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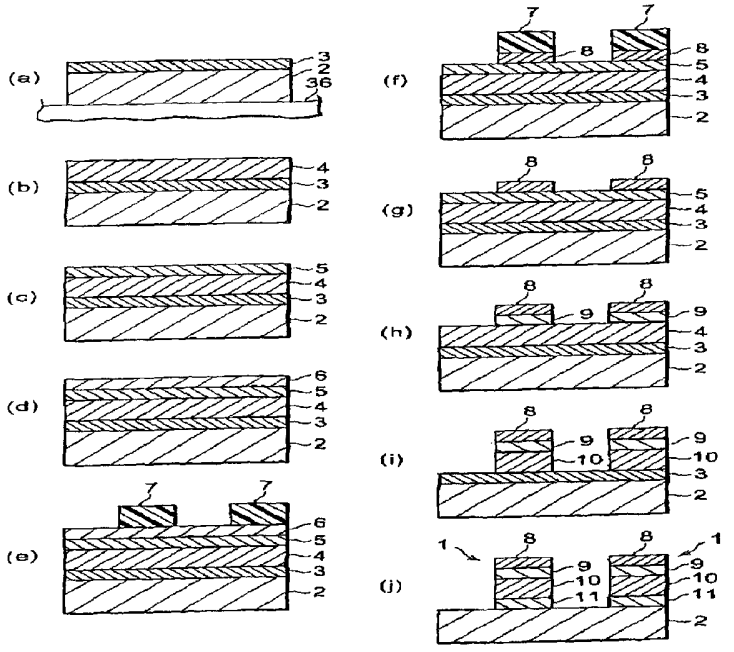
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(54) Title: METHOD OF ETCHING FERROELECTRIC LAYERS



(57) Abstract: A method of etching a ferroelectric layer comprises etching a ferroelectric layer using boron trichloride gas and at least one auxiliary gas selected from the group consisting of a carbon-containing gas and a nitrogen-containing gas. The carbon-containing gas may include CHF_3 or C_2H_4. The nitrogen-containing gas may include N_2 or NF_3. The method reduces side etching of ferroelectric layers, and in particular, PZT-based ferroelectric layers and thereby improves electrical performance and reliability of devices made therefrom.

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INTERNATIONAL SEARCH REPORT

Intern...l Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L21/311 H01L21/02

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)
CHEM ABS Data, INSPEC, EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 443 688 A (TOURE ABRON S ET AL) 22 August 1995 (1995-08-22) column 5 -column 6	1,6, 9-13,17, 20
X	WO 00 49649 A (APPLIED MATERIALS INC) 24 August 2000 (2000-08-24) page 27 -page 28	1,7-9, 11-13, 18,19,21
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A	US 6 100 201 A (HAYASHI YOSHIHIRO ET AL) 8 August 2000 (2000-08-08) column 1	1-21

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
5 December 2002	13/12/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Szarowski, A

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT

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