



Ultrasensitive sensors for the detection of Lithium Ion Batteries fails

Karine Mougin^{1,*}, Delphine Faye², Sigitas Tamulevicius³, Cesar Pascual Garcia⁴, Hyeong-Jin Kim⁵, Yannick Borthomieu⁶, KyungJoon Kim⁷

¹ Institut de Science des Matériaux de Mulhouse, 15 rue Jean Stracky 68057 Mulhouse, France

² Centre National d'Études Spatiales (CNES), 18 Av. Edouard Belin, 31400 Toulouse

³ Institute of Materials Science, Kaunas University of Technology, Baršausko st. 59, Kaunas LT51423, Lithuania

⁴ Luxembourg Institute of Science and Technology, Material Research & Technology Department (MRT), 41 Rue du Brill L-4422 Belvaux Luxembourg

⁵ Institute of Integrated Technology, Gwangju Institute of Science and Technology (GIST), 123 Cheomdan-gwagiro, Buk-gu, Gwangju 61005, Korea

⁶ Saft, rue Georges Leclanché- BP1039, 86060 POITIERS Cedex 9, France

⁷ U&S Energy, 97-34, 2gongdan 5-ro, Jiksan-eup, Seobuk-gu, Cheonan-si, Chungcheongnam-do 31040, Korea

* presenting author e-mail: karrine.mougin@uha.fr

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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