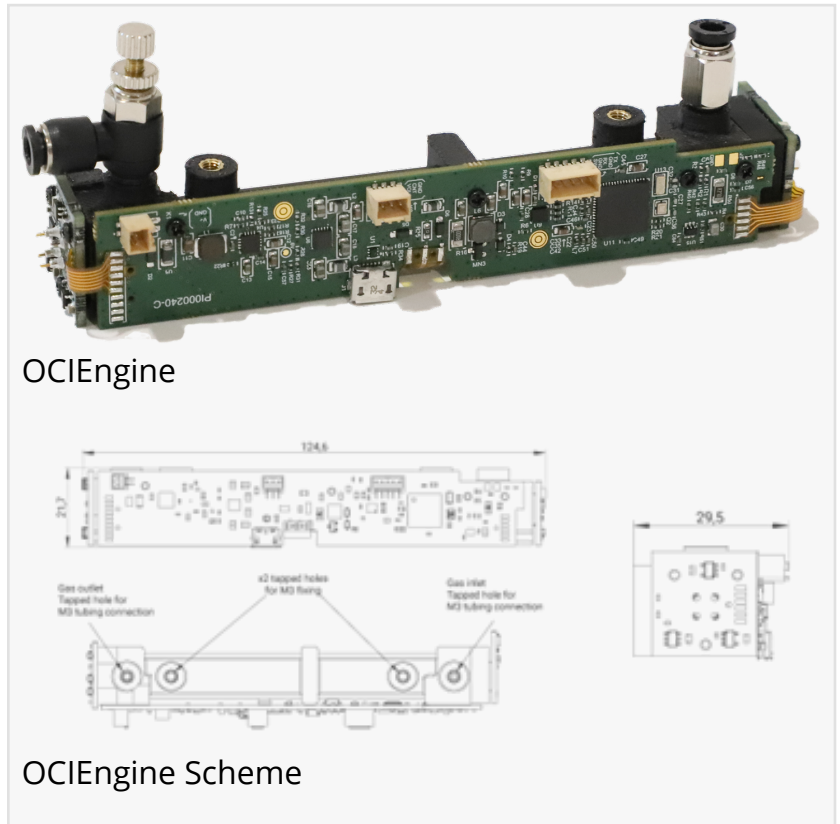


SPIE Photonics West 2023: Olythe releases new gas sensor measuring acetone level in exhaled air

AIX-EN-PROVENCE, FRANCE, January 26, 2023 /EINPresswire.com/ -- Olythe, an expert in the analysis of exhaled air, releases its new miniaturized and ultra-precise sensor which measures the concentration of acetone in exhaled air. Despite the technological evolution in many fields over the past 10 years, the medical diagnostic methods remain limited. Therefore, Olythe developed a patented technology that will allow major advances in the detection and treatment of certain diseases and metabolic disorders. Olythe provides manufacturers with this innovative sensor which, in addition to acetone, can measure ethanol and CO₂.



Acetone, an important volatile organic compound in the medical field

Acetone is a ketone body produced by the liver and eliminated through the respiratory tract and urine. Thus, detectable in the exhaled air, it can help in the diagnosis of certain pathologies. Indeed, too much acetone in the body can be the cause of a state of ketosis or diabetic ketoacidosis.

The state of ketosis, best known by the growing popularity of ketogenic diets, seeks to use body fat as an energy source. Although ketosis itself is not a marker of diabetes, a long-term state of ketosis can cause ketoacidosis, which is linked to diabetes or liver disease.

On the other hand, ketoacidosis indicates a level of acetone in the blood that is too high. This condition is often related to diabetes, caused by insulin deficiency that causes blood sugar levels

to rise. Thus, the precision of the OCIEngine sensor in the analysis of the acetone present in the exhaled air would help in the diagnosis of diabetes.

An innovative sensor for monitoring blood glucose

The studies have shown that the level of acetone in the exhaled air is correlated with the level of glucose in the blood. Today, blood glucose tests, carried out by blood sampling, are still for the most part intrusive, painful, and difficult to perform. Breath analysis would then allow simpler, non-invasive and painless monitoring of pathologies related to blood sugar imbalance.

According to Guillaume Nesa, CEO and Founder of Olythe: "Exhaled air is an immense source of biological markers related to a person's state of health. We know that volatile organic compounds are representative of certain inflammatory, cardiovascular, infectious diseases and certain types of cancer. The analysis of exhaled air would thus transform current sampling methods, and would facilitate diagnosis and medical follow-up, which is still too restrictive today."

OCIEngine, a unique technology for health monitoring

To measure the level of acetone in exhaled air, Olythe has developed, in France, OCIEngine. It is a unique sensor equipped with patented infrared spectroscopy (NDIR) technology. It consists of a measuring tank traversed by infrared radiation. When the exhaled air passes through this cell, the molecules of interest absorb some of the radiation, which reduces the intensity of the optical signal. The concentration of the gas can therefore be calculated according to the Beer-Lambert law of physics. The fluctuation of the infrared radiation emitted in contact with the molecules avoids any transformation or deterioration of the sensor and the elements which could alter its operation. This therefore ensures an unparalleled lifespan.

A new analysis for industrial players, manufacturers of medical equipment, etc.

The analysis of the acetone level in the exhaled air in a reliable and non-invasive way is now possible, like the analysis of ethanol already carried out by OCIEngine since 2018, integrated into OCIGO, electronic connected breathalyzer, and CO₂ analysis since November 2022. Smart and precise, OCIGO measures in real time the amount of alcohol in the exhaled air. Its proven effectiveness demonstrates the high potential of the sensor, which could be used in the analysis of other types of gas. In the future, OCIEngine aims to revolutionize other industries.

The show where innovations are being created

The largest annual conference and exhibition on optics and photonics, organized by SPIE, will be held from January 31st to February 2nd at the Moscone Center in San Francisco. It will bring together researchers, innovators, engineers, and business leaders from around the world for a dynamic and interesting week of networking and learning.

Photonics West will showcase the latest technologies and discoveries using optics and photonics, with four major application themes: BiOS, which highlights new research in biophotonics, biomedical optics and imaging; LASE, which focuses on the laser industry and its applications; OPTO, which covers optoelectronics, photonic materials and optical devices; and finally Quantum West, now in its second year, featuring technical talks, a quantum-specific plenary session, and presentations from industry leaders who focus on bringing quantum technologies to market. Overall, this year's Photonics West program features more than 4,500 technical presentations.

With more than 1,000 companies launching new products, doing live demonstrations, and exhibiting their latest technologies, Olythe will release its latest product for industrial players, medical equipment manufacturers, etc.

About Olythe

Based in Aix-en-Provence, France, Olythe is one of the world leaders in the analysis of exhaled breath by infrared spectroscopy thanks to its patented technology. Olythe designs, develops, and markets its OCIGO connected breathalyzer Made in France to meet the alcohol measurement needs of individuals and reusable for life. The company has also launched a complete solution for OCICorp professionals (transport and logistics, high-risk jobs, administrations and law enforcement, health actors). Olythe offers its products and services in Europe and the United States.

More information on <https://www.olythe.io/>

Meet Olythe at [SPIE Photonics West](#) - Booth 959E.

Press contacts Licence K for Olythe

Jean-François Kitten, +33 (0)9 72 33 47 63- jf@licencek.com

Constance Leglise, +33(0)6 65 20 00 56 - c.leglise@licencek.com

Anna Azarova, +33(0)1 45 03 21 77 (EN) – a.azarova@licencek.com

Jean-François Kitten

LICENCE K

+33 6 62 65 86 84

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/613463775>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

