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(71) Applicant (for all designated States except US): **LAM RESEARCH CORPORATION** [US/US]; 4650 Cushing Parkway, -, Fremont, California 94538 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LONG, Maolin** [CN/US]; c/o Lam Research Corporation, Legal Department, 4650 Cushing Parkway, Fremont, California 94538 (US). **JAFARIAN-TEHRANI, Seyed Jafar** [US/US]; c/o Lam Research Corporation, Legal Department, 4650 Cushing Parkway, Fremont, California 94538 (US). **SATO, Arthur** [US/US]; c/o Lam Research Corporation, Legal Department, 4650 Cushing Parkway, Fremont, California 94538 (US). **BENJAMIN, Neil Martin Paul** [GB/US]; c/o Lam Research Corporation, Legal Department, 4650 Cushing Parkway, Fremont, California 94538 (US). **WILLIAMS, Norman** [US/US]; c/o Lam Research

Corporation, Legal Department, 4650 Cushing Parkway, Fremont, California 94538 (US).

(74) Agent: **NGUYEN, Joseph A.**; PO Box 700640, San Jose, California 95170 (US).

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(54) Title: CURRENT CONTROL IN PLASMA PROCESSING SYSTEMS

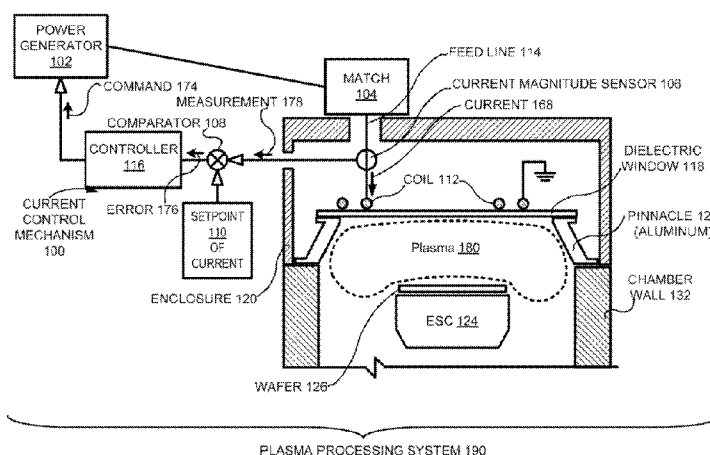


FIG. 1

(57) Abstract: A plasma processing system for generating plasma to process at least a wafer. The plasma processing system includes a coil for conducting a current for sustaining at least a portion of the plasma. The plasma processing system also includes a sensor coupled with the coil for measuring a magnitude of a supplied current to provide a magnitude measurement without measuring any phase angle of the supplied current. The supplied current is the current or a total current that is used for providing a plurality of currents (e.g., including the current). The plasma processing system also includes a controller coupled with the sensor for generating a command using the magnitude measurement and/or information derived using the magnitude measurement, without using information related to phase angle measurement, and for providing the command for controlling the magnitude of the supplied current and/or a magnitude of the total current.