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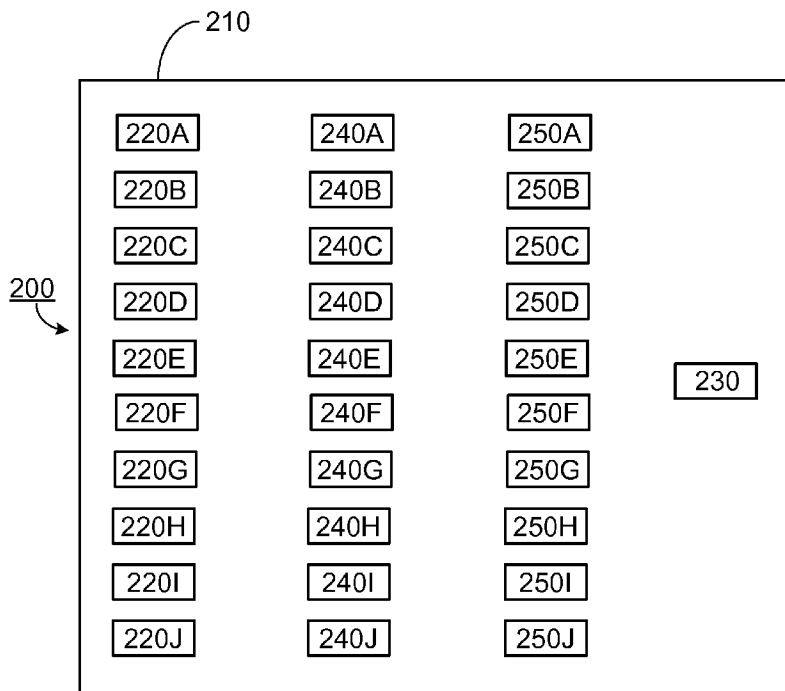
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[Continued on next page]

(54) Title: CROSS-SECTION SYSTEMS AND METHODS



(57) Abstract: A first instrument (230) is used to image a first semiconductor article having a trench (110) of defined cross-section, while a second instrument (220) is used to simultaneously prepare a second semiconductor article with a trench of defined cross-section. Furthermore, a method is disclosed to prepare a trench (110) of defined cross-section in a semiconductor article by rough milling and subsequent fine milling.

FIG. 2

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TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. H01J37/30

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)
H01J

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 643 297 A1 (TCE CONSULTANCY & ENG [NL]) 15 March 1995 (1995-03-15) column 5, line 5 - column 6, line 49; figure	1,19
X	US 2004/065826 A1 (BERGER STEVE [US] ET AL) 8 April 2004 (2004-04-08) paragraphs [0002], [0007], [0024] - [0026]; figure 1	1-11, 14-22, 26-29, 54-66
X	US 2003/098416 A1 (SHEMESH DROR [IL] ET AL) 29 May 2003 (2003-05-29) abstract; figures 4-7	19-29, 64-66
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *Z* document member of the same patent family

Date of the actual completion of the international search

5 January 2010

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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.
X	US 2005/178980 A1 (SKIDMORE GEORGE [US] ET AL) 18 August 2005 (2005-08-18) abstract; figure 1 -----	19-29, 64-66
X	US 2007/057182 A1 (FEUERBAUM HANS-PETER [DE]) 15 March 2007 (2007-03-15) abstract; figures 1a-1d -----	19-29, 64-66
X	US 2006/060777 A1 (MOTOI TAIKO [JP]) 23 March 2006 (2006-03-23) paragraphs [0067] - [0070]; figure 3 -----	30-53, 67-69
X	EP 0 734 045 A2 (HITACHI LTD [JP]) 25 September 1996 (1996-09-25) page 8, lines 18-26; figure 7 -----	30-53, 67-69

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/047474

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-29, 54-66

Simultaneous imaging and preparation

2. claims: 30-53, 67-69

Preparing a cross-section, followed by modifying it

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2009/047474

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