Title (en)

HIGH-RESOLUTION SURFACE PLASMON MICROSCOPE WITH HETERODYNE INTERFEROMETRY IN RADIAL POLARIZATION MODE

Title (de)

HOCHAUFLÖSENDES OBERFLÄCHENPLASMONENMIKROSKOP MIT HETERODYNER INTERFEROMETRIE IM RADIALEN POLARISATIONSMODUS

Title (fr)

MICROSCOPE A PLASMON DE SURFACE A HAUTE RESOLUTION AVEC INTERFEROMETRE HETERODYNE EN POLARISATION RADIALE

Publication

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Application

EP 08865044 A 20081211

Priority

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- FR 0759716 A 20071211

Abstract (en)

[origin: WO2009080998A2] The present invention relates to a high-resolution scanning surface-plasmon microscope, comprising a coherent light source (LG) and a medium for coupling and confining a surface plasmon, comprising an objective (O, 0M) of large numerical aperture, an immersion oil (Hi) and a glass slide (Gs). A metal layer (Ms) covers one surface of the glass slide (Gs). The microscope also includes a Twyman-Green interferometer operating in heterodyne mode, this being placed between the light source and the coupling medium, and also means (PL1, PL2, EC) for scanning the metal layer using a light beam, and means (PD) for detecting the beam output by the interferometer, said means being connected to means (S, F, DTec, COMP) for processing and forming an image from this beam. In accordance with the invention, at least one polarization converter (CP), for converting a linear polarization of the light beams (L) emitted by the light source (LG) into a radial polarization, is placed between the light source and the interferometer.

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IPC 8 full level

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