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(54) **Title:** MULTI-ZONE HEATER TUNING IN SUBSTRATE HEATER

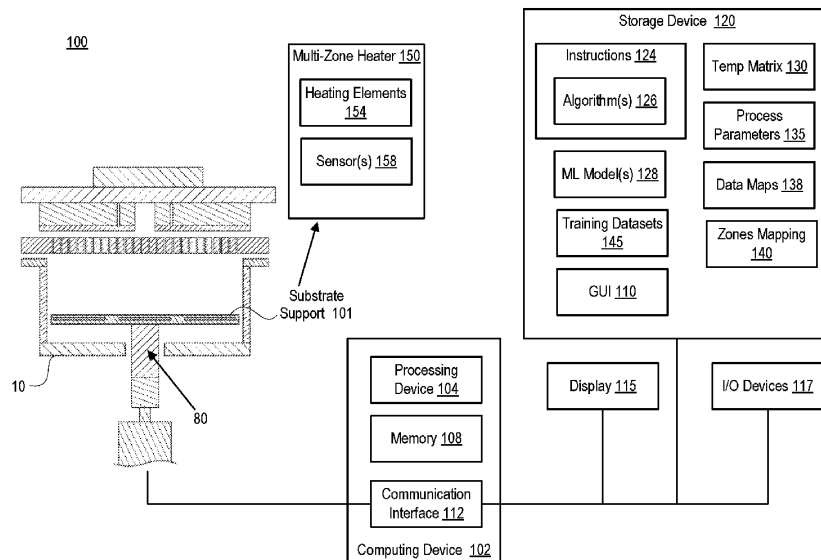


FIG. 1

(57) **Abstract:** A system includes multi-zone heater with heating elements within a substrate support that correspond to multiple zones of the substrate support. A processing device coupled to the heating elements and to access a temperature matrix with multiple vectors corresponding to zones; determine a temperature map of the substrate support by multiplying the temperature matrix by a weight vector, the weight vector containing estimated weight values for each respective vector; determine a target thickness map of a film on a substrate based on an original thickness map and the temperature map, the original thickness map having data characterizing an original thickness across locations of an original film at a uniform temperature; iteratively update the estimated weight values so that the temperature map results in minimization to a standard deviation of thickness values within the target thickness map; and employ the estimated weight values as control values for the heating elements.

[Continued on next page]

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