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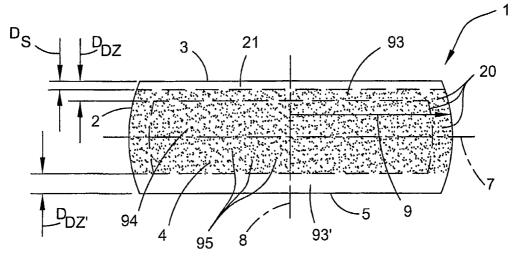
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(54) Title: PROCESS FOR METALLIC CONTAMINATION REDUCTION IN SILICON WAFERS



(57) Abstract: A process for removing a contaminant selected from among copper, nickel, and a combination thereof from a silicon wafer having a surface and an interior. The process comprises cooling the silicon wafer in a controlled atmosphere from a temperature at or above an oxidation initiation temperature and initiating a flow of an oxygen-containing atmosphere at said oxidation initiation temperature to create an oxidizing ambient around the silicon wafer surface to form an oxide layer on the silicon wafer surface and a strain layer at an interface between the oxide layer and the silicon wafer interior. The cooling of the wafer is also controlled to permit diffusion of atoms of the contaminant from the silicon wafer interior to the strain layer. Then the silicon wafer is then cleaned to remove the oxide layer and the strain layer, thereby removing said contaminant having diffused to the strain layer.

PCT/US2005/014529

# a. classification of subject matter H01L21/322

According to International Patent Classification (IPC) or to both national classification and IPC

### **B. FIELDS SEARCHED**

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

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X	PATENT ABSTRACTS OF JAPAN vol. 009, no. 185 (E-332), 31 July 1985 (1985-07-31) & JP 60 055629 A (FUJITSU KK), 30 March 1985 (1985-03-30) abstract	1,2,11

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
"A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family
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Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Gélébart, J

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