Abstract

A plasma processing apparatus, comprising: a RF driving electrode (25) and a passive electrode (22) mounted face to face; a first grounded ring (23) surrounding the passive electrode (22) and insulated from it, a second grounded ring (26) surrounding the RF driving electrode (25) and insulated from it; the RF driving electrode (25) is connected with a first RF source (271) and a second RF source (272) respectively; a first impedance adjusting element is connected in series between the passive electrode (22) and the ground. The plasma processing apparatus overcomes a shortcoming that plasma energy can only be changed over among several certain isolated values, and thus technical processes with different plasma density requirements can be realized in one and the same reaction chamber.