CONTROL OF IMPEDANCE OF RF DELIVERY PATH

ABSTRACT

A plasma system includes an RF generator and a matchbox including an impedance matching circuit, which is coupled to the RF generator via an RF cable. The plasma system includes a chuck and a plasma reactor coupled to the matchbox via an RF line. The RF line forms a portion of an RF supply path, which extends between the RF generator through the matchbox, and to the chuck. The plasma system further includes a phase adjusting circuit coupled to the RF supply path between the impedance matching circuit and the chuck. The phase adjusting circuit has an end coupled to the RF supply path and another end that is grounded. The plasma system includes a controller coupled to the phase adjusting circuit. The controller is used for changing a parameter of the phase adjusting circuit to control an impedance of the RF supply path based on a tune recipe.

FIG. 1