1, further comprising a base attached to the second layer wherein a radio frequency power is supplied to the base; or the base has embedded fluid channels; or the base has at least one plenum in fluid communication with the void space.

16. The component of Claim 15, wherein the base is bonded, or supported, or fastened or adhered to the second layer.

17. A plasma processing chamber comprising the component of Claim 1.

18. A method of manufacturing the component of Claim 1, comprising:

lining the interior surface of the void space in the second layer with the tubular sleeve such that the second layer is not exposed in the void space and parasitic plasma can be prevented in the void space; and

bonding the second layer to the second surface of the first layer.

19. The method of Claim 18, further comprising attaching a base to the second layer.