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New concepts of metal-air battery for automotive application based on advanced nanomaterials

FP7 Grant Agreement : NMP4-SL-2012-314159

Start date: 1/10/2012 / **Duration:** 36 months

Total costs: 3,1 M€ / **EC contribution:** 2,1 M€

Coordinator: TECNALIA
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Call identifier: FP7-2012-GC-MATERIALS

Activity code: GC.NMP.2012-1 Innovative automotive electrochemical storage applications based on nanotechnology

PROJECT OBJECTIVE:

To develop a new concept of battery based on the metal/air technology that overcomes the energy density limitation of the Li-ion battery used at present for electrical vehicles

FOCUS LINES:

- Metal-air battery technology
- Novel materials (nanomaterials) to increase the performance of the cell electrodes
- Testing of new metal-air cell prototypes for validation of performance and durability

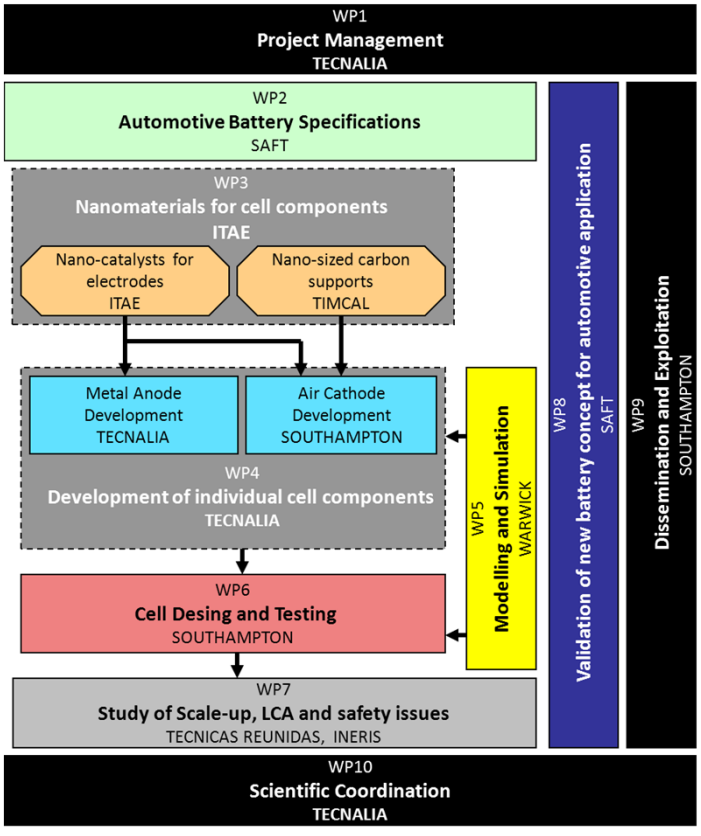
RESEARCH TOPICS AND RESULTS:

- Development of electrodes based on nanomaterials with improved specific surface area and controlled microporous structure
- Synthesis of new effective bifunctional catalysts for the air electrode.
- Optimisation of cell design for optimum performance and durability
- Assessment of the safety and environmental impact of the metal-air battery cell.
- Validation of cell behaviour under working conditions provided by the automotive industry

PARTNERSHIP:

PARTNERS	COUNTRY	Organisation type
TECNALIA	Spain	RTD
University of Southampton	UK	HES
ITAE / CNR	Italy	RTD
The University of Warwick	UK	HES
INERIS	France	RTD
Técnicas Reunidas	Spain	IND
TIMCAL	Switzerland	IND
SAFT Baterías	Spain	IND

PROJECT WORK STRUCTURE:



Joint EC / European Green Cars Initiative Workshop 2013
EV Batteries: Moving from Research Towards Innovation
10 April 2013, Foundation Universitaire, Brussels