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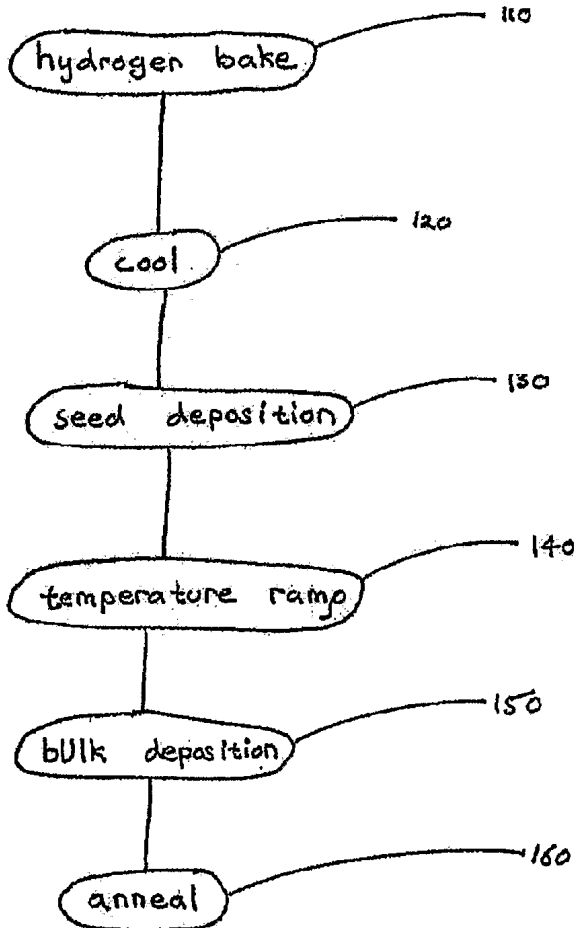
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(54) Title: GERMANIUM DEPOSITION



(57) Abstract: A method comprises, depositing a seed layer of germanium over a silicon-containing surface at a first temperature in a seed deposition process 130. The seed layer has a thickness between about one monolayer and about 1000 Å. The method further comprises, after depositing the seed layer, increasing the temperature of the reaction chamber while continuing to deposit germanium in a temperature ramp process 140. The method further comprises holding the reaction chamber in a second temperature range while continuing to deposit germanium in a bulk deposition process 150. The second temperature range is greater than the first temperature.

WO 2005/084231 A3



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A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 117/89,105,936;427/255.35;438/478,493,505,508,933,935

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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 practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, T ---	US 2005/0067377 A1 (Lei et al.) 31 March 2005 (31.03.2005), Para. [0015]	1, 5, 7
Y, T		4
Y, P	US 2004/0092104 A1 (Gunn III, et al.) 13 May 2004 (13.05.2004), Figure 1 and paragraphs [0019], [0021], [0026], [0028], [0036].	2, 3, 7-10, 23-25, 27, 65-67
X ---	US 6,537,370 B1 (Hernandez et al.) 25 March 2003 (25.03.2003), column 6, lines 53-54; column 7, lines 1-15; column 8, lines 37-43; column 4, lines 12-14.	1, 4-6, 28, 35, 36, 39, 42, 43, 46-51, 59, 62, 63
Y		29, 30, 37, 38



Further documents are listed in the continuation of Box C.



See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means		
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INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Luan et al., High quality Ge epilayers on Si with low threading dislocation densities, Applied Physics Letters, Volume 75, Number 19, 8 November 1999, pages 2090-2911, especially Table 1, Figure 1 and pages 2909-2911.	31, 32, 40, 41, 44, 45, 52, 53
A	6,635,110 B1 (Luan et al.) 21 October 2003 (21.10.2003).	1-67
A	6,429,098 B1 (Bensahel et al.) 06 August 2002 (06.08.2002).	1-67
A	6,107,653 A (Fitzgerald) 22 August 2000 (22.08.2000).	1-67