

Photoacoustic Point Spectroscopy

Applications:

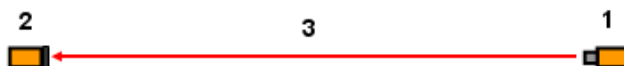
- Open environment photoacoustic spectroscopy

Advantages:

- Increases the range and sensitivity of producing a photoacoustic spectrum in an open environment.

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- 1.) Pulsed/Chopped Tunable Light Source
- 2.) Vibratory Sensor
- 3.) Optical Beam

Summary:

Technology Description

A detector that utilizes photoacoustic waves to excite a vibratory sensor coated with unknown molecules. To identify the molecules, pulsed/chopped light is shown on said sensor, acoustic waves are produced at the light's frequency, mechanically oscillating the vibratory sensor. The wavelength (color) of the light is then changed, and as the molecules absorb or reflect the impelling light, the amplitude of the acoustic waves (along with the amplitude of the vibrating sensor) increases or decreases. Thus, an identifying spectrum of the molecule is made based on the vibrational amplitude of the sensor verses optical wavelength.

Technology Application

Molecular analysis in an open environment using photoacoustic spectroscopy.

Stage of Development: Proof of Principle

Patent Status: Patent pending

Licensing Status: Available for licensing