What is claimed is:

1. A method applied to a plasma system, the plasma system having a chamber, a lower electrode disposed in the chamber, and a radio frequency source coupled to the lower electrode via a matching circuit, and the plasma system being configured to process a workpiece placed on the lower electrode, wherein the method comprises:

starting the radio frequency source;

increasing a radio frequency power of the radio frequency source, and generating an output power at the lower electrode through a matcher of the matching circuit that is at a default position; and

adjusting, when a first condition is met, the radio frequency power with a first trend, and adjusting, with a second trend involving increasing a ratio of the output power to the radio frequency power, the matching circuit to meet a second condition.

2. The method according to claim 1, wherein the first condition comprises a direct current (DC) voltage detected by a sensor coupled to the workpiece reaching a default voltage.

3. The method according to claim 1, wherein the first condition comprises the radio frequency power reaching a maximum radio frequency power.

4. The method of any one of claims 2-3, wherein the second condition is met when the ratio of the output power to the radio frequency power is at the maximum and the DC voltage detected by the sensor coupled to the workpiece reaches the default voltage.

5. The method according to claim 1, wherein the first trend comprises adjusting the radio frequency power in a decreasing manner.

6. A method applied to a plasma system, the plasma system having a chamber, a

lower electrode disposed in the chamber, and a radio frequency source coupled to the lower electrode via a matching circuit, and the plasma system being configured to process a workpiece placed on the lower electrode, wherein the method comprises:

starting a radio frequency source;

increasing a radio frequency power of the radio frequency source, the radio frequency power generating an output power at the lower electrode through a matcher of the matching circuit that is at a default position; and

adjusting, when a DC voltage detected by a sensor coupled to the workpiece reaches a default voltage or the radio frequency power reaches a maximum radio frequency power, the matcher of the matching circuit to increase a ratio of the output power to the radio frequency power.

7. The method according to claim 6, further comprising:

decreasing the radio frequency power of the radio frequency source when the DC voltage reaches the default voltage or the radio frequency power reaches the maximum radio frequency power.

8. The method according to claim 6, further comprising:

maintaining the radio frequency power until the DC voltage is greater than the default voltage, and then decreasing the radio frequency power of the radio frequency source.

9. The method according to any one of claims 7-8, further comprising:

stopping adjustment of the matcher of the matching circuit when the ratio of the output power to the radio frequency power is at the maximum and the DC voltage reaches the default voltage.

10. A plasma system having a chamber and configured to process a workpiece placed in the chamber, comprising:

a lower electrode disposed in the chamber;

a radio frequency source coupled to the lower electrode;

a matching circuit coupled between the radio frequency source and the lower electrode, wherein when the radio frequency source is started to generate a radio frequency power, an output power is generated at the lower electrode through a matcher of the matching circuit that is at a default position; and

a control circuit coupled to the radio frequency source and the matching circuit, wherein the control circuit is configured to control the radio frequency source to increase the radio frequency power until a first condition is met, and then adjust the radio frequency power with a first trend, and adjust, with a second trend involving increasing a ratio of the output power to the radio frequency power, the matching circuit to meet a second condition.