

Press release
For direct publication



Welcome Q.ANT as our esteemed sponsor! Q.ANT Particle Sensors revolutionize algae cultivation through real-time monitoring of photobioreactors! With Q.ANT on board, we are poised for an even more impactful and successful AlgaEurope 2023!

When cultivating algae, population vitality is crucial. However, existing monitoring procedures of bioreactors typically only track the optical density of algae cultures, which provides limited information about the viability of individual algae cells or contaminations in the bioreactor.

Q.ANT Particle Sensors enable the real-time detection and analysis of size, velocity and position of particle sizes ranging from 2 to 700 microns in liquids or gases such as powders, dispersions or aerosols. When used in a bioreactor, the sensors allow the detection and analysis of single algae cells, enabling the instant evaluation of growth phases and key cellular attributes like size, cell debris, agglomeration factor or contamination. This analysis provides real-time insights into the algae culture, enhancing the understanding of their state. Next on the product roadmap is classifying the shape of the measured particles, which could enable the discrimination of different microorganisms, for example to examine bacterial contamination or to serve as an indicator for cell vitality.

Operation, as well as real-time display of analysis results, are enabled via a browser-based, easy-to-use interface. The WebGUI visualizes detailed distributions of size, velocity and count of the particles and statistical analysis values of the measurements in real time, which are stored in detailed reports. In addition, the WebGUI is characterized by its extensive settings of the measurement parameters, which make the measurements specifically adaptable to your application.

Easy integration in the lab environment and a simple web-based software interface make it a user-friendly experience. For laboratory environments, repeatable analyses are possible and data can be exported, stored and securely transferred via customizable APIs to laboratory systems or the cloud. In the future, the online process integration of the sensor will enable real-time process control in bioreactors to increase their productivity as well as the quality of the processed media.

About Q.ANT

Q.ANT is a high-tech startup following the vision of providing customers new insights based on photonic data generation and data processing supported by quantum technology. To realize this vision, Q.ANT develops quantum sensors and quantum computing chips. Focusing on its four product lines of Photonic Computing, Particle Metrology, Atomic Gyroscopes and Magnetic Sensing, the company engages with a broad array of industries and applications ranging all the way from medical technology and autonomous vehicles to aerospace, machinery, and the process industry. Q.ANT employs more than 90 people at its site in Stuttgart/Southern Germany.

Meet Q.ANT at AlgaEurope 2023 on 12-15 December 2023 in Prague and experience a live demo of the sensor measuring algae cells.

More info at www.qant.com/particle-sensor

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