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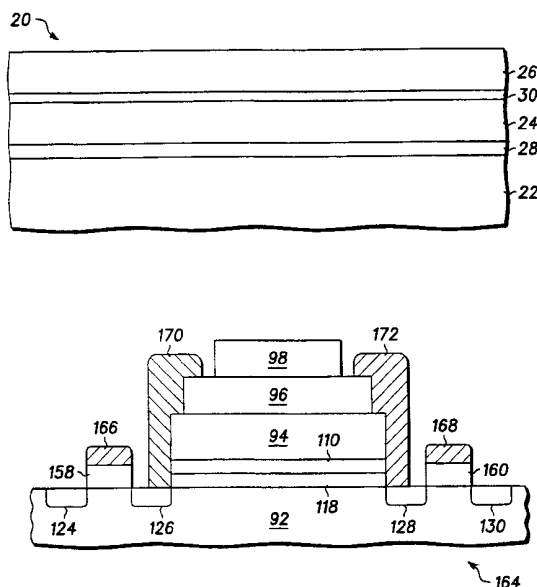
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(54) Title: NON-VOLATILE MEMORY ELEMENT



(57) Abstract: High quality epitaxial layers (26) of compound semiconductor materials can be grown overlying large silicon wafers (22) by first growing an accommodating buffer layer (24) on a silicon wafer. The accommodating buffer layer is a layer of monocrystalline oxide spaced apart from the silicon wafer by an amorphous interface layer (28) of silicon oxide. The amorphous interface layer dissipates strain and permits the growth of a high quality monocrystalline oxide accommodating buffer layer. Any lattice mismatch between the accommodating buffer layer and the underlying silicon substrate is taken care of by the amorphous interface layer. Utilizing this technique permits (20) the fabrication of thin film non-volatile memory elements on a monocrystalline silicon substrate.



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.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L29/78 H01L21/336 H01L21/8246 H01L27/115

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, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 248 564 A (RAMESH) 28 September 1993 (1993-09-28) cited in the application the whole document ---	1-9, 22-32
A	US 5 959 879 A (KOO) 28 September 1999 (1999-09-28) the whole document ---	1-4, 11, 15, 16, 19-21
A	US 5 418 389 A (WATANABE) 23 May 1995 (1995-05-23) the whole document ---	1, 11, 12
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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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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	RAMESH R ET AL: "FERROELECTRIC LA-SR-CO-O/PB-ZR-TI-O/LA-SR-CO-O HETEROSTRUCTURES ON SILICON VIA TEMPLATE GROWTH" APPLIED PHYSICS LETTERS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 63, no. 26, 27 December 1993 (1993-12-27), pages 3592-3594, XP000416479 ISSN: 0003-6951 the whole document -----	1-9, 22-32

INTERNATIONAL SEARCH REPORT

Information on patent family members

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