



The only European research project on Lithium-Sulfur batteries reaching its integration in PHEV and validated on circuit.



## ALISE KEY NUMBERS

**TOTAL BUDGET: 6 899 233 €**

→ Project start date: 01 June 2015

→ Project end date: 31 May 2019

→ 15 Partners

- 6 Industrials
- 4 SME
- 3 Research Centers
- 2 Academics
- 5 European Countries



## CONTACT DETAILS

**LEITAT Technological Center**  
**Carrer de la Innovació, 2**  
**08225 Terrassa (Barcelona-Spain)**  
 → Phone: +34 93 788 23 00  
 → E-mail: [vjamier@leitat.org](mailto:vjamier@leitat.org)



Crédit photo : Fotolia - zozulinsky



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 666157.

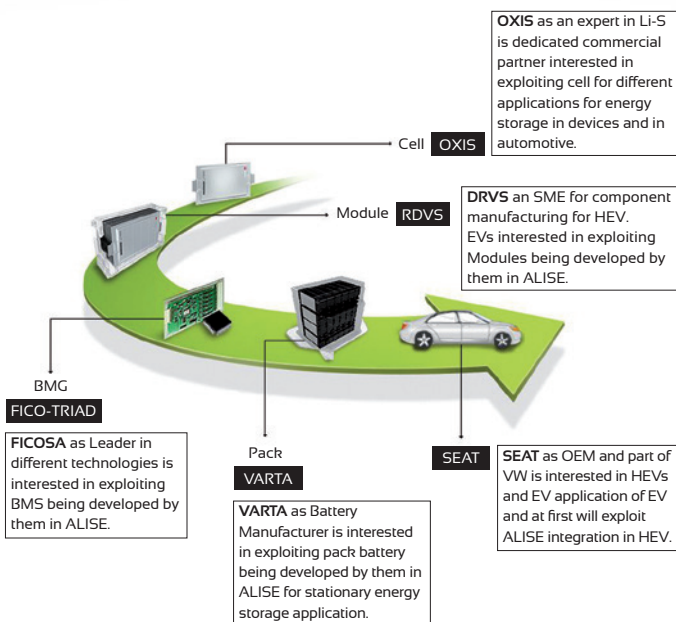
[www.aliseproject.com](http://www.aliseproject.com)

# ABOUT THE PROJECT

ALISE is a pan European collaboration focused on the development and commercial scale-up of new materials and on the understanding of the electro-chemical processes involved in the lithium sulphur technology. It aims to create impact by developing innovative battery technology capable of fulfilling the expected and characteristics from European Automotive Industry needs, European Materials Roadmap, Social factors from vehicle consumers and future competitiveness trends and European Companies positioning.

## DELIVERING INNOVATION TO THE MARKET

ALISE Consortium is dedicated to market transfer of different devices/ systems/ components being developed in ALISE project along the value chain due to the commercial interest of SME/Industrial Partners.



## > OBJECTIVE

The project is focused to achieve 500 Wh/Kg stable LiS cell. The project involves dedicated durability, testing and LCA activities that will make sure the safety and adequate cyclability of battery being developed and available at competitive cost. Initial materials research will be scaled up during the project so that pilot scale quantities of the new materials will be introduced into the novel cell designs thus giving the following advancements over the current state of the art.

## > APPROACH

The project approach will bring real breakthrough regarding new components, cell integration and architecture associated. New materials will be developed and optimized regarding anode, cathode, electrolyte and separator.

Complete panels of specific tools and modelling associated will be developed from the unit cell to the batteries pack.

## > FOCUS

Activities are focused on the elaboration of new materials and processes at TRL4. Demonstration of the lithium Sulphur technology will be until batteries pack levels with validation onboard. Validation of prototype (17 kWh) with its driving range corresponding (100 km) will be done on circuit. ALISE is more than a linear bottom-up approach from materials to cell.

ALISE shows strong resources to achieve a stable unit cell, with a supplementary top-down approach from the final application to the optimization of the unit cell.

## > LITHIUM-SULFUR BATTERIES

There is no one single perfect technology for all applications, but one technology adapted to one specific use. Lithium sulphur technology has been selected for ALISE project from the range of mechanical, chemical, electrical and electrochemical technologies available. This emerging technology presents similar abilities of charge / discharge C-rates in respect with onboard technology, with a potential to double specific energy.

### MEET WITH ALISE PARTNERS AT:

→ Batteries 2015, Nice, France / Oct 7<sup>th</sup> – Oct 9<sup>th</sup>, 2015  
[www.batteriesevent.com](http://www.batteriesevent.com)

→ 4th Workshop "Lithium-Sulfur-Batteries",  
Dresden, Germany / November 11<sup>th</sup>, 2015  
[www.zukunftenergie-dresden.de/en](http://www.zukunftenergie-dresden.de/en)

→ LISM 3, London, UK / February 12<sup>th</sup>, 2016  
[www.lism3.org](http://www.lism3.org)

