

Title (en)  
BEAMLET BLANKER ARRANGEMENT

Title (de)  
BEAMLET-BLANKER-ANORDNUNG

Title (fr)  
ELIMINATEUR DE FAISCEAUX

Publication  
**EP 2281296 A2 20110209 (EN)**

Application  
**EP 09732178 A 20090415**

Priority  

- EP 2009054468 W 20090415
- US 4524308 P 20080415

Abstract (en)  
[origin: WO2009127658A1] The invention relates to a charged particle multi-beamlet system for exposing a target (11) using a plurality of beamlets (21). The system has a charged particle source (1), an aperture array (4), a beamlet manipulator, a beamlet blanker (6), and an array of projection lens systems. The charged particle source (1) is configured to generate a charged particle beam (20). The aperture array (4) is configured to define separate beamlets (21) from the generated beam. The beamlet manipulator is configured to converge groups of the beamlets towards a common point of convergence for each group. The beamlet blanker (6) is configured to controllably blank beamlets in the groups of beamlets. Finally, the array of projection lens systems (10) is configured to project unblanked beamlets of the groups of beamlets on to the surface of the target (11). The beamlet manipulator is further adapted to converge each of the groups of beamlets towards a point corresponding to one of the projection lens systems.

IPC 8 full level  
**H01J 37/317** (2006.01); **B82Y 10/00** (2011.01); **B82Y 40/00** (2011.01); **H01J 37/30** (2006.01)

CPC (source: EP KR)  
**B82Y 10/00** (2013.01 - EP KR); **B82Y 40/00** (2013.01 - EP KR); **H01J 37/10** (2013.01 - KR); **H01J 37/147** (2013.01 - KR);  
**H01J 37/3007** (2013.01 - EP KR); **H01J 37/317** (2013.01 - KR); **H01J 37/3177** (2013.01 - EP KR); **H01L 21/0275** (2013.01 - KR);  
**H01J 2237/0492** (2013.01 - EP KR); **H01J 2237/10** (2013.01 - EP KR); **H01J 2237/15** (2013.01 - EP KR)

Citation (search report)  
See references of WO 2009127659A2

Citation (examination)  
US 2005242302 A1 20051103 - PLATZGUMMER ELMAR [AT], et al

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**WO 2009127658 A1 20091022**; AT E535932 T1 20111215; CN 102067271 A 20110518; CN 102067271 B 20140521;  
CN 102067272 A 20110518; CN 102067272 B 20140430; EP 2279515 A1 20110202; EP 2279515 B1 20111130; EP 2281296 A2 20110209;  
EP 2402979 A2 20120104; EP 2402979 A3 20120627; EP 2402979 B1 20131023; JP 2011517130 A 20110526; JP 2011517131 A 20110526;  
JP 2013140997 A 20130718; JP 2013140998 A 20130718; JP 5268170 B2 20130821; JP 5384759 B2 20140108; JP 5475155 B2 20140416;  
KR 101605865 B1 20160324; KR 101638766 B1 20160713; KR 101678823 B1 20161123; KR 20110007199 A 20110121;  
KR 20110015555 A 20110216; KR 20150091417 A 20150810; KR 20150099617 A 20150831; TW 201003711 A 20100116;  
TW 201003713 A 20100116; TW 201515044 A 20150416; TW I474360 B 20150221; TW I534849 B 20160521; WO 2009127659 A2 20091022;  
WO 2009127659 A3 20091210

DOCDB simple family (application)  
**EP 2009054467 W 20090415**; AT 09733141 T 20090415; CN 200980122615 A 20090415; CN 200980122616 A 20090415;  
EP 09732178 A 20090415; EP 09733141 A 20090415; EP 11183370 A 20090415; EP 2009054468 W 20090415; JP 2011504449 A 20090415;  
JP 2011504450 A 20090415; JP 2013024799 A 20130212; JP 2013024809 A 20130212; KR 20107025644 A 20090415;  
KR 20107025645 A 20090415; KR 20157020023 A 20090415; KR 20157021939 A 20090415; TW 104101464 A 20090415;  
TW 98112444 A 20090415; TW 98112445 A 20090415