

Title (en)

A MULTIPLE BEAM CHARGED PARTICLE OPTICAL SYSTEM

Title (de)

OPTISCHES SYSTEM MIT MEHREREN STRAHLEN GELADENER TEILCHEN

Title (fr)

SYSTÈME OPTIQUE À FAISCEAUX MULTIPLES DE PARTICULES CHARGÉES

Publication

**EP 2050118 A1 20090422 (EN)**

Application

**EP 07768909 A 20070713**

Priority

- NL 2007000180 W 20070713
- US 83339406 P 20060725
- NL 1032231 A 20060725

Abstract (en)

[origin: WO2008013442A1] The invention relates to a multiple beam charged particle optical system, comprising an electrostatic lens structure with at least one electrode, provided with apertures, wherein the effective size of a lens field effected by said electrode at a said aperture is made ultimately small. The system may comprise a diverging charged particle beam part, in which the lens structure is included. The physical dimension of the lens is made ultimately small, in particular smaller than one millimeter, more in particular less than a few tens of micrometers. In further elaboration, a lens is combined with a current limiting aperture (CLA), aligned such relative to a lens of said structure, that a virtual aperture (VA) effected by said current limiting aperture in said lens is situated in an optimum position with respect to minimizing aberrations total.

IPC 8 full level

**H01J 37/063** (2006.01); **H01J 37/12** (2006.01)

CPC (source: EP KR)

**H01J 37/12** (2013.01 - EP KR); **H01J 37/20** (2013.01 - KR); **H01J 2237/0453** (2013.01 - EP KR); **H01J 2237/04924** (2013.01 - EP KR); **H01J 2237/1205** (2013.01 - EP KR); **H01J 2237/121** (2013.01 - EP KR); **H01J 2237/153** (2013.01 - EP KR); **H01J 2237/26** (2013.01 - EP KR); **H01J 2237/3175** (2013.01 - EP KR)

Citation (search report)

See references of WO 2008013442A1

Citation (examination)

- JP 2006049703 A 20060216 - CANON KK, et al
- JP 2003045789 A 20030214 - CANON KK

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

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DOCDB simple family (application)

**NL 2007000180 W 20070713**; CN 200780028626 A 20070713; EP 07768909 A 20070713; EP 11183870 A 20070713; EP 11183872 A 20070713; JP 2009521713 A 20070713; KR 20097003925 A 20070713; TW 96127014 A 20070725