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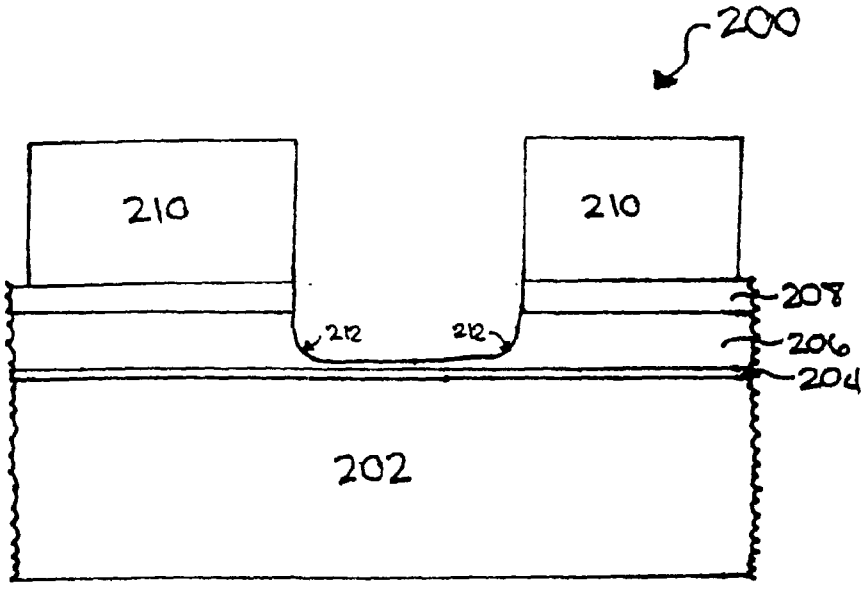
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(54) Title: METHOD OF ETCHING TITANIUM NITRIDE




(57) Abstract: The present disclosure pertains to a method of plasma etching a titanium nitride layer within a semiconductor structure. In many embodiments of the method, the titanium nitride layer is etched using a source gas comprising chlorine and a fluorocarbon. Also disclosed herein is a two-step method of plasma etching a titanium nitride gate consisting of a main etch step, followed by an overetch step which utilizes a source gas comprising chlorine and a bromine-containing compound, to etch a portion of the titanium nitride layer which was not etched in the main etch step. The chlorine/bromine overetch chemistry can be used in conjunction with a chlorine/fluorocarbon main etch chemistry, or with any other titanium nitride etch chemistry known in the art.

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