

UPCOMING EVENTS

Summer school on SOFC-Technology
6th-10th September 2004

Venue: Patras, Greece

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Real SOFC

The aim of the Integrated Project Real-SOFC is to solve the persisting generic problems of ageing with planar Solid Oxide Fuel Cells (SOFC) in a concerted action of the European fuel cell industry and research institutions. This includes gaining full understanding of degradation processes, finding solutions to reduce ageing and producing improved materials that will then be tested in stacks. In this process further consideration will be given to the design of cost effective materials, low cost components and optimised manufacturing processes.

In close co-operation between industry and research institutions the following steps are to be accomplished:

- improved understanding of ageing in planar SOFC stacks considering all modes of operation, including long-term testing over 10.000 hrs., thermal cycling up to 100 cycles, and the influences of fuel composition; these results will flow into
- adaptation of materials and protective coatings in order to reduce ageing to well below 0,5%/1000 hrs., the modified materials then are used in

- manufacturing of improved components under commercial conditions and subsequent characterisation in long-term and cycling tests – re-referring to step 1.

Following the state-of-the-art first testing campaign at the start of the project two further ‘feedback loops’ are planned for a second and third generation development of cells and stacks.

Besides the materials development the project addresses the topics of

- Life Cycle Analysis as an essential tool for assessing the environmental impact and recycling of the materials used,
- industrial standardisation as a means of lowering costs and improving industry competitiveness, and
- training and dissemination as a tool of human resource management and a contribution towards gender equality.

Though not building on a comparable financial basis, the project strives at establishing structures similar to the U.S. American SECA programme that is targeted at decisive cost reductions in SOFC systems in a concerted action of industry and research institutions under a funding scheme of the DoE.

The project, supported by the European Commission through FP 6, started on 1 February 2004 and will terminate on 31 January 2008.

ACTIVITIES

Work Package 1 – Understanding of aging of SOFC for industrial applications (*Coordination: ECN*)

Work Package 2 – Improved and new materials, components, cells and concepts for systems with increased durability and performance (*Coordination: FZJ*)

Work Package 3 – Manufacturing of cells and stacks (*Coordination: HTc*)

Work Package 4 – Standardisation of SOFCs and test methods (*Coordination: VTT*)

Work Package 5 – Environmental aspects of SOFC operation (*Coordination: EdF*)

Work Package 6 – Training and dissemination (*Coordination: EMPA*)

