

Title (en)

POLARIMETRIC METHOD FOR DETERMINING THE (MAIN-)OSCILLATION PLANE OF POLARISED LIGHT ON ABOUT 0.1 μm AND MINIATURISABLE DEVICE FOR ITS IMPLEMENTATION

Title (de)

POLARIMETRISCHES VERFAHREN ZUR BESTIMMUNG DER (HAUPT-) SCHWINGUNGSEBENE POLARISIERTEN LICHTS AUF ETWA 0,1 μm UND MINIATURISIERBARE VORRICHTUNG ZU SEINER DURCHFÜHRUNG

Title (fr)

PROCEDE POLARIMETRIQUE POUR LA DETERMINATION DU PLAN D'OSCILLATION (PRINCIPAL) DE LA LUMIERE POLARISEE SUR ENVIRON 0,1 μm , ET DISPOSITIF MINIATURISABLE POUR SA MISE EN OEUVRE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9966309A1] The invention relates to a method and a device for accurate determination of the oscillation plane of polarised light. According to said method, the light of a light source (1) is polarised by means of a polarisation filter (2) having an adjustment angle θ_0 determined relatively to the first reference plane, i.e. the incidence plane on the reflecting surface (4). The polarised beam (12) penetrates the object to be measured in the measuring chamber (3) and the rotation angle varies by a low angular value θ_{MG} . The sum of θ_0 and θ_{MG} is equal to the rotation angle θ_e with which the beam (13) exiting the measuring chamber is partially reflected on the surface of an optically thicker medium (4). The partially reflected beam is then decomposed into two partial beams (15a: extraordinary beam, 15b: ordinary beam) in a polarisation prism (5) having a reference plane, i.e. the oscillation plane of the ordinary beam, with an adjustment angle (θ^*) determined relatively to the first reference plane, the two partial beams having oscillation planes which are exactly perpendicular to one another. The intensities I_0 et I_a of the two partial beams are determined photometrically by means of two detectors (6a, 6b) and the ratio (Q) of the measured intensities is formed (ratio builder: 8).

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