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Organized by the
European Fuel Cell Forum
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FINAL ANNOUNCEMENT

16th conference series of the European Fuel Cell Forum in Lucerne

10th EUROPEAN SOFC FORUM 2012

26 – 29 June 2012

Kultur- und Kongresszentrum Luzern – KKL Lucerne / Switzerland

26 June 2012
FUEL CELL TUTORIAL
by Dr. Günther G. Scherer, PSI Villigen
Dr. Jan Van Herle, EPF Lausanne



International Solid Oxide Fuel Cell and
Electrolyser Conference with Exhibition



REGISTER soon at www.efcf.com

Convenient hotel rooms are being held until 30 April 2012

Schedule of Events

Motto 2012:	New perspectives opened by Solid Oxide technologies: International Programs, Research and Realizations, Market Entry.	
Tuesday, 26 June 2012	10:00 – 16:00	Exhibition set-up
	10:00 – 16:00	Tutorial by Dr. Gunther G. Scherer & Dr. Jan Van Herle
	16:00 – 18:00	Poster pin-up
	16:00	Official opening of the exhibition
	16:00 – 18:00	Registration (continued on following days)
	18:00 – 19:00	Welcome gathering on terrace above registration area
	from 19:00	Thank-you Dinner (according to special invitation) and Networking meetings (in individual groups)
Wednesday, 27 June 2012	08:00 – 09:00	Speakers Breakfast (World Café at ground floor KKL)
	09:00 – 18:00	Conference sessions 1 – 5 including keynotes on international overview from Europe, China, Japan, Korea and USA, poster presentation by authors, networking and exhibition
	09:00 – 18:00	Access to poster area
	12:30	Press Conference (by invitation only)
	18:30 – 23:00	Swiss Surprise Event (first-come-first-serve, 80 – 100 places, separate registration)
Thursday, 28 June 2012	08:00 – 09:00	Speakers Breakfast (World Café at ground floor KKL)
	09:00 – 18:00	Conference sessions 6 – 10 including technical keynotes on advanced characterisation and diagnosis, poster presentation by authors, networking and exhibition
	09:00 – 18:00	Access to poster area
	19:30 – 23:00	Great Dinner on the Lake
Friday, 29 June 2012	08:00 – 09:00	Speakers Breakfast (World Café at ground floor KKL)
	09:00 – 16:00	Conference sessions 11 – 15 including keynotes on SOFC for Distributed Power Generation, poster presentation, networking and exhibition
	09:00 – 12:00	Access to poster area
	12:00 – 14:00	Poster removal
	16:00 – 17:00	Closing & Award Ceremony – Christian Friedrich Schönbein & Hermann Göhr Awards

The European Fuel Cell Forum

The sole purpose of the European Fuel Cell Forum is the promotion of fuel cell and hydrogen technologies through conference, literature and media. It is an enabling, high level exchange platform providing scientific sessions, exhibition, tutorial as well as international project meeting support and recreational networking events at a very charming, inspirational location.

Like every year in summer and in Lucerne, the heart of Switzerland, the European Fuel Cell Forum invites more than 4,000 stakeholders to its internationally recognized event. About 280 contributions and posters will be presented in 23 partially parallel sessions during 3 intensive and stimulating days. Besides the high level scientific content, the targets, status, programs and future project calls of Europe, China, Japan, Korea and USA will be outlined. The major demonstration projects in the stationary application areas are presented, and two poster sessions are held. In 2010, over 400 participants from 35 countries attended. Based on the increasing number of submissions, 500 to 600 participants are expected in 2012.

The European Fuel Cell Forum was initiated in 1994 by Dr. Ulf Bossel and has now been a tradition for 18 years. Already the 1st EUROPEAN SOFC FORUM 1994 attracted highly qualified and international speakers and audience. Over the years a high quality conference series has been established, alternating the conference focus between high temperature fuel cells in even years and low temperature fuel cells and hydrogen in odd years. This track record of conferences with high technical level builds the base for this years' edition, the 10th EUROPEAN SOFC FORUM. It is open to all high temperature fuel cell and electrolysis technologies. Many fruitful contacts and promising solutions have been initiated around this event thanks to a careful organisation and watchful eye on scientific quality by dedicated advisors. Different from many commercial conferences, this event is organised by fuel cell technologists. For many years active members of the European fuel cell and hydrogen com-

munity, they are aware of the community's interest. The stakeholders' needs will remain the focus for the organisation of the future events.

