



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project COBRA

COatings for BipolaR pLates

Several automotive OEMs have announced plans for the commercialization of fuel cell vehicles from 2014/15. While this is a clear signal for the readiness of the automotive market, durability, efficiency, power density and cost of the fuel cell stack need further advancements and in some cases substantial improvement in years to come. Industrial fuel cell development in Europe lacks both state-of-the-art stack components and competitive stack suppliers for automotive application. Only a few European component suppliers can deliver mature state-of-the-art stack components such as bipolar plates with the specifications requested by the AIP of the FCH-JU. The COBRA proposal aims to develop best-of-its-class bipolar plates for automotive stacks with superior corrosion resistance and durability while meeting commercial target cost. The project has a multidisciplinary character which implies joint efforts of specialists from various areas: chemistry, physics, material science, fuel cell engineering. Thus the COBRA consortium combines the collective expertise of bipolar plate and coating suppliers, system integrators and research institutes and thus removes critical disconnects between stakeholders. The scientific objectives of this project are elaboration and characterization of low-cost new functional coated bipolar plates highly resistant to corrosion with low contact resistance. The project will contribute in defining new coatings combining passivity and conductive properties by i) material selection, ii) screening of the coating elaboration process, iii) performance evaluation in stack configuration in real operating conditions, iv) techno-economical evaluation for large scale industrial production. Presence of key industrial players in the project and strict orientation towards industrial requirements shall facilitate commercial utilization of the project outcomes. The project is of strategic importance for European competitiveness.

Project Information

Type of project : Research

Timing : 01/04/2014 > 31/12/2017

Project website: <http://www.cobra-fuelcell.eu/>

Project Budget : 3.809.234 €

Funding

European Union through FCH JU: Grant agreement 621193 - [CORDIS link](#)

Project partners

Coordinator :

[CEA - Commissariat à l'énergie atomique et aux énergies alternatives](#)

Partners :

[Symbio](#)

[COBRA](#)

BORIT NV

IMPACT COATINGS AB

INSTITUT NATIONAL DES SCIENCES APPLIQUEES DE LYON

[Sub project\(s\)](#)

Sub project 1

Country: France

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Sub project categories

Research

Project Id: 933

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