

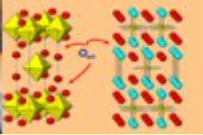
Introduction

European Working Group on SOFC & First Workshop Meeting

Sofia, 2008-11-26

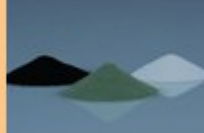
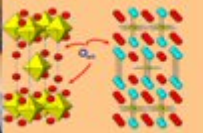
Bert Rietveld

Energy research Centre of the Netherlands (ECN)

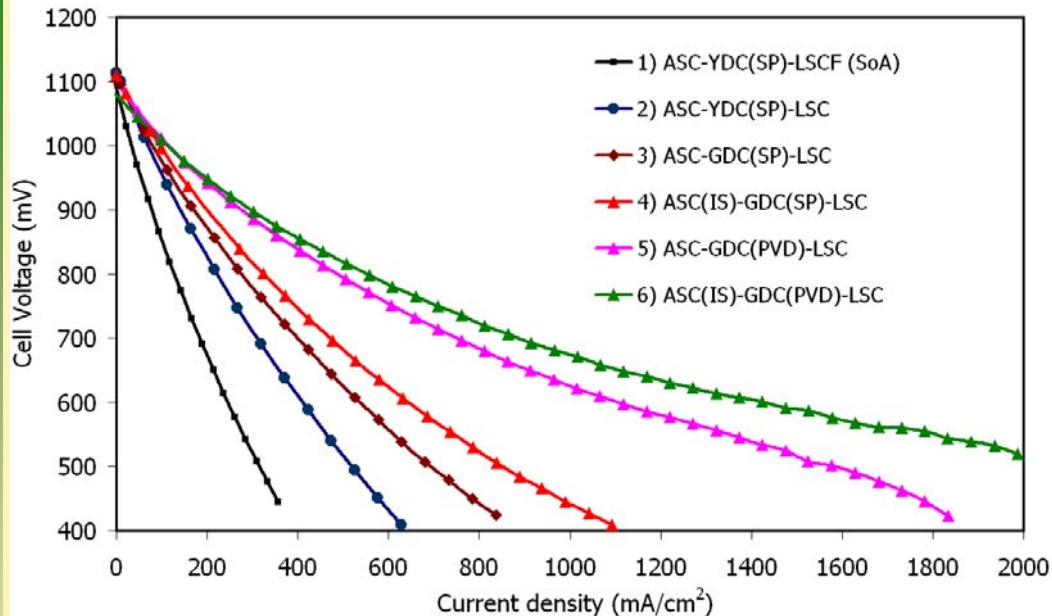


SOFC600 Project Objectives

- Specification of stack components for operation at 600°C aiming for endurance and cost
 - Anodes, cathodes and electrolytes
 - Interconnect materials
 - Contact and barrier/protective coatings
 - Seals
- Components are demonstrated by integration in the current cell and stack technology of the developers
- Non technical objectives (WP6)
 - Dissemination and communication project achievements
 - Project website
 - Workshops (internal and external)
 - Initiate and contribute to European HFP-SOFCnet
- Duration 1st March 2006 – 28th February



Main Achievement: Cell Performance at 600C



Cell type	ASR $\Omega \cdot \text{cm}^2$	$j @ 0.7 \text{ V}$ A/cm^2
1) ASC-YDC(SP)-LSCF (SoA)	1.73	0.19
2) ASC-YDC(SP)-LSC	1.08	0.31
3) ASC-GDC(SP)-LSC	0.83	0.41
4) ASC(IS)-GDC(SP)-LSC	0.71	0.48
5) ASC-GDC(PVD)/LSC	0.33	0.76
6) ASC(IS)-GDC(PVD)-LSC	0.25	0.92



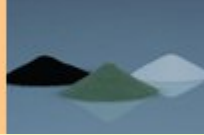
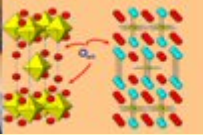
Motivation by the EC

