

SYSTEM AND METHOD FOR DETECTING A PROCESS POINT IN MULTI-MODE PULSE PROCESSES

ABSTRACT

A system and method of identifying a selected process point in a multi-mode pulsing process includes applying a multi-mode pulsing process to a selected wafer in a plasma process chamber, the multi-mode pulsing process including multiple cycles, each one of the cycles including at least one of multiple, different phases. At least one process output variable is collected for a selected at least one of the phases, during multiple cycles for the selected wafer. An envelope and/or a template of the collected at least one process output variable can be used to identify the selected process point. A first trajectory for the collected process output variable of a previous phase can be compared to a second trajectory of the process output variable of the selected phase. A multivariate analysis statistic of the second trajectory can be calculated and used to identify the selected process point.

FIG. 1A