

Title (en)  
SEMICONDUCTOR MANUFACTURE USING HELIUM-ASSISTED ETCH

Title (de)  
HALBLEITERHERSTELLUNG MIT HELIUM-UNTERSTÜTZTER ÄTZUNG

Title (fr)  
FABRICATION DE SEMICONDUCTEUR AU MOYEN DE GRAVURE ASSISTEE PAR HELIUM

Publication  
**EP 1166346 A1 20020102 (EN)**

Application  
**EP 00986720 A 20001222**

Priority  
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Abstract (en)  
[origin: WO0150511A1] Semiconductor chip manufacturing is enhanced using a highly selective etching process that enables the formation of structure having near 90 DEG side walls within the chip without degrading the selectivity. According to an example embodiment of the present invention, a plasma generated from an etch gas and an inert gas is used to etch a semiconductor chip having substrate formed over a thin oxide. The chip is etched at an etch pressure and plasma power that, when coupled with the etch gas chemistry, are sufficient to achieve high oxide selectivity. The inert gas supplied concurrently with the etch gas is sufficient to maintain an about vertical side wall profile of the substrate as it is etched without degrading the etch gas selectivity.

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