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(54) Title: CONFINED LATERAL GROWTH OF CRYSTALLINE MATERIAL

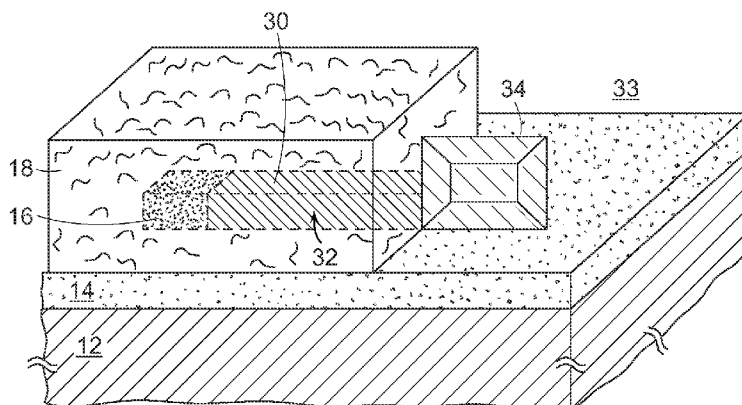


FIG. 2B

(57) Abstract: In a structure for crystalline material growth, there is provided a lower growth confinement layer and an upper growth confinement layer that is disposed above and vertically separated from the lower growth confinement layer. A lateral growth channel is provided between the upper and lower growth confinement layers, and is characterized by a height that is defined by the vertical separation between the upper and lower growth confinement layers. A growth seed is disposed at a site in the lateral growth channel for initiating crystalline material growth in the channel. A growth channel outlet is included for providing formed crystalline material from the growth channel. With this growth confinement structure, crystalline material can be grown from the growth seed to the lateral growth channel outlet.



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**A. CLASSIFICATION OF SUBJECT MATTER***H01L 21/20(2006.01)i, H01L 21/205(2006.01)i, H01L 21/8238(2006.01)i*

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)

H01L 21/20; H01L 21/205; H01L 21/84; G02F 1/1368

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: confinement, lateral, growth, crystalline, material

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 04999314 A (DIDIER PRIBAT et al.) 12 March 1991 See abstract; column 2 lines 51-57, column 4 line 40 - column 5 line 50, column 7 lines 22-26, column 9 line 17 - column 10 line 2, column 13 lines 22-32; claims 1-16; and figures 28-34.	1-32
A	JP 04-026111 A (NEC CORP) 29 January 1992 See page 2; claim 1; and figure 1.	1-32
A	PETER J. SCHUBERT et al. `Confined Lateral Selective Epitaxial Growth of Silicon for Device Fabrication`, IEEE ELECTRON DEVICE LETTERS, VOL. 11, NO. 5, May 1990, pp. 181-183. See abstract; page 181 right column line 1 - page 182 left column line 40; and figure 1.	1-32
A	JP 2004-071832 A (SHARP CORP) 04 March 2004 See abstract; paragraphs [0063]-[0066]; and figure 3.	1-32

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

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"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

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		EP 0336831 B1	17.08.1994
		JP 02-010825 A	16.01.1990
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