

Title (en)

RESONATOR-AMPLIFIED ABSORPTION SPECTROMETER COMPRISING AN INCOHERENT RADIATION SOURCE

Title (de)

RESONATORVERSTÄRKTES ABSORPTIONS-SPEKTROMETER MIT EINER INKOHÄRENTEN STRAHLUNGSQUELLE

Title (fr)

SPECTROMETRE D'ABSORPTION RENFORCE PAR UN RESONATEUR

Publication

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Application

EP 03795842 A 20031124

Priority

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- EP 0313174 W 20031124

Abstract (en)

[origin: WO2004048907A2] The invention relates to a device (10) for determining absorption of a sample, comprising an incoherent radiation source (12) for generating a measuring light beam (20), a resonator that is provided with at least two mirrors (30, 32) into which the measuring light beam can be coupled, a sample volume (38) for receiving an absorbing sample within the resonator (14), and a detector (18) for absorbing the radiation that can be decoupled from the resonator (14). The inventive device (10) is characterized by the fact that spectrometric or interferometric means (16) which spectrally split the measuring light beam are provided between the radiation source (12) and the detector (18) while means are provided for generating a signal that represents the amplitude of the measuring light beam independently of the phase.

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CPC (source: EP US)

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Citation (search report)

See references of WO 2004048907A2

Citation (examination)

- GHERMAN T ET AL: "Mode-locked cavity-enhanced absorption spectroscopy", QUANTUM ELECTRONICS CONFERENCE,, vol. 10, no. 19, 23 September 2002 (2002-09-23), pages 1033 - 1042, XP003025397
- DASGUPTA P K ET AL: "Optical cells with partially reflecting windows as nonlinear absorbance amplifiers", ANALYTICAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY, US, vol. 59, 1 January 1987 (1987-01-01), pages 783 - 786, XP003025398, ISSN: 0003-2700, DOI: DOI:10.1021/AC00132A022

Citation (third parties)

Third party :

- GHERMAN T. ET AL: "Mode-locked cavity-enhanced absorption spectroscopy", QUANTUM ELECTRONICS CONFERENCE, vol. 10, no. 19, 20 September 2002 (2002-09-20), pages 1033 - 1042, XP003025397
- DASGUPTA P.K. ET AL: "Optical cells with partially reflecting windows as nonlinear absorbance amplifiers", AMERICAN CHEMICAL SOCIETY, vol. 59, 1987, pages 783 - 786, XP003025398

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