

Title (en)

CONCEPT FOR DETECTING IMAGES WITH SUB-WAVELENGTH RESOLUTION

Title (de)

KONZEPT ZUR ERFASSUNG VON BILDERN MIT SUBWELLENLÄNGENAUFLÖSUNG

Title (fr)

CONCEPT POUR NUMÉRISER DES IMAGES AVEC UNE RÉSOLUTION DE LONGUEUR DE SOUS-ONDES

Publication

EP 2140298 A2 20100106 (DE)

Application

EP 08735058 A 20080407

Priority

- EP 2008002738 W 20080407
- DE 102007016588 A 20070405

Abstract (en)

[origin: US2010072353A1] A microscope with sub-wavelength resolution with a light source for monochromatic light with a predetermined wavelength, an object carrier for an object to be examined, and an image sensor with an optical structure with a first side and a second side opposite to the first side, the optical structure having a negative refractive index, and a pixel array extending along the second side of the optical structure at a predetermined distance, wherein the first side of the optical structure of the image sensor is arranged at a near-field distance smaller than the wavelength of the monochromatic light to the object carrier.

IPC 8 full level

G02B 21/00 (2006.01); **H04N 25/00** (2023.01)

CPC (source: EP US)

B82Y 20/00 (2013.01 - EP US); **G02B 1/007** (2013.01 - EP US); **G02B 21/0004** (2013.01 - EP US); **G02B 27/58** (2013.01 - EP US)

Citation (examination)

- WO 2004054001 A2 20040624 - AUGUSTO CARLOS J R P [US]
- US 2006006485 A1 20060112 - MOULI CHANDRA [US]
- US 2006066743 A1 20060330 - ONOZAWA KAZUTOSHI [JP], et al
- EP 1837635 A1 20070926 - CANON KK [JP]
- US 2006171032 A1 20060803 - NISHIOKA KIMIHIKO [JP]
- WO 03088419 A1 20031023 - MASSACHUSETTS INST TECHNOLOGY [US]
- JOHNSON N P ET AL: "Nanophotonic structures: from photonic crystals to metamaterials", TRANSPARENT OPTICAL NETWORKS, 2005, PROCEEDINGS OF 2005 7TH INTERNATIO NAL CONFERENCE BARCELONA, CATLONIA, SPAIN JULY 3-7, 2005, PISCATAWAY, NJ, USA,IEEE, vol. 1, 3 July 2005 (2005-07-03), pages 171 - 171b, XP010834373, ISBN: 978-0-7803-9236-6, DOI: 10.1109/ICTON.2005.1505843

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 MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

DE 102007016588 A1 20081009; DE 102007016588 B4 20141009; EP 2140298 A2 20100106; JP 2010524020 A 20100715;
JP 5108936 B2 20121226; US 2010072353 A1 20100325; US 8300307 B2 20121030; WO 2008122430 A2 20081016;
WO 2008122430 A9 20100121

DOCDB simple family (application)

DE 102007016588 A 20070405; EP 08735058 A 20080407; EP 2008002738 W 20080407; JP 2010501445 A 20080407;
US 59456608 A 20080407