

A PLASMA REACTOR CONTROL BY TRANSLATING DESIRED VALUES OF M PLASMA PARAMETERS TO VALUES OF N CHAMBER PARAMETERS

ABSTRACT

The invention concerns a method of processing a wafer in a plasma reactor chamber by controlling plural chamber parameters in accordance with desired values of plural plasma parameters. The method includes concurrently translating a set of M desired values for M plasma parameters to a set of N values for respective N chamber parameters. The M plasma parameters are selected from a group including wafer voltage, ion density, etch rate, wafer current, etch selectivity, ion energy and ion mass. The N chamber parameters are selected from a group including source power, bias power, chamber pressure, inner magnet coil current, outer magnet coil current, inner zone gas flow rate, outer zone gas flow rate, inner zone gas composition, outer zone gas composition. The method further includes setting the N chamber parameters to the set of N values.