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

(72) Inventor; and

(75) Inventor/Applicant (for US only): **FISCHER, Andreas** [DE/US]; 18989 Mt. Lassen, Castro Valley, CA 94552 (US).

(74) Agent: **GENCARELLA, Michael, L.**; Martine & Penilla, LLP, Suite 170, 710 Lakeway Drive, Sunnyvale, CA 94085 (US).

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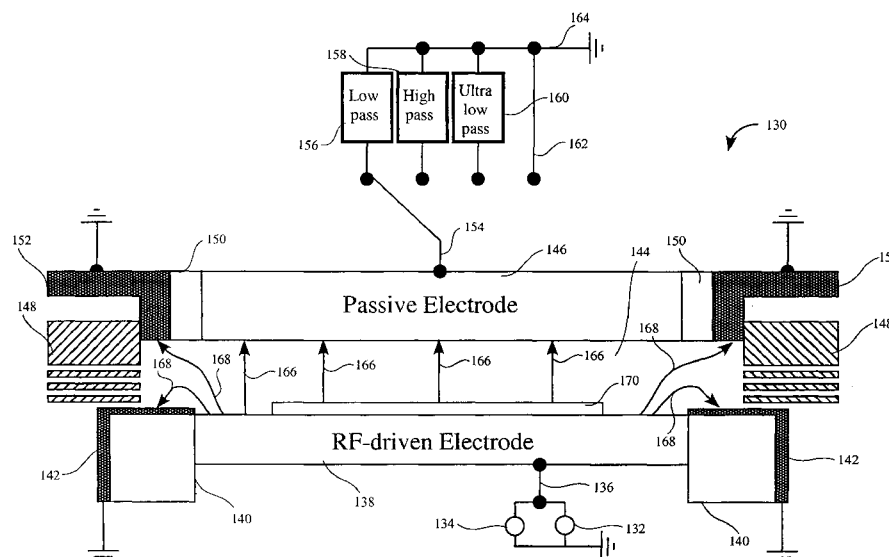
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(54) Title: APPARATUS AND METHOD FOR RADIO FREQUENCY DE-COUPLING AND BIAS VOLTAGE CONTROL IN A PLASMA REACTOR



(57) Abstract: Provided is a method and apparatus for controlling a bias voltage over a wide range and for de-coupling dual radio frequency (RF) currents to allow for independent control of plasma density and ion energy of a plasma for processing a substrate. An exemplary apparatus provides a plasma processing chamber which includes a bottom electrode configured to hold a substrate and first and second RF power supplies being connected to the bottom electrode. Also included is a top electrode which is electrically isolated from a top ground extension. A filter array defining a set of filter settings is included. A switch is coupled to the top electrode and the switch is configured to interconnect the top electrode to one of the filter settings. The filter settings are configured to enable or disable RF current generated from one or both of the RF power supplies from passing through the top electrode.



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