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(54) Title: THIN FILM GROWTH MODULATION USING WAFER BOW

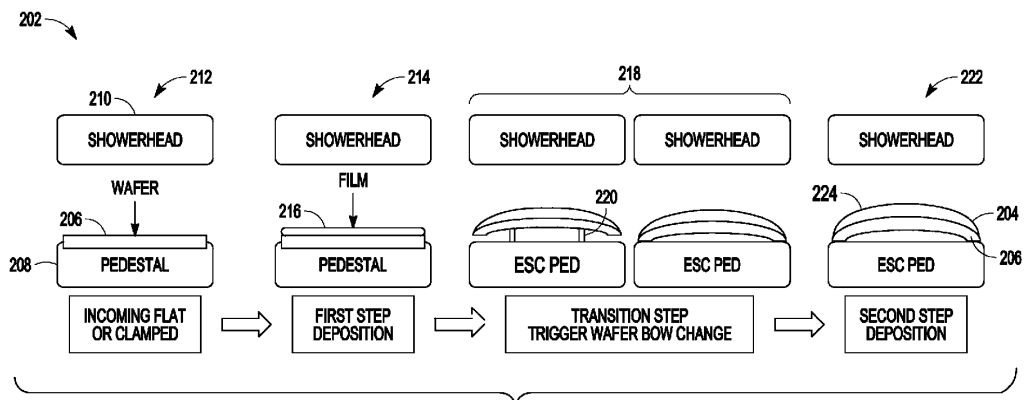


FIG. 2

(57) Abstract: A process chamber and method of modulating thin film growth on a wafer using a plasma-enhanced chemical vapor deposition (PECVD) process is described. During a first deposition phase, a first portion of a film is disposed on a wafer on a pedestal in a process chamber. During a second deposition phase, a second portion of the film is deposited on the wafer. The wafer is unclamped from the pedestal prior to the first and/or second deposition phase and remains unclamped during the first and/or second deposition phase. The wafer has a non-zero wafer bow during unclamped deposition phase to provide a radially non-uniform thickness profile of the film on the wafer.

[Continued on next page]

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