Digital nose: deep tech start-up SmartNanotubes plans to use world's firsts smell detector chip for mass market applications

Dresden, Germany, Sept. 08, 2022 - SmartNanotubes Technologies, a German start-up has developed the world's first highly energy-efficient multi-channel gas detector chip "Smell iX16" for the mass market. The company plans to use its technology in networked IoT systems and smart home devices. The chip is much more sensitive, smaller and energy efficient compared to any product on the market. In addition, Smell iX16 is significantly less expensive and can be manufactured in larger quantities. The chip is used in a plug-in module with 64 channels developed by SmartNanotubes, the "Smell Board iX16x4". Applications include leak detection and the protection against hazardous gases, intelligent fire prevention, network-assisted healthcare and indoor air quality monitoring. The novel technology enables tremendous scalability. "Our development has reached the stage where we can produce tens of thousands of sensors next year," says Viktor Bezugly, CEO & Co-Founder of SmartNanotubes Technologies.

Game changer in the gas sensor market

SmartNanotubes' of an electronic nose technology is similar to the receptors in the human nose in terms of the principle of smell detection. Also in the human nose the odor is defined by a reaction pattern of the various receptors. SmartNanotubes' carbon nanotube-based sensors stand out from other gas sensor arrays, they are highly sensitive, energy efficient, compact and cost-effective. SmartNanotubes Technologies is a game changer in the gas sensor market,its sensors can detect odors and complex gas mixtures, while conventional gas sensor technology focuses on single gases.

The world's first odor database

SmartNanotubes is buildung a database of smells that will enable machine smelling. The "Smell Inspector" developer kit offered by SmartNanotubes also includes the specially developed AI-based "Smell Annotator" software. "With Smell Inspector, we enable developers, researchers and tinkerers to submit their use cases to us in the form of measurement data that they feed into our database," says Dr. Birte Sönnichsen, COO & Co-Founder of SmartNanotubes Technologies. "We are very happy about the progress we have made so far and the many international customers who already purchased our developer kit. Together with the community, we are building the world's first database of smells and can't wait to establish smart odor sensing internationally in this way," Sönnichsen continued. The more data fed into the AI software, the better it will learn to identify smells of individual substances, even in different compositions.

About SmartNanotubes The start-up 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, Bezugly had previously spent several years on the development of a smell detector chip based on nanomaterials. The sensor elements contain finely tuned nanomaterials that make the technology highly sensitive, energy-efficient, compact and cost-effective. SmartNanotubes' smell detectors can detect single gases, smells and volatile organic

compounds (VOCs). Applications range from environmental and security applications to home and industrial safety, wearables and IoT lifestyle products. The multi-channel sensor module can be easily integrated into various devices. The company is also developing the AI-based Smell Annotator software, which provides customers with access to the company's proprietary database of smells. Series A and seed funding for the startup was secured by the internationally investing Cottonwood Technology Fund, German electronics manufacturer duotec, Mittelständische Beteiligungsgesellschaft Sachsen, Technologiegründerfonds Sachsen, TU Dresden Aktiengesellschaft, LSI Pre-Seed Fonds and a private business angel. For more information, please visit: http://www.smart-nanotubes.com