European Working Group on SOFC

- Requested by the European Commission
- Generate a common European SOFC voice
 - What does the SOFC community wants/needs
 - Wider, non-exclusive stakeholders group than the JTI
- HFP-SOFCnet proposal was rejected

EWGS Workshops

- SOFCnet like workshops
- For synthesising and formulating the 'common voice'
- Identification of critical RTD issues
- Second opinion compared to the selected RTD issues of JTI/JU work plan
- Additional SOFC programme by the EC (basic, long-term research)

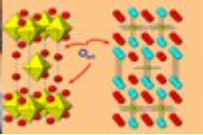


Activities & Benefits of the Grouping

- Organisation of own workshops; coordination of project workshops
- Coordination of summer schools
- Facilitate student exchange
- Job applications and recruitment

- Common voice to EC and the FCH-JU
- Prevent fragmentation, achieve critical mass
- Inventory and definition of common interests
- Inform universities and R&D organisation on industrial needs
- Platform for getting to know each other (workshops, database?)
- Future cooperation
- Exchange of results and ideas
- Showcase of achievements
- Dissemination / evaluation for standards, test procedures
- Introduction for newcomers in the field: prevents inventing the wheel again

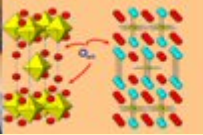
Participation to EWGS and Workshops strictly non-exclusive



Plan for further developing the EWGS

Definition of provisional structure, chapters and task leaders

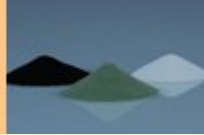
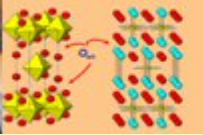
1. Basic Research (materials) – **Peter Holtappels** (EMPA)
 2. Applied Research (components) – Massimo Bertholdi (SOFCPower)
 3. Small-scale stationary – Josef Sfeir (Hexis)
 4. Large-scale stationary – **Rolf Rosenberg** (VTT)
 5. Auxiliary Power Supplies – **Robert Steinberger** (FZJ)
 6. Balance of Plant Components – **Matti Noponen** (Wärtsilä)
 7. Fuel Processing – John Bøgild Hansen (HTAS – TOFC)
 8. Regulations, codes and standards - Eleni Konstantinidou (VDI)
 9. New EU countries – Georgios Tsotridis (JRC)
- General Coordination – **Bert Rietveld** (ECN)



Plan for further developing the EWGS

Ten 'representatives'

1. Organise the first workshop together with UCTM team
 - Vladimir Kozhukharov, Maria Machkova, Yana Tsvetkova
2. Report workshop results/summary to the EC and HFC-JU
3. Propose definite structure, chapters, activities, task leaders and general coordinator
 - Other volunteers are welcome
4. Propose embedding
 - SOFC600 till February 2009 (limited funding available)
 - Independent – no funding
 - N.ERGHY (Research Grouping of the FCH-JU) – possibility for funding
 - Probably only funding of task leaders, not the members (own interest)
5. Meeting of the 10+ in Jan/Feb 2009
6. Feedback to the registered members for comments and approval

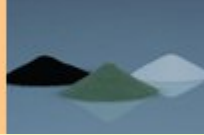
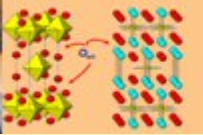


Till here on the EWGS

- Questions & Comments

- Any suggestions or objections
 - The ten provisional representatives
 - The further procedure towards definition of the EWGS

- Other volunteers to participate in the process



Introduction Workshop

Objective

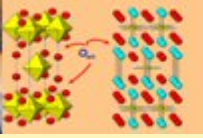
- What RTD is required for furthering SOFC technology towards maturity
 - Collecting of stakeholders visions
 - Synthesise the common interest
- Not presenting what organisations are doing but what has to be done in future

Reporting results

- Summary and conclusions
- What's missing in MAIP of the FCH-JU
- To European Commission and FCH-JU

Dissemination

- Presentations and result reporting
- Worldwide public
- On SOFC600 website or EWGS website



Thank you for your attention

&

Wish you all a fruitful workshop