CLAIMS

1. A cup assembly for holding, sealing, and providing electrical power to a wafer during electroplating, the cup assembly comprising:

a cup bottom sized to hold the wafer and comprising a main body portion and a radially inwardly protruding surface, wherein the radially inwardly protruding surface comprises a plurality of through-holes;

an elastomeric lipseal disposed on the radially inwardly protruding surface, wherein the elastomeric lipseal, when pressed against by the wafer, seals against the wafer so as to define a peripheral region of the wafer from which plating solution is substantially excluded during electroplating, wherein portions of the elastomeric lipseal pass through the plurality of through-holes of the cup bottom; and

an electrical contact element disposed on or proximate the elastomeric lipseal, wherein the electrical contact element contacts the wafer in the peripheral region when the elastomeric seal seals against the wafer so that the electrical contact element may provide electrical power to the wafer during electroplating.

2. The cup assembly of claim 1, wherein the portions of the elastomeric lipseal passing through the plurality of the through-holes also extend around an inner edge of the cup bottom.

3. The cup assembly of claim 2, wherein the elastomeric lipseal directly adheres to the radially inwardly protruding surface, and wherein the portions of the elastomeric seal passing through the plurality of through-holes fill the plurality of through-holes and encircle the inner edge of the cup bottom.

4. The cup assembly of claim 1, wherein the cup bottom comprises a polymeric material.

5. The cup assembly of claim 4, wherein the polymeric material is PPS.

6. The cup assembly of claim 1, further comprising an adhesive between the elastomeric lipseal and the radially inwardly protruding surface.

7. The cup assembly of claim 1, wherein each of the through-holes have a diameter of between about 0.01 and 0.05 inches.

8. The cup assembly of claim 1, wherein the radially inwardly protruding surface of the cup bottom comprises between about 100 and 500 through-holes.

9. The cup assembly of claim 1, wherein a distance between an inner edge of the cup bottom and a center of the through-holes is between about 0.05 inches and 0.5 inches.

10. The cup assembly of claim 1, wherein a thickness of the radially inwardly protruding surface of the cup bottom at the location of the through-holes is between about 0.02 inches and 0.05 inches.

11. The cup assembly of claim 1, wherein the elastomeric lipseal is molded around a portion of the radially inwardly protruding surface of the cup bottom.