Title (en)

APPARATUS OF PLURAL CHARGED-PARTICLE BEAMS

Title (de)

VORRICHTUNG MIT MEHREREN GELADENEN TEILCHENSTRAHLEN

Title (fr)

APPAREIL AYANT PLUSIEURS FAISCEAUX DE PARTICULES CHARGÉES

Publication

EP 3268979 A4 20190508 (EN)

Application

EP 16762718 A 20160413

Priority

US 2016027267 W 20160413

Abstract (en)

[origin: WO2016145458A1] A multi-beam apparatus for observing a sample with high resolution and high throughput is proposed. In the apparatus, a source-conversion unit changes a single electron source into a virtual multi-source array, a primary projection imaging system projects the array to form plural probe spots on the sample, and a condenser lens adjusts the currents of the plural probe spots. In the source-conversion unit, the image-forming means is on the upstream of the beamlet-limit means, and thereby generating less scattered electrons. The image-forming means not only forms the virtual multi-source array, but also compensates the off-axis aberrations of the plurality of probe spots.

IPC 8 full level

H01J 49/00 (2006.01); **G01N 23/00** (2006.01); **G21K 5/10** (2006.01); **G21K 7/00** (2006.01); **H01J 37/147** (2006.01); **H01J 37/28** (2006.01)

CPC (source: EP US)

H01J 37/12 (2013.01 - US); **H01J 37/1472** (2013.01 - EP US); **H01J 37/28** (2013.01 - EP US); H01J 2237/04924 (2013.01 - EP US); H01J 2237/083 (2013.01 - EP US); H01J 2237/1205 (2013.01 - EP US); H01J 2237/1516 (2013.01 - EP US); H01J 2237/2817 (2013.01 - US)

Citation (search report)

- [XI] US 2008054184 A1 20080306 - KNIPPELMEYER RAINER [DE], et al
- [Y] EP 2879155 A1 20150603 - INTEGRATED CIRCUIT TESTING [DE]
- [Y] US 6175122 B1 20010116 - GROVES TIMOTHY R [US], et al
- See references of WO 2016145458A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2016145458 A1 20160915; CN 108292583 A 20180717; CN 108292583 B 20200320; EP 3268979 A1 20180117; EP 3268979 A4 20190508; JP 2018513543 A 20180524; JP 6550478 B2 20190724

DOCDB simple family (application)

US 2016027267 W 20160413; CN 201680026508 A 20160413; EP 16762718 A 20160413; JP 2017567053 A 20160413