Gentex Announces New Nanofiber Sensing Technology

January 12, 2021

ZEELAND, Mich., Jan. 12, 2021 (GLOBE NEWSWIRE) -- Gentex Corporation (NASDAQ: GNTX) today announced the acquisition of a new nanofiber sensing technology capable of detecting a wide variety of chemicals, from explosives to volatile organic compounds, with widespread application in a multitude of industries.

Gentex is a long-time supplier of electro-optical products for the global automotive, aerospace and fire protection industries. It's best known for supplying nearly every major automaker with connected-car technologies and advanced electronic features that optimize driver vision and enhance driving safety.

Gentex's new nanofiber technology can detect a wide variety of chemicals, including explosives, drugs, VOCs, toxic industrial chemicals, amines, and more. The technology and patents were included in Gentex's 2020 acquisition of the Utah-based startup, Vaporsens, which was founded by University of Utah professor Dr. Ling Zang. Zang invented the technology and launched Vaporsens with assistance from the Partners for Innovation, Ventures, Outreach & Technology (PIVOT) Center at the University of Utah.

The core of Vaporsens' chemical sensor technology is a net of nanofibers approximately one thousand times smaller in size than human hair. Their porous structure allows them to absorb targeted molecules from sampled gas and identify them via changes in their electrical resistance. The technology allows for the rapid detection of target chemicals with high sensitivity in the parts per billion and parts per trillion ranges.

"Our new Vaporsens technology can be used in a wide variety of markets and industries, with potential applications for automotive, aerospace, agriculture, chemical manufacturing, military & first responders, worker safety, food & beverage processing, and medical – anywhere chemical sensing is needed," said Neil Boehm, Gentex's chief technology officer.

Gentex is no stranger to sensing technology. The Company has over 40 years of experience in the commercial fire protection industry, where it pioneered the photoelectric smoke detector, which uses light to "see" smoke particles. The company is currently working with an autonomous vehicle manufacturer on a derivative of this technology to introduce the first smoke detector designed to detect smoke and vape within the vehicle environment. The system consists of a sensing unit placed within the vehicle's ductwork where it continuously samples the air quality. Once smoke or vape is detected, the vehicle operator could be notified, the vehicle flagged for cleaning, and the offending passenger assessed a fine.

"Vaporsens is the perfect complement to our existing smoke detection technology," continued Boehm. "By combining our smoke and chemical detection technologies we can offer complete, wholistic sensing for the automotive industry and other key markets. In autonomous vehicles, these units will become increasingly important to vehicle operators in order to keep passengers safe and vehicles clean."

Founded in 1974, Gentex Corporation (NASDAQ: GNTX) is a supplier of automatic-dimming rearview mirrors and electronics to the automotive industry, dimmable aircraft windows for aviation markets, and fire protection products to the fire protection market. Visit the company website at www.gentex.com.

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Photos accompanying this announcement are available at:

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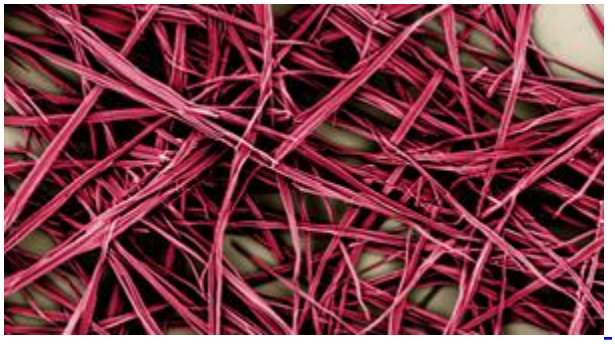
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Vaporsens Nanofiber Mesh



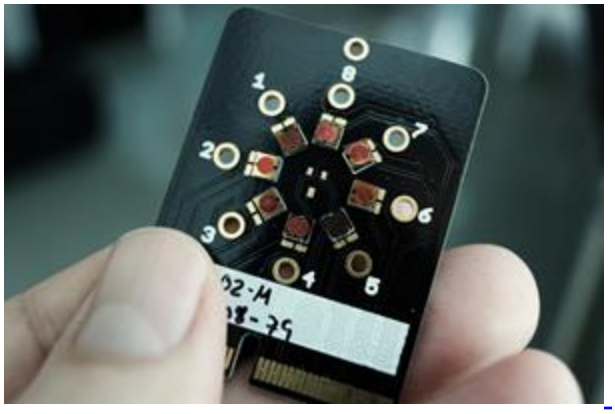
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Vaporsens Nanofiber Sensor Chip



A nanofiber sensor chip contains nanofibers approximately one thousand times smaller than a human hair. Their large porous surface area provides optimal absorption of chemical vapors that can result in sensitivity in the parts per billion range for most target compounds and in the parts per trillion range for some chemicals.

Vaporsens Nanofiber Senor Array



Nanofiber sensor arrays allow for multi-target sensing.

Vaporsens Military Chemical Sensor Prototype



Nanofiber chemical sensors are ideal for military applications, capable of detecting chemical warfare agents, toxic industrial chemicals, illicit drugs, explosives, VOCs, and more.

Gentex Vaporsens Overhead Sensing Unit



In the automotive environment, Vaporsens technology could be located in overhead sensing units capable of detecting dangerous chemicals in the cabin environment, helping to keep passengers safe and autonomous vehicles up and running.

Source: Gentex Corporation