Our dedicated goal is to continue to grow the European Fuel Cell Forum as one of the most prominent meeting places for the comprehensive exchange of scientific and technical information as well as for networking towards future breakthroughs.

Together with the conference chair, Dr. Florence Lefebvre-Joud from the French Commissariat de l'Energie Atomique et Alternatives, CEA, we would like to offer you a sound scientific program and invite you to enjoy the unforgettable side activities in very pleasant surroundings. Finally we thank all the authors, exhibitors and suppliers. Together with the numerous participants, they are the base to perform together a striking 10th EUROPEAN SOFC FORUM.

Kind regards and looking forward to seeing you in Lucerne
Olivier Bucheli & Michael Spirig

European Fuel Cell Forum

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10th EUROPEAN SOFC FORUM

Chairwoman: Dr. Florence Lefebvre-Joud

CEA-LITEN, Grenoble, France

Several Solid Oxide technologies will be presented at the 10th EUROPEAN SOFC FORUM: SOFC (Fuel cell), SOE (Electrolyser), and PCFC (Proton Conductor ceramic Fuel Cells). In 3 days, a complete overview will be given from material development, component optimisation, system operation in fuel cell mode or as electrolysers to market entry and commercialisation possibilities. The conference is chaired by Dr. Florence Lefebvre-Joud from the French Energy Research Centre CEA-LITEN.

The 10th EUROPEAN SOFC FORUM aims to catalyse a fruitful dialogue between science, engineering, industry and market. It will address scientific questions and technical challenges as well as provide feedback on full-size systems in operation in order to give an updated state-of-the-art of Solid Oxide Technology development and to enable identification of relevant products with appropriate technological readiness for today's markets.

The technical program of the 10th EUROPEAN SOFC FORUM has been set up by the Scientific Committee with the aim of enlightening the worldwide results of academic institutions, research organizations and industry. This independent unbiased panel is competent in all technical matters. All papers presented as lectures or posters will be collated in the Electronic Proceedings to be distributed to all participants at the time of registration and later sold to libraries, research institutions and universities. A special Edition of the international journal "Fuel Cells" will gather the best contributions.

Conference language is English.

The Chairwoman: Dr. Florence Lefebvre-Joud

Dr. Florence Lefebvre-Joud is Senior Scientist and Program Manager in the field of Materials for Energy at CEA-LITEN in Grenoble, France. Former Head of Fuel Cell and Hydrogen Laboratory for several years, she now organizes and coordinates research programs on Solid Oxide electrolysers and fuel cells at the national and European level.



Her research area, initially nuclear materials, has evolved towards understanding and improving solid oxide fuel cell and electrolyser operation. With a Habilitation from "Grenoble Institut National Polytechnique" she supervises PhD thesis and has authored and co-authored more than 50 publications in refereed scientific journals.

Since February 2009 she is Vice Chair of the Scientific Committee of the European Fuel Cell and Hydrogen Joint Technology Initiative (FCH-JU).

The 2012 conference stands under the Motto:

**New perspectives opened by Solid Oxide technologies:
International Programs, Research and Realizations, Market Entry.**

Tutorial

Tuesday, 26 June 2012, from 10:00 to 17:00

The Tutorial is an excellent Kick-Start to the 10th EUROPEAN SOFC FORUM

The Tutorial will provide the basic concepts required to address the general but also more specialized fuel cell literature. Fuel cell technology is interdisciplinary par excellence, and requires knowledge in electrochemistry, materials science, mechanical and electrical engineering, catalysis, corrosion, thermal management, systems engineering etc. The course will cover these different aspects as broad as possible, illustrated by many examples. All fuel cell families will be addressed. Applications and examples will focus predominantly on the two most popular types, PEFC (G. G. Scherer) and SOFC (J. Van Herle), given the expertise of both lecturers in their respective fields.



Dr. Günther G. Scherer



Dr. Jan Van Herle

The Tutorial lecture topics are fuel cell operating principles, thermodynamics, kinetics, efficiencies, central notions such as electrolyte ionic conductivity, electrode overpotential, triple phase boundary, Nernst equation, fuel reforming, cell and stack architectures and design, fuels (both fossil and renewable) for different fuel cells including their treatment, all fuel cell families (SOFC, MCFC, PAFC, PEFC/DMFC, AFC).

