

## **Optiqua-NTU partnership to develop next-generation sensor technology**

To enhance its contaminant-detection capability, Optiqua Technologies Pte Ltd is collaborating with Nanyang Technological University (NTU) to tap on its expertise in biomolecular sciences and sensor technology.

Optiqua, a subsidiary of Dutch optical sensor company Optisense, provides the international water industry with innovative products that offer high quality monitoring applications for the detection of contaminants in water. The sensor technology company aims to develop in Singapore the next-generation version of its optical sensor that can be used to detect specific target substances in water, and for medical diagnostics applications.

This is where NTU's Centre for Biomimetic Sensor Science (CBSS), with its research and development expertise in sensor science, comes into the picture. The centre, which specialises in biosensing technology, develops biosensors that can detect molecules in small amounts of blood, or pick out traces of toxins and harmful agents in water. This has potential applications in biomedical research, food production and homeland security.

The collaborative research will be supervised and coordinated by Prof Bo Liedberg and Asst Prof Zhang Hua, who will be the principal investigator and co-investigator respectively.

Prof Liedberg, a visiting professor at NTU's School of Materials Science and Engineering, has produced cutting-edge work at the interface between nanomaterials and biomolecular science, and its application as optical biosensors. His research is primarily devoted to soft materials science, including surface chemistry, self-assembly, supramolecular chemistry and biomimetics. A significant portion of his work is devoted to applications in biology and medicine, for example in biosensing and molecular recognition, and the development of novel transduction principles for biochemical/biological sensing and biomedical diagnostics.

The CBSS director, Prof Liedberg said. "One of the centre missions is to initiate collaborative research projects with bioanalytical companies in Singapore. The present project with Optiqua offers excellent opportunities to test our achievements in bioassaying and biomolecular sciences on a very attractive optical sensor platform."

To this end, Optiqua is setting up a dedicated lab and research team at the CBSS which will be fully up and running in the first quarter of 2011.

On the collaboration with NTU, Optiqua's Managing Director, Mr Melchior van Wijlen, said: "The international water industry has a strong desire for innovative monitoring approaches that can overcome the shortcomings of traditional monitoring solutions. This collaboration with NTU will accelerate our R&D in biochemistry and help us to develop even more innovative real-time monitoring solutions for the industry."

"Once the next-generation biochemistry technology has been tested and selected, we will also use our optical sensor platform to develop a line of commercial products for medical Point of Care applications. We believe that Singapore provides a unique scientific and business environment that will help us to successfully develop and launch these applications on a global scale" he added.

The president of NTU, Prof. Bertil Andersson said. "This project at the interface between Bioanalytics, Biomedicine and Materials Engineering is very strategic for NTU. It has great potential to lead to commercial and economical benefits for Singapore."

**About Optiqua ([www.optiqua.com](http://www.optiqua.com))**

Optiqua Technologies provides next generation optical biosensor technology for online early warning systems and the detection of organic and microbial contaminants in water.

The patented 'Lab-on-Chip' technology is recognized by a range of reputable international industry partners and guarantees highly sensitive real time detection, available in multiple sensor applications.

The company is based in Singapore at PUB's WaterHub, and recipient of the Frost & Sullivan Asia Pacific New Product Innovation Award 2009 for its innovative monitoring technology. Optiqua is a subsidiary of Dutch optical sensor company Optisense ([www.optisense.nl](http://www.optisense.nl)).

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