

POWER ADJUSTMENT METHOD OF UPPER ELECTRODE POWER SUPPLY AND SEMICONDUCTOR PROCESS APPARATUS

ABSTRACT

The present disclosure provides a power adjustment method of an upper electrode power supply of a semiconductor process apparatus. The method includes obtaining a processing load of an upper electrode power supply of a reference process chamber and a processing load of an upper electrode power supply of a current process chamber corresponding to semiconductor process step, when starting to perform a semiconductor process step, determining a power compensation coefficient for the current process chamber relative to the reference process chamber based on the processing load of the current process chamber and the processing load the reference process chamber, and controlling the upper electrode power supply to output compensation power. The compensation power is a product of the set power of the upper electrode power supply of the current process chamber corresponding to the semiconductor process step and the corresponding power compensation coefficient. With the power adjustment method of the present disclosure, the consistency of the plasma parameters in different process chambers is improved, thereby improving the process result consistency. The present disclosure also provides the semiconductor process apparatus.

Fig. 11