Claims:

1. A semiconductor processing chamber, comprising:

a pedestal disposed in the chamber having a first electrode and a second electrode circumferentially surrounding the first electrode;

a high frequency power source and a low frequency power source coupled to both of the first electrode and the second electrode;

a power splitter disposed between the high frequency power source and the low frequency power source, and the first electrode and the second electrode; and

an electrode tuning circuit coupled to both of the first electrode and the second electrode.

2. The semiconductor processing chamber of claim 1, wherein the electrode tuning circuit comprises a plurality of capacitors.

3. The semiconductor processing chamber of claim 2, wherein at least one of the plurality of capacitors comprises a variable capacitor.

4. The semiconductor processing chamber of claim 1, wherein a sensor is coupled to each of the first electrode and the second electrode.

5. The semiconductor processing chamber of claim 1, wherein the electrode tuning circuit comprises a plurality of parallel LC circuits.

6. The semiconductor processing chamber of claim 1, wherein the electrode tuning circuit comprises a plurality of capacitors and an inductor.

7. The semiconductor processing chamber of claim 6, wherein one of the plurality of capacitors is directly coupled to the high frequency power source, and the inductor is directly coupled to the low frequency power source.

8. The semiconductor processing chamber of claim 1, wherein the second electrode partially overlaps the first electrode.

~~9~~1. A method for tuning a plasma in a chamber, the method comprises:

providing a first radio frequency power to a first electrode embedded in a substrate support assembly, the substrate support assembly positioned adjacent to a showerhead in the chamber~~.~~;

providing a second radio frequency power to a second electrode embedded in the substrate support assembly at a location different than the first electrode, wherein the second electrode circumferentially surrounds the first electrode;

monitoring parameters of the first and second radio frequency power; and

tuning the plasma based on the monitored parameters~~.~~

~~10. The method of claim 9, wherein the first radio frequency, power is provided by a first power source and the second radio frequency power is provided by a second power source.~~

~~11. The method of claim 9, wherein the first electrode is disposed below the second electrode.~~

~~12. The method of claim 11, wherein the second electrode partially overlaps the first electrode.~~

~~13. The method of claim 9,~~ wherein the tuning comprises tuning one or both of the first electrode and the second electrode when one or both of the first and second electrode is a source of radio frequency power~~.~~

~~14. The method of claim 13~~, and wherein the showerhead is electrically grounded.

~~15. The method of claim 9, wherein the tuning comprises tuning one or both of the first electrode and the second electrode when one or both of the first and second electrode is a ground electrode.~~