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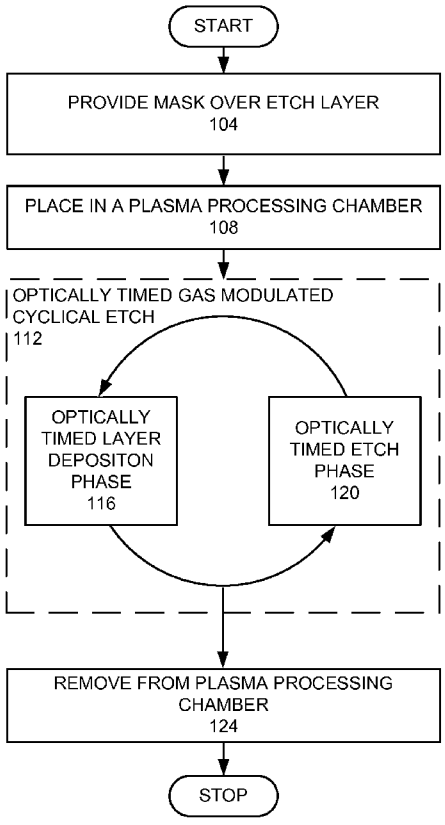
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(54) Title: USE OF SPECTRUM TO SYNCHRONIZE RF SWITCHING WITH GAS SWITCHING DURING ETCH



(57) Abstract: A method for etching features into an etch layer in a plasma processing chamber is provided. An optically timed deposition phase is provided comprising providing a flow of deposition phase gas, detecting the presence of deposition gas within the plasma processing chamber, providing RF energy for forming a plasma from the deposition phase gas in the plasma processing chamber, and stopping the flow of the deposition gas into the plasma processing chamber. An optically timed etching phase is provided, comprising providing a flow of an etch gas, detecting the presence of the etch gas within the plasma processing chamber, providing RF energy for forming a plasma from the etch gas in the plasma processing chamber, and stopping the flow of the etch gas into the plasma processing chamber.

WO 2012/170249 A2

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