



## Ultrasensitive sensors for the detection of Lithium Ion Batteries fails

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Lithium-ion batteries (LIBs) represent the largest share of the electrical battery storage of our modern society and are considered to be a valid technology during the next twenty years for plug-in hybrid applications and electric vehicles. One issue in conversion of chemical into electrical energy is that damages such as overcharging lead to fatal composition changes and leaks outside the battery. To respond to the massive societal increasing needs battery safety issues have to evolve to overcome these limitations.

NanoTRAACES aims to develop a novel combined microchip integrable into LIBs for the detection of electrolyte failures. A new concept of sensors based on real-time leakage detection with high sensitivity of chemical changes has been fabricated [1-3]. A rapid detection of battery electrolyte damage is on the way to be achieved to prevent unexpected exothermal reactions. The future improvement of the sensor will make it more versatile to implement the concept of online chemical surveillance onto new generations of batteries.

### References:

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