

DETECTION EQUIPMENT & METHODS

Third Patent Portfolio Investment Company

Initial Bidding Guidance: Please inquire

With an early priority date from 2000, this portfolio is directed to methods for sensing and detecting, including:

1. A surface sensor – including a production method and associated system – which has a sensor response that is largely independent of readout beam polarization and which nevertheless yields a comparatively high sensor sensitivity. The surface sensor utilizes a THz structure which is configured asymmetrically, and a group of two or more THz structures has essentially centrosymmetrically aligned polarization axes to form a unit cell. The sensor surface has a resonance which has no polarization dependency and comprises an array of a plurality of unit cells, wherein each unit cell comprises a number of THz structures having essentially centrosymmetrically aligned polarization axes. Advantageously, this offers a distinctly lower cross-sensitivity in comparison to previous FSS structures. [8,097,854]
2. A method for proving the existence of a polynucleotide sequence A in a sample containing a plurality of identical or different polynucleotide sequences X as individual strands and where the polynucleotide sequence A may be identical with one of the polynucleotide sequences X or may be contained as a sequence portion in one of the polynucleotide sequences X, through the inquiry of the state of linkage of the polynucleotide sequences X contained in the sample to a known test polynucleotide sequence B complementary to the polynucleotide sequence A, comprising the following steps: preparation of a test medium containing as individual strands test polynucleotide sequences B complementary to the polynucleotide sequence A which is to be proven, establishing contact of the sample with the test medium by placing the sample into or onto the test medium such that the individual strands of the polynucleotide sequences X contained in the sample may bind to the complementary test polynucleotide sequences B contained in the test medium. For proving a linkage of polynucleotide sequences X to test polynucleotide sequences B, the following step c) is carried out: determination of at least one component of the complex index of refraction or of a parameter equivalent to it of the sample which is in contact with the test medium by interaction with incident electro-magnetic radiation, the frequency of which is within the range of 0.1 terahertz (THz) and 20 THz, preferably between 1 THz and 10 THz and subsequent analysis of the properties of the electro-magnetic radiation after the interaction, in particular in respect of time delay or phase delay, absorption, refraction or dispersion of the incident electro-magnetic radiation caused by the interaction. [7,148,010]

Earliest Priority Date: 07-10-2000

Representative Claim: US 8,097,854 – Claim #1

A surface sensor (100, 200, 300, 400), comprising a frequency-selective surface with periodically arranged THz structures (1) sensitive to THz radiation, the THz resonator structures each having an associated polarization axis (3), wherein one THz structure (1) is configured asymmetrically, and a group of two or more THz structures have essentially centrosymmetrically aligned polarization axes (3) for forming a unit cell (10).

Contact:

For more information on the assets available for sale in this portfolio, contact Michelle Tyler.

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TECHNOLOGY

SENSORS; DETECTION METHODS

NOVELTY

A UNIQUE SENSOR WHICH OFFERS DISTINCTLY LOWER CROSS-SENSITIVITY AND A METHOD FOR PROVING THE EXISTENCE OF A POLYNUCLEOTIDE SEQUENCE IN A SAMPLE CONTAINING A PLURALITY OF POLYNUCLEOTIDE SEQUENCES

IMPORTANCE

A VALUABLE PORTFOLIO FOR COMPANIES PRODUCING DETECTION EQUIPMENT

NUMBER OF ASSETS

21

PATENTS (11)

US 7,148,010
US 8,097,854
AT 1301774
CH 1301774
CN 102301001
DE 50109504
DE 102008059985
EP 1301774
FR 1301774
GB 1301774
LU 1301774

APPLICATIONS (10)

US 13/132,328
AU 20010079555
CA 20092744894
DE 2000154476
DE 20081016294
EP 20090723994
EP 20090774652
JP 20110501187
JP 20110538983
SG 20110003903