

The Office of Technology Management

UNIVERSITY OF TEXAS  ARLINGTON

Tech ID: UTA 15:01

Nanoscale Gas Chromatography Device

INVENTOR: Dr. Yuze Sun and Dr. Weidong Zhou

TECHNOLOGY NEED

Chemical vapor sensing is vital to a developing society. Whether the goal is to collect resources from, protect, study, or shape our environment, knowledge of what chemical vapors are in a sample keep members of our society safe. Current gas sensors have the ability to sense multiple chemicals but lack sensing selectivity. This issue becomes more troublesome when real-world samples contain tens to hundreds of volatile organic compounds (VOC). Gas chromatography (GC) is the current state of the art in laboratories, but attempts to miniaturize these systems are disqualified for certain applications due to their lack of chromatographic resolution.

INVENTION DESCRIPTION/SOLUTION

Researchers at UTA have developed an optical cavity enhanced nanoscale gas chromatography device. Separation capabilities achieved by the dimensions of the device enable the device to compete with conventional bench top GC systems. Nano-sensor arrays provide portable, wearable, ultra-fast, and high separation resolution VOC analysis. The capabilities of the device are suitable for research, security, and industry environments.

APPLICATIONS

- Analyzer- Analysis of fluids and other materials by Gas Chromatography
- Continuous monitoring systems
 - Refinery, Industrial plants, Environmental monitoring
- Food Analysis

KEY BENEFITS

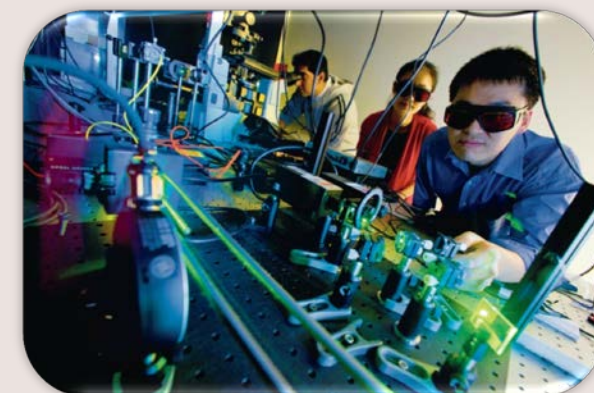
- Rapid, portable, all-encompassing gas sensing capabilities
- Cheaper and more compact GC system

STAGE OF DEVELOPMENT

Prototyped

INTELLECTUAL PROPERTY STATUS

Patent Pending -PCT



More about the Inventor:

Dr. Yuze Sun

Dr. Weidong Zhou

Contact information

For licensing, please contact
Sharon Ngwenya, PhD
(Licensing Associate)

sngwenya@uta.edu

otm@uta.edu

P: 817.272.1130

Our mailing Address:

The Office of Technology
Management
701 S Nedderman drive,
Suite 333, Arlington, TX
76019

Connect with us:

