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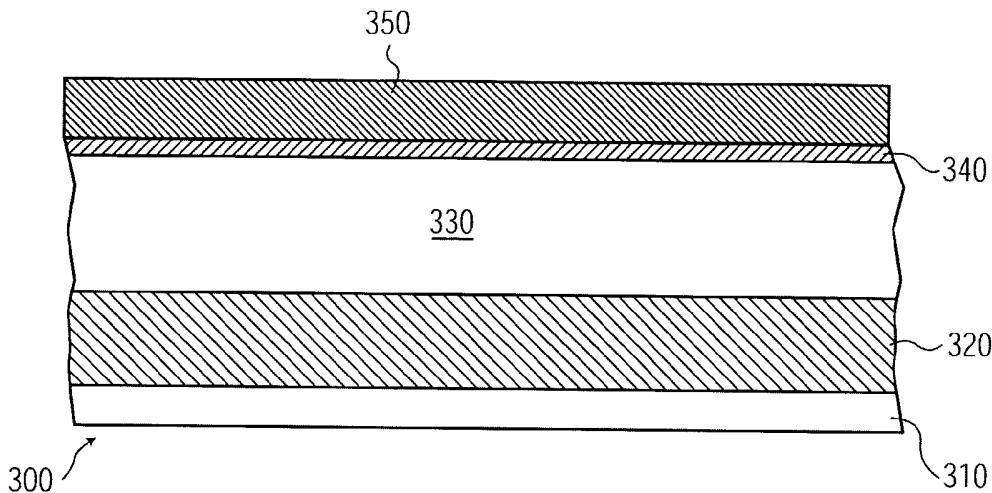
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— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: REDUCTION OF SHEET RESISTANCE OF PHOSPHORUS IMPLANTED POLY-SILICON



(57) Abstract: There is a process for reducing the sheet resistance of phosphorus-implanted polysilicon. In an example embodiment, there is an MOS transistor structure (300). The structure has a gate region, drain region and a source region. A method (220) for reducing the sheet resistance of the gate region comprises depositing intrinsic amorphous silicon (221) at a predetermined temperature onto the gate region. An amorphizing species is implanted (222) into the intrinsic amorphous silicon. Phosphorus species are then implanted (223) into the gate region of the MOS transistor structure. A feature of this embodiment includes using Ar+ as the amorphizing species.

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INTERNATIONAL SEARCH REPORT

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B. FIELDS SEARCHED		
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
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Y	column 5, line 4 - line 60; figure 2 column 1, line 43 - column 2, line 38 -----	11
A	US 5 254 484 A (HEFNER ET AL) 19 October 1993 (1993-10-19) column 2, line 32 - line 67 abstract -----	4
Y	US 4 689 667 A (ARONOWITZ ET AL) 25 August 1987 (1987-08-25) abstract column 3, line 21 - line 30 -----	11
A	US 6 720 626 B1 (IGARASHI MOTOSHIGE) 13 April 2004 (2004-04-13) figures 1-8 -----	2,6,7
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<input checked="" type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/>
		See patent family annex.
* Special categories of cited documents :		
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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A	<p>HO C S ET AL: "Integration of SALICIDE process for deep-submicron CMOS technology: effect of nitrogen/argon-amorphized implant on SALICIDE formation" MATERIALS SCIENCE AND ENGINEERING B, ELSEVIER SEQUOIA, LAUSANNE, CH, vol. 51, no. 1-3, 27 February 1998 (1998-02-27), pages 274-279, XP004129578 ISSN: 0921-5107 the whole document</p> <p>-----</p>	1-11

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