Tutorial Schedule

10:00 Registration, welcome refreshments
10:30 Session 1: Operating principles, fundamental aspects, fuel cell types
12:00 Business lunch
13:00 Session 2: Fuels for fuel cells, fuel processing, system aspects
14:30 Coffee break
15:00 Session 3: Applications, State-of-the-art, challenges, specificities per fc type
17:00 End of Tutorial

The Tutorial language is English.

Each participant will receive complete documentation of the Tutorial lectures. Tutorial registration fee for all participants is 500 CHF.

Please register on-line at www.efcf.com

Date and Place

The 10th EUROPEAN SOFC FORUM will be held from 26 to 29 June 2012 in the famous Kultur- und Kongresszentrum Luzern KKL in Lucerne/Switzerland. The parallel lectures will be presented in the "Luzerner Saal" and the "Auditorium", while all posters will be exhibited permanently in the "Club Rooms". The KKL is located next to the Railroad Station on the shore of Lake Lucerne. Boat traffic, water front activities, as well as spectacular views of the old town and snow-capped mountains add to the charm of the venue.

Technical Program

This conference will deal exclusively with high temperature fuel cell and electrolysis technologies. Also the worldwide fuel cell and hydrogen programs and coming project calls from Europe, China, Japan, Korea and USA will be outlined by high level representatives. Further keynotes will be presented on "advanced characterisation and diagnosis" as well as "SOFC for Distributed Power Generation". An attractive four-day program offers product presentations, scientific lectures, demonstrations, posters and exhibits. Altogether, more than 280 scientific contributions will be presented i. e. more than 120 papers in 21 oral sessions, and more than 160 posters in two additional sessions.

All events are offered in the same building. Registration covers unrestricted admission to conference and exhibition. Developers from Europe and overseas present innovative high temperature fuel cell and electrolysis solutions. The technical program is designed to inform representatives of industry, trade, finance, utilities and users as well as architects, engineers, technology brokers and members of the research community. Technical information is available from the exhibitors. The 10th EUROPEAN SOFC FORUM will be a major international event on Solid Oxide technology in the year 2012.

Exhibition

Fuel cell and electrolysis products are exhibited in the lobby area of the lecture halls. Developers of all kinds of fuel cells and system hardware, suppliers of components and research laboratories from all parts of the world are invited to participate. Please contact the EUROPEAN FUEL CELL FORUM or visit www.efcf.com for further information. The names of confirmed exhibitors are listed below.

International Project Meetings

As many international experts participate at the EUROPEAN FUEL CELL FORUM, Monday and Tuesday of the conference week have become more and more established as ideal opportunity for meetings. Thus take the chance to schedule your meetings on those days for your ongoing projects, setting-up of new projects or for other topic related events such as an IEA workshop.

To simplify project initiators' and organizers' life, the organisation of such events for registered participants and exhibitors are now actively supported by our organization. Get more information and download registration form at www.efcf.com.



Proceedings

The complete conference proceedings will be available in electronic form and distributed in Lucerne at the time of registration to all participants. Proceedings of previous EUROPEAN FUEL CELL FORUM events will be available. If you are unable to attend the event, you may order the proceedings by mail. The Proceedings Purchase Form can be downloaded from our website www.efcf.com. Payment by credit card is preferred.

Who should attend?

The conference with exhibition offers an attractive program for potential users of fuel cells, decision makers, researchers and engineers of industry, laboratories, academic institutions, governments, investment groups, consultants and electric power engineers. The event provides many opportunities for informal exchanges between industry, market and academia, a platform for technology transfer and recruitment of qualified students and trainees. The 10th EUROPEAN SOFC FORUM combines the personal atmosphere of a workshop with the format of a scientific conference. This is the time and the place where decision makers meet politicians, inventors meet investors, engineers meet scientists, utilities meet manufacturers and users meet providers. Participants from all continents are invited and welcome.

