

Press release 2019-12-04

Insplorion, Chalmers and PowerCell develop the world's fastest hydrogen sensor with funding from the Swedish Energy Agency

The Swedish Energy Agency awards the project "Nano-Plasmonic ultra-fast H₂ sensor for a safe hydrogen economy" MSEK 3.8. Within the project, a hydrogen sensor will be developed that will enable faster conversion to hydrogen as an alternative to fossil energy by increasing safety and optimizing the operation of fuel cells. In the project, the hydrogen sensor chip from Chalmers will be integrated with Insplorion's own developed sensor platform and adapted to the requirements and needs of PowerCell, global leader within fuel cell technology. The project will run for 24 months with expected start in January 2020.

The project is based on a technical breakthrough recently published in the prestigious journal Nature Materials by co-applicant Prof. Christoph Langhammer's research group at Chalmers University of Technology. The aim of the project is to demonstrate how these sensors can be used in two different but equally important applications, which place different demands on the sensor:

- to improve the understanding and thus the efficiency of fuel cells in the development stage and long term be able to optimize operation.
- to operate within safety around various hydrogen gas systems, such as detection of leaks during transport and storage of hydrogen, as well as when operating fuel cells.

"We need access to sensors that combine short response time with high measurement accuracy, compact format and at the right cost. Sensors based on Insplorion's technology could meet all the requirements and thus also contribute to increased efficiency and reliability of our fuel cell systems", comments Lisa Kylhammar, Manager Stack Development at PowerCell.

The function of the sensor will be demonstrated in a real environment. What most distinguishes this sensor from existing ones on the market is its rapid response time. A fast response time is of great importance both for sensors that will work for safety applications and for optimizing fuel cells.

"The hydrogen sensor has been an opportunity within Insplorion since the company was founded. It's great to see that the research that has been ongoing within Christoph's group now has had great breakthroughs which can coincide with both our gas platform development and the maturing market for hydrogen", says Patrik Dahlqvist, CEO of Insplorion.

Questions are answered by:

Patrik Dahlqvist, CEO Insplorion AB, +46 723 62 32 61 or patrik.dahlqvist@insplorion.com

This information is insider information that Insplorion AB (publ) is obliged to make public pursuant to the EU Market Abuse Regulation.
The information was published on December 4, 2019.