

## ***CES: German Scientists Present Digital Nose for the Mass Market and Plans for a Collaborative Database of Smells***

**Dresden (Germany)/Las Vegas (US), 1/11/2021** - German deeptech start-up SmartNanotubes Technologies presents its multi-channel gas detection platform Smell Inspector at CES 2021. With their innovation, the scientists want to make digital noses suitable for the mass market. In several years of research, the founding team around Viktor Bezugly developed the "Smell iX16", a smell detector chip based on nanotechnology. Compared to conventional gas sensors, this chip is much more sensitive, smaller and more energy efficient. In addition, Smell iX16 is significantly cheaper and can be produced in larger quantities.

The chip will be used in the 64-channel developer's platform Smell Inspector which can be integrated into IoT systems and smart home devices and is compatible with single-board computers such as Arduino and Raspberry Pi. Possible areas of application are quality assurance, food control, hazard prevention and the health sector.

Smell Inspector has already been successfully tested for the detection of gases like ammonia, nitrogen monoxide, phosphine, carbon dioxide, water vapour, ethanol, acetone, toluene, isopropanol, but also smells of chocolate, wine, wodka, coffee, tee, onion, orange, banana, meat or fish.

### **Crowdfunding: World's First Collaborative Database of Smells**

In order to gather experience from as many application scenarios as possible, SmartNanotubes wants to win over an international developer community beginning of 2021 with the help of a Kickstarter campaign. With help of the community, the researchers aim to build the world's first AI-based database of smells. A Kickstarter campaign to support it will launch February 2, 2021.

"Smart technologies such as Shazam, PI@ntNe and Google recognize songs, plants, faces, artwork and products. The recognition of smells, on the other hand, has so far been a thing of the future. We are looking forward to changing this," says Bezugly.

To build a functional and comprehensive database for smells, artificial intelligence needs to be "fed" with as much information as possible. The goal: at least 1,000 active users who participate with diverse projects from food to farming, from cosmetics to construction. Such a database of smells will foster research on smell recognition globally and boost the development of various novel applications and gadgets. Backers will receive a ready-to-use developer kit and access to AI software and smell database.

## Technical Data of Smell Inspector

- 64 chemiresistor-type Nanomaterial-based gas detectors
- High sensitivity to different gases and VOCs (<80 ppb for NH<sub>3</sub>, PH<sub>3</sub>, H<sub>2</sub>S and NO)
- Power consumption of the gas sensor chip: 1  $\mu$ W
- Read-out time: all 64 channels every 1.8 s
- Serial interface, Wi-Fi, Bluetooth
- Read-out format: ASCII
- Compatible with Arduino and Raspberry Pi

## Early bird registration:

<https://smell-inspector.com/>

## Location at CES:

Virtual Booth Saxony @ CES (Jan 12 - 13): [http://bit.ly/SNT\\_CES](http://bit.ly/SNT_CES)

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## About SmartNanotubes

The start-up company SmartNanotubes Technologies was founded in summer 2020 by Dr. Viktor Bezugly and Dr. Birte Sönnichsen together with two other colleagues in Freital near Dresden as a spin-off of the Life Science Incubator Saxony. With his team, Dr. Bezugly had previously spent several years on the development of a smell sensor chip based on nanomaterials. The highly sensitive, energy-efficient and easily scalable Smell iX16 is the world's first multi-channel gas detector chip for the mass market. The odor sensor can be used in a wide range of applications such as quality assurance, food production, hazard control and health care. The company also develops the AI-based software Smell Annotator, which is designed for both proprietary and open source applications. The seed financing of the start-up was secured by the Technologiegründerfonds Sachsen, the TU Dresden Aktiengesellschaft and a private business angel. Current pilot projects are currently running at the German electronics manufacturer Turck duotec GmbH, the American sensor manufacturer Centaur Analytics Inc. as well as at the Technical University of Dresden and the Technical University of Munich.

More information: <https://smell-inspector.com/>