Morning

Wednesday, June 27, 2012

Morning

1_A Luzerner Saal	
09:00	Opening Session Plenary 1 – International Overview (A01)
09:00	Welcome by the Organizers (A0101) Olivier Bucheli, Michael Spirig European Fuel Cell Forum; Luzern/Switzerland
09:05	Welcome by the Chairwoman (A0102) Florence Lefebvre-Joud CEA/DEHT/Liten; Grenoble/France
09:15	Welcome to Switzerland the Smart Research Place (A0103) to be announced Swiss Federal Office of Energy; Bern/Switzerland
09:30	The Status of SOFC Programs in USA – 2012 (A0104) Daniel Driscoll, Briggs M. White U.S. DOE National Energy Technology Laboratory; Morgantown/USA-WV
10:00	Current SOFC Development in China: Challenges and Solutions for SOFC Technologies (A0105) Wei Guo Wang Fuel Cell and Energy Technology Division, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences; Ningbo/China
10:30	Coffee Break – Ground Floor in the Exhibition

Session Overview				
Luzerner Saal		Page	Auditorium	Page
1	Opening Session Plenary 1 – International Overview	8	A	
2	Plenary 2 – International Overview	9	A	
3	Poster Session I – A04, A05, A07, A09, A10, B10, A11, A12, A13	22 – 31		
4	Company & Major groups development status I (EU)	10	A	Cell materials development I 10 B
5	Company & Major groups development status II (Worldwide)	11	A	Diagnostic, advanced characterisation and modelling I 11 B
6	Plenary 3 – Advanced Characterisation & Diagnosis	12	A	
7	Cell and stack design I	13	A	SOE cell material development 13 B
8	Poster Session II B04, B05, B07, B09, B11, B12, B13	22 – 31		
9	Cell and stack design II (Metal Supported Cells)	15	A	Cell materials development II (IT & Proton Conducting SOFC) 15 B
10	Cell operation	16	A	Diagnostic, advanced characterisation & modelling II 16 B
11	SOE cell and stack operation	18	A	Fuels bio reforming 18 B
12	Cell and stack operation	19	A	Interconnects, coatings & seals 19 B
13	Stack integration, system operation and modelling	20	A	Seals 20 B
14	Plenary 4 – SOFC for Distributed Power Generation	21	A	
15	Plenary 5 – Closing Ceremony	21	A	

Morning

Wednesday, June 27, 2012

Morning

2_A Luzerner Saal	
11:00	Plenary 2 – International Overview (A02)
11:00	Fuel Cell development programs in Europe (A0201) Bert de Colvaneer FCH JU; Brussels/EU
11:30	Status of FC Development and Programs in Japan (A0202) to be announced Tokyo/Japan
12:00	High Temperature Fuel Cell Activities in Korea (A0203) Ki Suk Chung POSCO Energy, Fuel Cell Business Division, Performance Improvement TF; Seoul/South Korea
12:30	Lunch – 2nd Floor on the Terrace Coffee – Ground Floor in the Exhibition and 2nd Floor in the Poster Session

Afternoon

Wednesday, June 27, 2012

Afternoon

3_A Club Room 3 – 8	
13:30	Poster Session I – A04, A05, A07, A09, A10, B10, A11, A12, A13

