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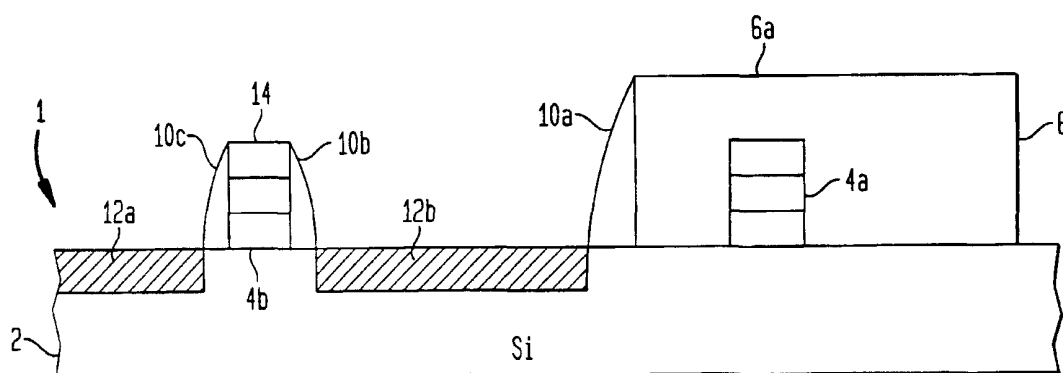
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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: DISPOSABLE SPACER TECHNOLOGY FOR DEVICE TAILORING



(57) Abstract: The present provides a method for tailoring silicon dioxide source and drain implants and, if desired, extension implants of different devices used on a semiconductor wafer in order to realize shallow junctions and minimize the region of overlap between the gate and source and drain regions and any extension implants. The method includes the steps of applying a mask over a first gate structure positioned on a semiconductor substrate, depositing a layer of a spacer material over the surface of the first gate structure and a second gate structure adjacent to the first gate structure, etching the spacer material so that a portion of the spacer material remains on the second gate sidewalls and a sidewall of the block out mask, implanting ions into the semiconductor substrate into a region defined between the spacer material on the block out mask and the second gate to form a source or drain region, and removing the spacer material and block out mask. If desired, a second etch can be performed on the spacer material to reduce spacer thickness, and second ions can be implanted into the semiconductor substrate into an implant region defined between the spacer material remaining after the second etch.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L21/8234 H01L21/336

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

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, WPI Data, PAJ, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 881 670 A (SGS THOMSON MICROELECTRONICS) 2 December 1998 (1998-12-02) abstract; claims; figures 3-5 column 3, line 22 -column 4, line 11	1-4, 6-10, 15
Y	---	5, 11-14
X	EP 0 945 897 A (TEXAS INSTRUMENTS INC) 29 September 1999 (1999-09-29) abstract; claims; figure 2C paragraph '0008!	1, 2, 6-8, 10, 15
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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G document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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II INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/US 01/24193

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