

Available
Technologies

Nanomechanical Sensor

Applications:

- Explosives
 - Explosive detection
 - Individual explosives differentiation
- Pharmaceuticals
 - Evaluating purity of pharmaceuticals
- Polymers
 - Investigating temperature dependent properties of sub-nanogram quantities of polymers

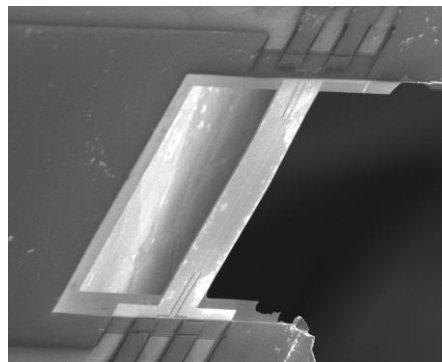
Advantages:

- High sensitivity and selectivity
- Functions in humid environments
- Fast (milliseconds), real-time response
- Low cost
- Simplicity of use
- Hand-held size
- Receptor Free

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Summary:

Technology Description

This invention is a nanomechanical detector that takes advantage of the unique thermal response patterns of adsorbed materials. It can be heated with a gradient as high as a few million degrees, which will enable investigating the thermal properties of sub-nanogram quantities of materials under extremely high heating rates.

Technology Application

This invention can be used for detection and identification of explosives for the purposes of securing the transportation, communication, energy, government, social service, and commercial sectors. It can detect and speciate explosives, providing a method for direct, fast and receptor-free detection.

The invention can also be used to evaluate the purity of pharmaceuticals and investigating the temperature dependent properties of sub-nanogram quantities of polymers.

Stage of Development: Proof-of-Principle Prototype

Patent Status: Patent pending

Licensing Status: Available for licensing