Afternoon

Wednesday, June 27, 2012

Afternoon

4 _A	Luzerner Saal	4 _B	Auditorium
14:30	Company & Major groups development status I (EU) (A04)	14:30	Cell materials development I (B04)
14:30	SOFC System Development at AVL (A0401) Jürgen Rechberger, Michael Reissig, Martin Hauth, Peter Prenninger, AVL List GmbH; Graz/Austria	14:30	Fundamental Material Properties Underlying Solid Oxide Electrochemistry (B0401) Mogens Mogensen, Karin Vels Hansen, Peter Holtappels, Torben Jacobsen, Fuel Cells and Solid State Chemistry Division, Risø National Laboratory for Sustainable Energy, DTU; Roskilde/Denmark
14:45	Status of the Solid Oxide Fuel Cell Development at Topsoe Fuel cell A/S and Risø DTU (A0402) Niels Christiansen (1), Søren Primdahl (1), Marie Wandel (2), Severine Ramousse (2), Anke Hagen (2) (1) Topsoe Fuel Cell A/S; Lyngby/Denmark, (2) Risø DTU; Roskilde/Denmark	14:45	La and Ca doped SrTiO₃: A new A-site deficient strontium titanate in SOFC anodes (B0402) Maarten C. Verbraken (1), Boris Iwanschitz (2), Andreas Mai (2), John T.S. Irvine (1) (1) University of St Andrews; St Andrews/UK, (2) Hexis AG; Winterthur/Switzerland
15:00	Progress in the Development of the Hexis' SOFC Stack and the Galileo 1000 N Micro-CHP System (A0403) Andreas Mai, Boris Iwanschitz, Roland Denzler, Ueli Weissen, Dirk Haberstock, Volker Nerlich, Alexander Schuler Hexis Ltd.; Winterthur/Switzerland	15:00	Thermomechanical Properties of Re-oxidation Stable Y-SrTiO₃ Ceramic Anode Substrate Material (B0403) Viacheslav Vasechko, Bingxin Huang, Qianli Ma, Frank Tietz, Jürgen Malzbender Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (IEK); Jülich/Germany
15:15	Development and Manufacturing of SOFC-based products at SOFCpower SpA (A0404) Massimo Bertoldi, Olivier Bucheli, Alberto V. Ravagni, SOFCpower SpA; Pergine Valsugana/Italy	15:15	Doped La_{2-x}Y_{2x-1}Ni_{1-y}O_{4-z} (A=Pr, Nd, B=Co, Zr, Y) as IT-SOFC cathode (B0404) Laura Navarrete, María Fabuel, Cecilia Solís, José M. Serra, Instituto de Tecnología Química (Universidad Politécnica de Valencia – Consejo Superior de Investigaciones Científicas); Valencia/Spain
15:30	Recent Results in JÜLICH SOFC Technology Development (A0405) Ludger Blum (1), Bert de Haart (1), Jürgen Malzbender (1), Norbert Menzler (1), Josef Remmel (2), Robert Steinberger-Wilckens (3) (1) Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (IEK); Jülich/Germany (2) Forschungszentrum Jülich GmbH, Central Institute of Technology (ZAT), Jülich/Germany (3) University of Birmingham, School of Chemical Engineering; Birmingham/UK	15:30	Development and Characterization of LSCF/CGO composite cathodes for SOFCs (B0405) Rémi Costa (1), Roberto Spottono (1), Norbert Wagner (1), Zeynep Ilhan (1), Vitaliy Yurkiv (1), (2), Wolfgang G. Bessler (1), (2), Asif Ansar (1), (1) German Aerospace Centre (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany, (2) Universität Stuttgart, Institute of Thermodynamics and Thermal Engineering (ITW); Stuttgart/Germany
15:45	Compact and highly efficient SOFC Systems for off-grid power solutions (A0406) Matthias Boltze, Gregor Holstermann, Arne Sommerfeld, Alexander Herzog new enerday GmbH; Neubrandenburg/Germany	15:45	Effect of Ultra-thin Zirconia Blocking Layer on Performance of 1 µm-thick Gadolinia-doped Ceria Electrolyte SOFC (B0406) Doo-Hwan Myung (1), (2), Jongill Hong (2), Kyungjoong Yoon (1), Byung-Kook Kim (1), Hae-Weon Lee (1), Jong-Ho Lee (1), Ji-Won Son (1), (1) Korea Institute of Science and Technology, High-Temperature Energy Materials Research Center; Seoul/South Korea, (2) Yonsei University, Department of Materials Science and Engineering; Seoul/South Korea
16:00	Coffee Break – Ground Floor in the Exhibition and 2nd Floor in the Poster Session		

