

CES: German Startup Presents Digital Nose for the Mass Market

Dresden (Germany)/Las Vegas (US), 1/5/2022 - German deep-tech startup SmartNanotubes Technologies presents its electronic nose developer kit Smell Inspector at CES 2022. With its innovation, the company wants 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 multi-channel gas 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 is the key component of both the developer's platform Smell Inspector and the plugin module. The latter can be integrated into IoT systems and different smart home devices. Possible areas of application are quality assurance, food control, hazard prevention and the health care sector.

Smell iX16 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, vodka, coffee, tea, 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 won over an international developer community at the beginning of 2021 with the help of a Kickstarter campaign. With help of the community, the company aims to build the world's first AI-based database of smells.

"Smart technologies such as Shazam, Pl@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 receive a ready-to-use developer kit Smell Inspector and access to AI software Smell Annotator and smell database.

Technical Data of Smell Inspector

- Four nanomaterial-based Smell iX16 detectors
- High sensitivity to different gases and VOCs (<80 ppb for NH₃, PH₃, H₂S and NO)
- Power consumption of the gas sensor chip: 1 μW
- Read-out time: all channels every 1.8 s
- Serial interface, Bluetooth
- Read-out format: ASCII

Pre-Order:

<https://smart-nanotubes.com/preorder/>

Location at CES:

Eureka Park @ CES, Booth #61969 (Jan. 05 – 08)

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About SmartNanotubes

The startup company SmartNanotubes Technologies was founded in summer 2020 by Dr. Viktor Bezugly and Dr. Birte Sönnichsen together with two other colleagues in the Dresden region 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.

More information: <https://smart-nanotubes.com>