

Title (en)  
METHOD AND APPARATUS FOR X-RAY MICROSCOPY

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR RÖNTGENMIKROSKOPIE

Title (fr)  
PROCÉDÉ ET APPAREIL DE MICROSCOPIE À RAYONS X

Publication  
**EP 3465182 A4 20200318 (EN)**

Application  
**EP 17810765 A 20170602**

Priority

- US 201615173711 A 20160605
- US 201662401164 P 20160928
- US 201662429587 P 20161202
- US 201662429760 P 20161203
- US 201762485916 P 20170415
- US 201715605957 A 20170526
- US 2017035800 W 20170602

Abstract (en)  
[origin: WO2017213996A1] This disclosure presents systems for x-ray microscopy using an array of micro-beams having a micro- or nano-scale beam intensity profile to provide selective illumination of micro- or nano-scale regions of an object. An array detector is positioned such that each pixel of the detector only detects x-rays corresponding to a single micro-or nano-beam. This allows the signal arising from each x-ray detector pixel to be identified with the specific, limited micro- or nano-scale region illuminated, allowing sampled transmission image of the object at a micro- or nano-scale to be generated while using a detector with pixels having a larger size and scale. Detectors with higher quantum efficiency may therefore be used, since the lateral resolution is provided solely by the dimensions of the micro- or nano-beams. The micro- or nano-scale beams may be generated using an arrayed x-ray source or a set of Talbot interference fringes.

IPC 8 full level  
**G01N 23/04** (2018.01); **G21K 1/02** (2006.01); **G21K 1/06** (2006.01); **G21K 7/00** (2006.01); **G01N 23/201** (2018.01)

CPC (source: EP KR US)  
**G01N 23/04** (2013.01 - EP KR US); **G01N 23/041** (2018.01 - EP US); **G01N 23/201** (2013.01 - KR); **G21K 1/025** (2013.01 - EP KR); **G21K 1/06** (2013.01 - EP KR); **G21K 7/00** (2013.01 - EP KR); **G01N 23/044** (2018.01 - EP US); **G01N 23/201** (2013.01 - EP US); **G01N 2223/6116** (2013.01 - EP KR); **G21K 2207/005** (2013.01 - EP KR)

Citation (search report)

- [X] US 2015117599 A1 20150430 - YUN WENBING [US], et al
- [A] US 2010260315 A1 20101014 - SATO GENTA [JP], et al
- [A] WO 2015168473 A1 20151105 - SIGRAY INC [US]
- [A] WO 2015176023 A1 20151119 - SIGRAY INC [US]
- See references of WO 2017213996A1

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

DOCDB simple family (publication)  
**WO 2017213996 A1 20171214**; CN 109564176 A 20190402; EP 3465182 A1 20190410; EP 3465182 A4 20200318; JP 2019523871 A 20190829; JP 6775035 B2 20201028; KR 20190015531 A 20190213

DOCDB simple family (application)  
**US 2017035800 W 20170602**; CN 201780045768 A 20170602; EP 17810765 A 20170602; JP 2018563587 A 20170602; KR 20197000360 A 20170602