Afternoon

Wednesday, June 27, 2012

Afternoon

5 _A	Luzerner Saal	5 _B	Auditorium
16:30	Company & Major groups development status II (Worldwide) (A05)	16:30	Diagnostic, advanced characterisation and modelling I (B05)
16:30	Latest Update on Delphi's Solid Oxide Fuel Cell Stack for Transportation and Stationary Applications (A0501) Karl Haltiner, Subhashis Mukerjee, Rick Kerr, Delphi Corporation; W. Henrietta/USA-NY	16:30	Stroboscopic Ni Growth/Volatilization Picture (B0501) J. Andreas Schuler (1), Boris Iwanschitz (2), Lorenz Holzer (3), Marco Cantoni (4), Thomas Graule (1), (1) EMPA; Dübendorf/Switzerland, (2) Hexis AG; Winterthur/Switzerland, (3) ZHAW; Winterthur/Switzerland, (4) EPFL; Lausanne/Switzerland
16:45	Solid Oxide Fuel Cell Development at Versa Power Systems (A0502) Brian Borglum, Eric Tang, Michael Pastula Versa Power Systems; Calgary AB/Canada	16:45	Oxidation of nickel in solid oxide fuel cell anodes: A 2D kinetic modeling approach (B0502) Jonathan P. Neidhardt (1), (2), Wolfgang G. Bessler (1), (2), (1) German Aerospace Centre (DLR), Inst. of Technical Thermodynamics; (2) Stuttgart Univ., Inst. of Thermodynamics and Thermal Engineering; Stuttgart/Germany
17:00	BlueGen for Europe – Commercialisation of Ceramic Fuel Cells' residential SOFC Product (A0503) Karl Föger, Ceramic Fuel Cells GmbH; Heinsberg/Germany	17:00	NiO reduction studied by environmental TEM and in situ XRD (B0503) Q. Jeangros (1), T.W. Hansen (2), J.B. Wagner (2), C. D. Damsgaard (2), R. E. Dunin-Borkowski (3), J. Van Herle (4), A. Hessler-Wyser (1), (1) EPFL, Interdisciplinary Centre for Electron Microscopy; Lausanne/Switzerland, (2) DTU, Center for Electron Nanoscopy; Lyngby/Denmark, (3) Jülich Research Centre, Ernst Ruska-Centre; Jülich/Germany, (4) EPFL; Laboratory for Industrial Energy Systems; Lausanne/Switzerland
17:15	SOFC system integration activities in NIMTE (A0504) Shuang Ye, Jun Peng, Bin Wang, Sai Hu Chen, Qin Wang, Wei Guo Wang Chinese Academy of Sciences, Fuel Cell and Energy Technology Division, Ningbo Institute of Materials Technology and Engineering; Ningbo/China	17:15	LEIS of Oxide Air Electrode Surfaces (B0504) John Kilner, Stephen Skinner, Monica Burriel, Manos Symianakis, Imperial College London, Department of Materials; London/UK
17:30	Development of SOFC Technology at INER (A0505) Ruey-yi Lee, Yung-Neng Cheng, Chang-Sing Hwang, Maw-Chwain Lee Institute of Nuclear Energy Research; Longtan Township/Taiwan ROC	17:30	Impact of Surface-related Effects on the Oxygen Exchange Kinetics of IT-SOFC Cathodes (B0505) Edith Bucher, Werner Sitte, Montanuniversität Leoben, Chair of Physical Chemistry; Leoben/Austria
17:45	Techno-economical analysis of systems converting CO₂ and H₂O into liquid fuels including high-temperature steam electrolysis (A0506) Christian von Olshausen sunfire GmbH; Dresden/Germany	17:45	Anisotropy of the oxygen diffusion in Ln₂NiO_{4+z} (Ln = La, Nd, Pr) single crystals (B0506) Jean-Marc Bassat (1), Mónica Burriel (2), Rémi Castaing (1), (2), O. Wahyudi (1), A. Villesuzanne (1), M. Cerretti (4), W. Paulus (4), M. Zaghrioui (3), P. Veber (1), J. Grenier (1), J.A. Kilner (2), (1) Université de Bordeaux, CNRS, ICMCB; Pessac Cedex/France, (2) Imperial College London, Department of Materials; London/UK, (3) LEMA, UMR 6157-CNRS-CEA; Blois Cedex/France, (4) Université de Rennes; Rennes/France
18:00	End of Sessions		
18:30	Swiss Surprise	Registered Participants meet at the Lakeside of KKL around the large Fountain	

6_A Luzerner Saal	
09:00	Plenary 3 – Advanced Characterisation and Diagnosis (A06)
09:00	Studies of Solid Oxide Fuel Cell Electrode Evolution Using 3D Tomography (A0601) Scott A Barnett, J Scott Cronin, Kyle Yakal-Kremski Northwestern University, Department of Materials Science; Evanston/USA-IL
09:30	Electrochemical Impedance Spectroscopy: A Key Tool for SOFC Development (A0602) André Leonide (1), André Weber (2), Ellen Ivers-Tiffée (2) (1) Siemens AG, CT T DE HW4; Erlangen/Germany (2) Karlsruher Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany
10:00	In-operando Raman spectroscopy of carbon deposition from Carbon Monoxide and Syngas on SOFC nickel anodes (A0603) Gregory J. Offer (1), Robert C. Maher (2), Lesley F. Cohen (2), Nigel P. Brandon (1) Imperial College London (1) Department of Earth Science Engineering, (2) Department of Physics; London/UK
10:30	Coffee Break – Ground Floor in the Exhibition

