

Title (en)

DEVICE AND METHOD FOR MEASURING THE PROFILE OF FLAT OBJECTS COMPRISING UNKNOWN MATERIALS

Title (de)

VORRICHTUNG UND VERFAHREN ZUR PROFILMESSUNG VON FLACHEN OBJEKTEN MIT UNBEKANNTEN MATERIALIEN

Title (fr)

DISPOSITIF ET PROCÉDÉ POUR LA MESURE DU PROFIL D'OBJETS PLATS COMPRENANT DES MATÉRIAUX INCONNUS

Publication

EP 4048978 A1 20220831 (DE)

Application

EP 20788826 A 20201014

Priority

- EP 19205397 A 20191025
- EP 2020078927 W 20201014

Abstract (en)

[origin: WO2021078609A1] The invention relates to a method and a device (2) for measuring the profile of the surface (40) of a flat object (20) comprising unknown materials, comprising an interferometry measuring system (4), an ellipsometry measuring system (5), a beam splitter (82) for splitting a light beam of a light source (111) into an interferometry light beam (410) and an ellipsometry light beam (420), and an analysis unit which is designed to ascertain the profile height in the measured region on the object surface (40) from an analysis beam (490) analyzed in a detector unit (250) of the interferometry measuring system and a sensor beam (520) received in an ellipsometry sensor (220). The interferometry measuring system (4) comprises a beam divider (91), a reference mirror (60), and the detector unit (250), and the ellipsometry measuring system (5) comprises a polarizer (190) for polarizing an ellipsometry light beam (420) and transmitting same onto the measuring region on the object surface (40) as well as the ellipsometry sensor (220), which comprises a polarization filter in order to determine the polarization state of a received sensor beam.

IPC 8 full level

G01B 9/02 (2022.01); **G01B 11/06** (2006.01); **G01N 21/21** (2006.01)

CPC (source: CN EP US)

G01B 9/0207 (2013.01 - CN EP); **G01B 11/0641** (2013.01 - CN EP US); **G01N 21/21** (2013.01 - CN); **G01N 21/211** (2013.01 - US)

Citation (search report)

See references of WO 2021078609A1

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)

EP 3812697 A1 20210428; CN 114616437 A 20220610; EP 4048978 A1 20220831; US 2022390355 A1 20221208;
WO 2021078609 A1 20210429

DOCDB simple family (application)

EP 19205397 A 20191025; CN 202080075406 A 20201014; EP 2020078927 W 20201014; EP 20788826 A 20201014;
US 202017769830 A 20201014