



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project SCOTAS-SOFC

Sulphur, Carbon, and re-Oxidation Tolerant Anodes and Anode Supports for Solid Oxide Fuel Cells

The project will demonstrate a new full ceramic SOFC cell with superior robustness as regards to sulphur tolerance, carbon deposition (coking) and re-oxidation (redox resistance). Such a cell mitigates three major failure mechanisms which today have to be addressed at the system level. Having a more robust cell will thus enable the system to be simplified, something of particular importance for small systems, e.g. for combined heat and power (CHP). The new ceramic based cell will be produced by integrating a new, very promising class of materials, strontium titanates, into existing, proven SOFC cell designs. Cost effective and up-scalable processes will be developed for the fabrication of supports and cells. In an iterative process the cell performance at defined tolerance levels will subsequently be improved by adjustments of the fabrication on full cell level according to identified failure mechanisms. Cells with matching performance but improved sulphur, coling and re-oxidation tolerance compared to state-of-the-art Ni-cermet materials will finally be demonstrated in a real system environment.

Project Information

Type of project : Research

Timing : 01/10/2010 > 31/12/2013

Project Budget : 4.340.487 €

Funding

European Union through FCH JU: [Grant agreement 256730 - CORDIS link](#)

Project partners

Coordinator :

[DVGW - German Technical and Scientific Association for Gas and Water](#)

Partners :

[JÜLICH - Forschungszentrum Jülich GmbH](#)

HEXISAG

TOPSOE FUEL CELL A/S

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Sub project(s)

Sub project 1

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Sub project categories

Research

Project Id: 1083

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