

Title (en)
A CONTROLLED CLEAVAGE PROCESS

Title (de)
KONTROLLIERTES SPALTUNGSVERFAHREN

Title (fr)
PROCEDE DE CLIVAGE CONTROLE

Publication
EP 0995227 A4 20000705 (EN)

Application
EP 98924756 A 19980511

Priority
• US 9809567 W 19980511
• US 4627697 P 19970512
• US 2611598 A 19980219
• US 2602798 A 19980219

Abstract (en)
[origin: WO9852216A1] A technique for forming a film of material (12) from a donor substrate (10). The technique has a step of introducing energetic particles (22) in a selected manner through a surface of a donor substrate (10) to a selected depth (20) underneath the surface, where the particles have a relatively high concentration to define a donor substrate material (12) above the selected depth and the particles for a pattern at the selected depth. An energy source such as pressurized fluid is directed to a selected region of the donor substrate to initiate a controlled cleaving action of the substrate (10) at the selected depth (20), whereupon the cleaving action provides an expanding cleave front to free the donor material from a remaining portion of the donor substrate.

IPC 1-7
H01L 21/304; H01L 21/20; H01L 21/762; B26F 3/00; B26D 3/28; H01L 21/425

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
• [XY] EP 0703609 A1 19960327 - COMMISSARIAT ENERGIE ATOMIQUE [FR]
• [YA] EP 0397237 A1 19901114 - PHILIPS NV [NL]
• [PX] EP 0793263 A2 19970903 - CANON KK [JP]
• [E] EP 0843344 A1 19980520 - CANON KK [JP]
• [E] EP 0867921 A2 19980930 - CANON KK [JP]
• [A] US 4466852 A 19840821 - BELTZ RICHARD K [US], et al
• [A] US 5213451 A 19930525 - FRANK WALTER [DE], et al
• [A] LU X ET AL: "SOI MATERIAL TECHNOLOGY USING PLASMA IMMERSION ION IMPLANTATION", PROCEEDINGS OF THE ANNUAL SOS/ SOI TECHNOLOGY CONFERENCE. (FROM 1991 PROCEEDINGS OF THE INTERNATIONAL SOI CONFERENCE.) SILICON-ON-INSULATOR TECHNOLOGY AND DEVICES,US,NEW YORK, NY: IEEE, 1996, pages 48 - 49, XP000736841, ISBN: 0-7803-3316-0
• See references of WO 9852216A1

Designated contracting state (EPC)
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DOCDB simple family (application)
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