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(71) Applicant (for all designated States except US): **NXP B.V.** [NL/NL]; High Tech Campus 60, NL-5656 AG Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DOORNBOS, Gerben** [NL/BE]; c/o NXP Semiconductors, IP Department, Betchworth House 57-65 Station Road, Redhill Surrey RH1 1DL (GB). **PAWLAK, Bartłomiej, Jan** [PL/BE]; c/o

NXP Semiconductors, IP Department, Betchworth House 57-65 Station Road, Redhill Surrey RH1 1DL (GB).

(74) Agents: **WHITE, Andrew, G.** et al.; c/o NXP Semiconductors, IP Department, Betchworth House 57-65 Station Road, Redhill Surrey RH1 1DL (GB).

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[Continued on next page]

(54) Title: METHOD OF MANUFACTURING A FINFET

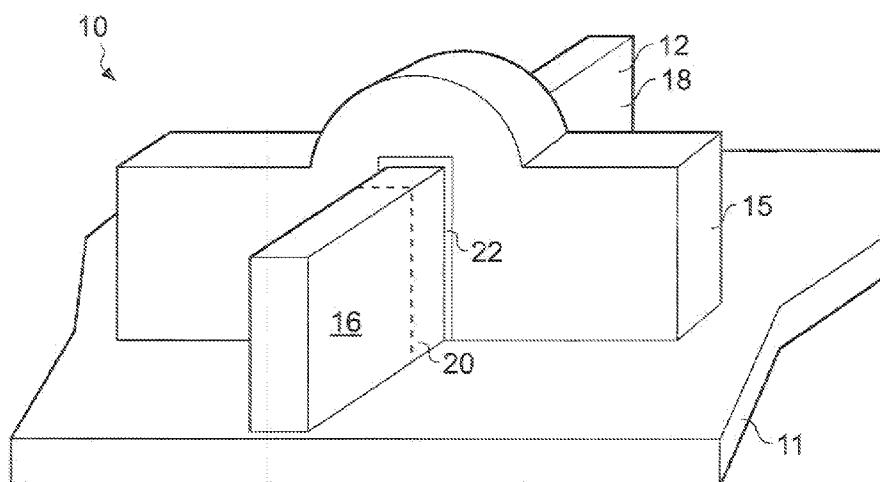


FIG. 1

(57) Abstract: A method of fabricating a fin field effect transistor (finFET) (10) is provided wherein diffusion inhibiting species, e.g. carbon, ions are implanted from above into the extension regions (20) before spacers are formed adjacent the gate (15) and a thermal anneal is carried out to activate the source/drain dopants. The anneal conditions are selected to cause the dopant ions to diffuse from the source and drain regions (16,18) into the neighbouring extension regions (20), thus avoiding the need for a dedicated extension implant step and providing a conformal doping profile. Furthermore, by providing the diffusion inhibiting species implant, and optionally an amorphising implant to the extension regions, the rate and profile of the diffusion can be easily controlled by adjusting the anneal parameters.

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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)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	US 2003/207542 A1 (CHIDAMBARAM P R [US] ET AL) 6 November 2003 (2003-11-06) paragraphs [0007], [0010], [0011] paragraph [0041] - paragraph [0057]	1-9
A	US 2007/026615 A1 (GOKTEPELI SINAN [US] ET AL) 1 February 2007 (2007-02-01) the whole document	1-9
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☒ See patent family annex.

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Hoffmann, Niels

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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