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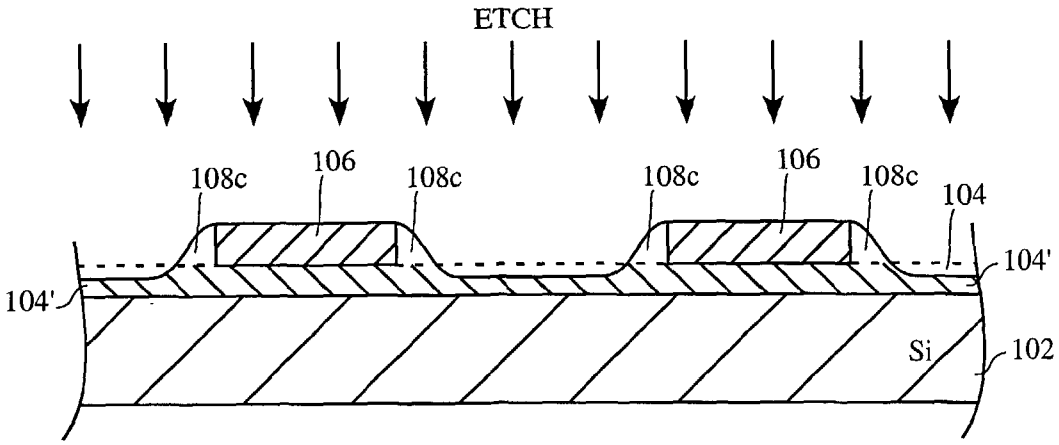
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(54) Title: METHOD AND APPARATUS FOR NITRIDE SPACER ETCH PROCESS IMPLEMENTING *IN SITU* INTERFEROMETRY ENDPOINT DETECTION AND NON-INTERFEROMETRY ENDPOINT MONITORING



(57) Abstract: A method for fabricating a spacer of a gate structure is provided. The method performing a first etch process implementing a first etchant gas. The first etch process is configured to implement an interferometry endpoint (IEP) detection method to detect a removal of a portion of a spacer layer having a specific thickness from over the surface of the substrate, thus leaving a thin spacer layer. The method further includes performing a second etch process for a predetermined period of time implementing a second etchant gas. The second etch process is configured to remove the thin spacer layer, leaving the spacer for the gate structure.

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