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## Superior gas detection assured when instruments have ‘ION inside’

**Visitors to Sensor + Test 2023 in Nürnberg, Germany (9 - 11<sup>th</sup> May) can see the world’s leading sensors for the measurement of Volatile Organic Compounds (VOCs) and Particulate Matter (PM) at the ION Science booth 512 in Hall 1.**

“The designers of gas detection instrumentation, systems and process control equipment will already know ION Science as a manufacturer of the market’s best PID sensors,” explains Peter Morris, Head of Sensors at ION Science Ltd. “However, they will be delighted to learn that the Next-PM high-performance Particulate Matter sensor, is now also available, and will feature prominently on our stand.”

“When customers integrate our sensors into their equipment, they know that having ‘ION inside’ enhances both their performance capability and reliability, which builds trust in their brands. We therefore look forward to welcoming all visitors, including developers, designers, engineers, technicians and product managers to speak with us at the show, so that we can explain the benefits of the unique patented technology behind the performance superiorities that ION sensors deliver.”

With global organisations looking to lower safety risks and improve their environmental performance, the demand for VOC monitoring technologies is growing. Typically, ION Science customers are developing portable, wearable and fixed measurement instrumentation solutions for applications such as environmental monitoring, industrial health and safety, air quality, facility/site monitoring and fugitive emissions. Photoionisation Detection (PID) is the recommended technology for VOC detection in these applications.

One of the unique features of ION’s MiniPIDs is a patent-protected design with a third electrode that overcomes humidity interference (that plagues competitors’ sensors), delivering a stable signal from 0 – 99% RH.

The sensitivity of PID sensors is extremely important in many applications; particularly where the sensors are deployed in the measurement of trace VOCs. Again, ION leads the field, offering MiniPIDs with ten times the sensitivity of other PID manufacturers.

“We encourage anyone with an interest in developing a monitoring solution for VOCs, to view our [gas response table](#)” explains Peter Morris. “This document includes the response factors for over 900+ VOCs, as well as a small number of inorganic gases such as hydrogen sulphide, so it’s really helpful in deciding which PID variant is most appropriate to the OEM application or need.”

The NextPM sensor was recently added to the ION Science portfolio following hugely successful field trials at South Coast AQMD in the USA. The NextPM sensors showed strong to very strong correlations for both PM<sub>1.0</sub> and PM<sub>2.5</sub> with reference instruments costing several hundred times the cost of the sensors. “These results were incredibly good for such a low-cost sensor,” explains Peter Morris, “the NextPM, therefore, fits well with our philosophy of offering the best sensors to the market.”

Thanks to its patented airflow control technology, Next-PM ensures years of maintenance-free measurements, even in polluted and humid atmospheres. These sensors are therefore ideal for inclusion in instruments and systems that monitor industrial processes or air quality; both indoors and outdoors.

Fine particulates are a particular health concern, and the requirement for monitoring equipment is growing rapidly alongside tightening regulations. In 2021, the WHO halved its yearly average guideline limit for PM<sub>2.5</sub> from 10 to 5 µg/m<sup>3</sup>. In the UK, under the Environment Act 2021, a maximum annual mean concentration of 10 µg/m<sup>3</sup> by 2040 has been set as the PM<sub>2.5</sub> target. The EU Commission has proposed a reduction in the PM<sub>2.5</sub> target to 10 µg/m<sup>3</sup> by 2030, and the US Environmental Protection Agency is currently considering recommendations from its independent particulate matter review panel to lower its target from 12 to between 8 and 10 µg/m<sup>3</sup>.

Sensor + Test visitors can see ION’s latest sensing technology and discuss their applications with the technical experts on the stand. They may also wish to take advantage of ION’s sensor development kit which helps reduce development time and cost.

<https://bit.ly/3ITQRo9>

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**Note:**

Pioneering Gas Sensing Technology

ION Science is one of the world's leading manufacturers of VOC gas sensors. The company's photoionisation detection (PID) sensor technology is trusted by major global gas detection equipment manufacturers for accurate detection of volatile organic compounds (VOCs). With an ever-growing sensing portfolio, ION Science now provides Development Boards and Kits, offering OEMs a simple, low-cost means of integrating MiniPID sensors into existing systems and applications.

As the world's largest manufacturer of PIDs, with the widest range, and with the only truly fail-safe PIDs, ION Science can claim to be the most sensible and obvious choice for OEMs. Tightening legislation and a growing global focus on worker safety, environmental emissions and air quality, have prompted demand for a new generation of measurement and monitoring systems. In response, ION Science now also offers multi-award-winning Disc Pumps for gas sampling, detection, monitoring and analysis.

For more information, visit <https://ionscience.com/en/sensors-and-components/>