

Title (en)

METHOD AND APPARATUS FOR CONSTANT ANGLE OF INCIDENCE SCANNING IN ION BEAM SYSTEMS.

Title (de)

VERFAHREN UND VORRICHTUNG ZUM ABTASTEN MIT KONSTANTEM EINFALLSWINKEL IN IONENSTRAHLSYSTEMEN.

Title (fr)

PROCEDE ET APPAREIL DE BALAYAGE A ANGLE D'INCIDENCE CONSTANT POUR SYSTEMES A FAISCEAUX D'IONS.

Publication

EP 0287630 A4 19890725 (EN)

Application

EP 87907058 A 19870929

Priority

US 91653486 A 19861008

Abstract (en)

[origin: WO8802920A1] An ion beam (18) is scanned over a semiconductor wafer (30) in an ion implanter by deforming the wafer to have a concave contour selected to provide a constant angle of incidence of the scanned beam on the wafer surface. In one embodiment, the beam is scanned along one axis with a constant angle of incidence and is scanned about a center of deflection (46) along a second orthogonal axis. The wafer is deformed to have a concave cylindrical contour. The wafer can be clamped to a concave cylindrical platen surface by electrostatic or peripheral clamping. In a second embodiment, the beam is scanned in two dimensions about a center of deflection and the wafer is deformed to have a concave spherical contour. The wafer can be clamped to a concave spherical platen surface by electrostatic clamping.

IPC 1-7

G21K 5/00

IPC 8 full level

G21K 1/08 (2006.01); **G21K 5/04** (2006.01); **G21K 5/08** (2006.01); **H01J 37/147** (2006.01); **H01J 37/317** (2006.01)

CPC (source: EP)

H01J 37/1477 (2013.01); **H01J 37/3171** (2013.01)

Citation (search report)

- [AD] US 4457359 A 19840703 - HOLDEN SCOTT C [US]
- [X] PATENT ABSTRACTS OF JAPAN, vol. 2, no. 150, 15th December 1978, page 9671 E 78; & JP-A-53 119 670 (TOKYO SHIBAURA DENKI K.K.) 19-10-1978
- [X] PATENT ABSTRACTS OF JAPAN, vol. 8, no. 131 (E-251)[1568], 19th June 1984; & JP-A-59 041 828 (HITACHI SEISAKUSHO K.K.) 08-03-1984
- [A] PATENT ABSTRACTS OF JAPAN, vol. 10, no. 99 (E-396)[2156], 16th April 1986; & JP-A-60 240 125 (FUJITSU K.K.) 29-11-1985
- See references of WO 8802920A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

WO 8802920 A1 19880421; EP 0287630 A1 19881026; EP 0287630 A4 19890725; IL 84101 A0 19880331; JP H01500942 A 19890330

DOCDB simple family (application)

US 8702506 W 19870929; EP 87907058 A 19870929; IL 8410187 A 19871005; JP 50641287 A 19870929