Claims:

1. An edge ring configured to be raised and lowered relative to a substrate support, via one or more lift pins, in a substrate processing system, wherein the edge ring is further configured to interface with a guide feature extending upward from a bottom ring and/or a middle ring of the substrate support during tuning of the edge ring, the edge ring comprising:

an upper surface;

an annular inner diameter;

an annular outer diameter;

a lower surface; and

an annular groove arranged in the lower surface of the edge ring to interface with the guide feature, wherein walls of the annular groove are substantially vertical,

wherein a depth of the groove is at least 50% of a thickness of the edge ring, and

wherein the depth of the groove is selected according to a tunable range of the edge ring.

2. The edge ring of claim 1, wherein the edge ring is “U”-shaped.

3. The edge ring of claim 1, wherein a depth of the groove is between 7.7 mm and 8.3 mm.

4. The edge ring of claim 1, wherein a first corner on the lower surface of the edge ring is chamfered.

5. The edge ring of claim 1, wherein a first corner within the annular groove is chamfered.

6. The edge ring of claim 1, wherein an upper corner of an outer diameter of the edge ring is chamfered.

7. The edge ring of claim 1, wherein the lower surface of the edge ring includes at least four changes in direction.

8. The edge ring of claim 1, wherein the lower surface of the edge ring includes at least five alternating vertical and horizontal paths.

9. The edge ring of claim 1, wherein an outer diameter of the edge ring is less than approximately 12.883” (327.228 mm) and the annular inner diameter of the edge ring is greater than approximately 11.6” (294.64 mm).

10. The edge ring of claim 1, wherein a thickness of the edge ring at the annular inner diameter is between approximately 0.459” (11.659 mm) and approximately 0.592” (15.037 mm).