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

Fact Sheet

Project Information

SCOTAS-SOFC

Grant agreement ID: 256730

[Project website](#) 

Project closed

Start date

1 October 2010

End date

31 December 2013

Funded under

Specific Programme "Cooperation": Joint Technology Initiatives

Total cost

€ 4 340 487,00

EU contribution

€ 1 701 770,00

Coordinated by

DANMARKS TEKNISKE
UNIVERSITET



Denmark

Objective

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.

Fields of science (EuroSciVoc)

[natural sciences](#) > [chemical sciences](#) > [inorganic chemistry](#) > **[alkaline earth metals](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electrical engineering](#) > [power engineering](#) > [electric power generation](#) > **[combined heat and power](#)**

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > **[fuel cells](#)**



Programme(s)

[FP7-JTI - Specific Programme "Cooperation": Joint Technology Initiatives](#)

Topic(s)

[SP1-JTI-FCH.2009.3.2 - Materials development for cells, stacks and balance of plant \(BoP\)](#)

Call for proposal

FCH-JU-2009-1

[See other projects for this call](#)

Funding Scheme

[JTI-CP-FCH - Joint Technology Initiatives - Collaborative Project \(FCH\)](#)

Coordinator



DANMARKS TEKNISKE UNIVERSITET

EU contribution

€ 634 364,00

Total cost

No data

Address

ANKER ENGELUNDS VEJ 101

2800 Kongens Lyngby

 Denmark 

Region

Danmark > Hovedstaden > Københavns omegn

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (4)



FORSCHUNGSZENTRUM JULICH GMBH

 Germany

EU contribution

€ 428 943,00

Address

WILHELM JOHNEN STRASSE

52428 Julich 

Region

Nordrhein-Westfalen > Köln > Düren

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



HEXIS AG

 Switzerland

EU contribution

€ 152 160,00

Address

ZUM PARK 5

8404 WINTERTHUR 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



TOPSOE FUEL CELL A/S

 Denmark

EU contribution

€ 173 724,00

Address

Nymoellevvej 55

2800 LYNGBY 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS

United Kingdom

EU contribution

€ 312 579,00

Address

NORTH STREET 66 COLLEGE GATE
KY16 9AJ St Andrews

Region

Scotland > Eastern Scotland > Clackmannanshire and Fife

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

No data

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Permalink: <https://cordis.europa.eu/project/id/256730>

European Union, 2025

