

SEMICONDUCTOR PROCESS APPARATUS AND POWER CONTROL METHOD

ABSTRACT

The present disclosure provides a semiconductor process apparatus and a power control method. The apparatus includes an upper electrode assembly, a process chamber, and a power adjustment assembly. A chuck configured to carry a wafer is arranged in the process chamber. The upper electrode assembly is configured to excite the process gas in the process chamber to form the plasma. The power adjustment component is configured to detect the bias voltage value on the upper surface of the chuck in real-time, calculate the difference between the bias voltage value and the target bias voltage value, and when the difference is greater than the preset threshold, adjust the output power value of the upper electrode assembly according to the difference until the difference is less than or equal to the preset threshold. The semiconductor process apparatus of the present disclosure can be configured to more precisely control the plasma density in the process chamber to improve the process consistency among different process chambers.

(FIG.1)