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The Swedish Energy Agency grants two million SEK to Insplorion's battery sensor development

The Swedish Energy Agency has granted Insplorion two million to further develop the battery sensor. Two research groups at Chalmers University of Technology will together with CEVT develop "A multiplex plasmonic battery sensor for better battery control" as the project is called. Professors Patrik Johansson and Christoph Langhammer lead the two groups and the project will be ongoing for approximately 1.5 years.

The purpose of the project is to improve Insplorion's battery cell-internal measurement technology NanoPlasmonic Sensing (NPS). The goal is to enable real-time measurements of several parameters, so called multiplexing, of battery cell status during operation. Same sensor will in addition to measuring chemical changes also measure the temperature inside the battery cell during operation. Temperature is today measured outside the battery in the battery pack, but especially during larger loads, during fast charging and acceleration is better measurement needed to enable optimised performance. In addition will new chemistries such as sodium ion (Na-ion) and lithium-sulfur (Li / S) be investigated. CEVT, the Geely Group's development company specifies the demands for the automotive industry and is part of the industrial expert group, including battery manufacturers SAFT, AGM Batteries and the battery control company Dukosi.

"We already have produced some encouraging results using Insplorion's sensors that has attracted attention in the battery community. We are now excited to, given this recognition and support, be able to extend this further towards some of the more promising next generation battery chemistries, such as Na-ion and Li-sulfur batteries", says Patrik Johansson, Professor of Condensed Matter Physics at Chalmers University of Technology.

The Energy Agency estimates that NPS has the potential to be used as a new method of battery development where a successful project can accelerate the development of battery technology and lead to more efficient electrified vehicles.

"This project ranges wide and is exciting in several ways. We acquire a better position for future needs with upcoming battery chemistries. We also strengthen our offer with today's sensor, where combined temperature measurement inside the battery cell is requested by industry in combination to today's chemical measurement. That we also tie commercial actors, such as CEVT and SAFT, will accelerate commercialization in the short term", commented Patrik Dahlqvist, CEO of Insplorion.

Questions are answered by
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