7_A Luzerner Saal	7_B Auditorium
11:00	11:00
Cell and stack design I (A07)	SOE cell material development (B07)
11:00	11:00
Co-sintering of Solid Oxide Fuel Cells made by Aqueous Tape Casting (A0701) Johanna Stierstedt (1), (2), Elis Carlström (1), Bengt-Erik Mellander (2) (1) Swerea IVF AB; Mölndal/Sweden (2) Chalmers University of Technology, Department of Applied Physics; Göteborg/Sweden	Step-change in (La,Sr)(M,Ti)O₃ solid oxide electrolysis cell cathode performance with exsolution of B-site cations (B0701) George Tsekouras, Dragos Neagu, John T.S. Irvine University of St Andrews, School of Chemistry; St Andrews/UK
11:15	11:15
Powder Injection Molding of Structured Anode-supported Solid Oxide Fuel Cell (A0702) Antonin Faes (1), Amédée Zryd (1), Hervé Girard (1), E. Carreno-Morelli (1), Jan Van Herle (2), Zacharie Wuillemin (3) (1) University of Applied Science Western Switzerland, Design and Materials Unit; Sion/Switzerland (2) EPFL Laboratory of Industrial Energy Systems (LENI); Lausanne/Switzerland (3) HTCeramik – SOFCpower; Yverdon-les-Bains/Switzerland	Enhanced Performances of Structured Oxygen Electrode for High Temperature Steam Electrolysis (B0702) Tiphaine Ogier (1), Jean-Marc Bassat (1), Fabrice Mauvy (1), Sébastien Fourcade (1), Jean-Claude Grenier (1), Karine Couturier (2), Marie Petitjean (2), Julie Mougin (2) (1) Université de Bordeaux, CNRS, ICMCB; Pessac Cedex/France (2) CEA-Grenoble, LITEN/DTBH/LTH; Grenoble Cedex 9/France
11:30	11:30
Inkjet Printing of Segmented-in-Series Solid-Oxide Fuel Cell Architectures (A0703) Wade Rosensteel (1), Nicolaus Faino (1), Brian Gorman (2), Neal P. Sullivan (1) (1) Colorado School of Mines, Colorado Fuel Cell Center; Golden/USA-CO (2) Colorado Fuel Cell Center, Colorado School of Mines, Metallurgical and Materials Engineering Department; Golden/USA-CO	Electrochemical Characterisation of High Temperature Solid Oxide Electrolysis Cell Based on Scandia Stabilized Zirconia with Enhanced Electrode Performance (B0703) Nikolai Trofimenko, Mihails Kusnezoff, Alexander Michaelis Fraunhofer IKTS; Dresden/Germany
11:45	11:45
Miniaturized free-standing SOFC membranes on silicon chips (A0704) M. Prestat (1), A. Evans (1), R. Tölke (1), M.V.F. Schlupp (1), B. Scherrer (1), Z. Yáng (1), J. Martynczuk (1), O. Pecho (1), H. Ma (1), S. Laffranchini (1), A. Bieberle-Hütter (1), L.J. Gauckler (1), Y. Safa (2), T. Hocker (2), P. Murali (3), Y. Yan (3), J. Courbat (4), D. Briand (4), N.F. de Rooij (4) (1) ETH Zurich, Nonmetallic Inorganic Materials; Zurich/Switzerland (2) Zurich University of Applied Sciences (ZHAW), Institute for Computational Physics; Winterthur/Switzerland (3) EPFL, Ceramics Laboratory; Neuchâtel/Switzerland, (4) EPFL, Sensors, Actuators and Microsystems Laboratory; Lausanne/Switzerland	Durability studies of Solid Oxide Electrolysis Cells (SOEC) (B0704) Aurore Mansuy, Julie Mougin, Marie Petitjean, Fabrice Mauvy CEA Grenoble LITEN/DTBH/LTH; Grenoble/France

