Available Technologies

Photoacoustic Microcantilevers Spectroscopy

Applications:

- Detection of chemical vapors, adsorbates, immobilized cells, tissues.
- Characterization of pharmaceuticals, biomaterials (such as tissues, cells, biomass, etc).

Advantages:

- Overcome the problem of selectivity of microcantilevers
- Overcomes the problem of low sensitivity of the photothermal deflection cantilevers

Summary:

Technology Description

This technology is a microcantilever based sensor and method for chemical speciation of extremely small quantities of samples. The microcantilever in this invention acts as a physical sensor measuring vibration, not as a chemical sensor. It provides for high sensitivity and selectivity. It allows for increased amount of analyte to be absorbed on the sensor without losing sensitivity. The invention can work on small quantities of powdered materials or solutions.

Technology Application

By adding the photoacoustic effect to solve for previous shortcomings, this invention can characterize chemical vapors, adsorbates, immobilized cells, and tissues, biomaterials (such as tissues, cells, and biomass) and pharmaceuticals

Stage of Development: Proof-of-Principle Prototype

Licensing Status: Available for licensing

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