

Title (en)
MICROFABRICATED TEMPLATE FOR MULTIPLE CHARGED PARTICLE BEAM CALIBRATIONS AND SHIELDED CHARGED PARTICLE BEAM LITHOGRAPHY

Title (de)
MIKROTECHNOLOGISCH HERGESTELLTE BLENDE FÜR DIE AUSRICHTUNG VON TEILCHENSTRAHLENQUELLEN SOWIE FÜR DIE UNTERDRÜCKUNG DER SUBSTRATAUFLADUNG IN DER TEILCHENSTRAHL LITHOGRAPHIE

Title (fr)
MODELE MICROFABRIQUE POUR CALIBRATIONS DE FAISCEAUX A MULTIPLES PARTICULES CHARGEES ET LITOGRAFIE DE FAISCEAUX A PARTICULES CHARGEES PROTEGEES

Publication
EP 1135789 A2 20010926 (EN)

Application
EP 00929001 A 20000503

Priority
• US 0040082 W 20000503
• US 30450599 A 19990503

Abstract (en)
[origin: WO0067291A2] A method, an associated structure, and an apparatus for multiple charged particle beam calibration and shielded charged particle lithography. A template defining an array of membranes is positioned above a target (e.g., a semiconductor wafer of the electron beams). Each membrane defines a through slot (opening) and a set of registration marks which are located with respect to registration marks of the other membranes. Patterns are written onto the target by scanning each electron beam through its associated through slot. Intra- and inter-charged particle beam calibrations for each charged particle beam are carried out using its associated set of registration marks. The template also suppresses undesirable electrical charging of any resist present on the target during the exposure process.

IPC 1-7
H01J 37/317

IPC 8 full level
G03F 1/16 (2006.01); **G03F 7/20** (2006.01); **G03F 9/00** (2006.01); **H01J 37/305** (2006.01); **H01J 37/317** (2006.01); **H01L 21/027** (2006.01)

CPC (source: EP KR)
B82Y 10/00 (2013.01 - EP); **B82Y 40/00** (2013.01 - EP); **H01J 37/3174** (2013.01 - EP); **H01L 21/027** (2013.01 - KR); **H01J 2237/1205** (2013.01 - EP)

Citation (search report)
See references of WO 0067291A2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0067291 A2 20001109; **WO 0067291 A3 20010705**; AU 4715300 A 20001117; CA 2336557 A1 20001109; EP 1135789 A2 20010926; IL 140714 A0 20020210; JP 2002543607 A 20021217; KR 20010100758 A 20011114

DOCDB simple family (application)
US 0040082 W 20000503; AU 4715300 A 20000503; CA 2336557 A 20000503; EP 00929001 A 20000503; IL 14071400 A 20000503; JP 2000616043 A 20000503; KR 20017000065 A 20010103