Morning

Thursday, June 28, 2012

Morning

7 _A	Luzerner Saal	7 _B	Auditorium
12:00	Cell and stack design I (A07) (cont.) 12:00 Large-area micro SOFC based on a silicon supporting grid (A0705) Iñigo Garbayo (1), Marc Salleras (1), Albert Tarancón (2), Alex Morata (2), Jose Santiso (3), Neus Sabaté (1) (1) Institute of Microelectronics of Barcelona (IMB-CNM, CSIC); Barcelona/Spain (2) Catalonia Institute for Energy Research (IREC); Barcelona/Spain (3) Research Centre of Nanoscience and Nanotechnology (CIN2, CSIC); Barcelona/Spain 12:15 Fabrication and Performance of Nd_{1.95}NiO_{4+δ} (NNO) Cathode supported Microtubular Solid Oxide Fuel Cells (A0706) Miguel A. Laguna-Bercero (1), Jorge Silva (1), R. Campana (1), Henning Luebbe (2), Jan Van Herle (2) (1) Universidad de Zaragoza, Instituto de Ciencia de Materiales de Aragón; Zaragoza/Spain (2) EPFL, Industrial Energy Systems Laboratory (LENI); Lausanne/Switzerland	12:00	SOE cell material development (B07) (cont.) 12:00 Influence of steam supply homogeneity on electrochemical performances and durability of SOEC (B0705) Manon Nuzzo (1), Armelle Ringuedé (2), Anne Laure Sauvet (1), Julien Vulliet (1) (1) CEA Le Ripault; Monts/France (2) LECIME, UMR 7575 CNRS, ENSCP, Chimie Paristech; Paris/France 12:15 High Temperature Electrolysis at EIFER (B0706) A. Brisse (1), J. Schefold EIFER; Karlsruhe/Germany
12:30	Lunch – 2nd Floor on the Terrace Coffee – Ground Floor in the Exhibition and 2nd Floor in the Poster Session		

Afternoon

Thursday, June 28, 2012

Afternoon

8 _A	Club Room 3 – 8
13:30	Poster Session II – B04, B05, B07, B09, B11, B12, B13

Afternoon

Thursday, June 28, 2012

Afternoon

9 _A	Luzerner Saal	9 _B	Auditorium
14:30	Cell and stack design II (Metal Supported Cells) (A09) 14:30 Micro-SOFC supported by a thick Ni film (A0901) Younk Lee, Gyeong Man Choi, Pohang University of Science and Technology (POSTECH), Fuel Cell Research Center and Department of Materials Science and Engineering; Pohang/South Korea 14:45 Thin Electrolytes on Metal-Supported Cells (A0902) S. Vieweger (1), R. Mücke (1), N. H. Menzler (1), M. Rüttinger (2), Th. Franco (2), H. P. Buchkremer (1) (1) Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (IEK); Jülich/Germany (2) PLANSEE SE Innovation Services; Reutte/Austria 15:00 Advances in Metal Supported Cells in the METSOFC EU Consortium (A0903) Brandon J. McKenna (1), Niels Christiansen (1), Richard Schauerperl (2), Peter Prenninger (2), Peter Blennow (3), Trine Klemensø (3), Severine Ramousse (3), (1) Topsoe Fuel Cell A/S; Lyngby/Denmark, (2) AVL List GmbH; Graz/Austria, (3) Riso DTU; Roskilde/Denmark 15:15 Stack Tests of Metal-Supported Plasma-Sprayed SOFC (A0904) Patric Szabo (1), Asif Ansar (1), Thomas Franco (2), Malko Gindrat (3), Thomas Kiefer (4), (1) German Aerospace Centre (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany, (2) PLANSEE SE Innovation Services; Reutte/Austria, (3) Sulzer Metco AG; Wohlen/Switzerland, (4) ElringKlinger AG; Dettingen, Erms/Germany 15:30 Tubular metal supported solid oxide fuel cell resistant to high fuel utilization (A0905) Lide M. Rodriguez-Martinez, Laida Otaegi, Amaia Arregi, Igor Villarreal, Ikerlan, Centro Tecnológico; Álava/Spain 15:45 Quality Assurance Aspects for Metal-Supported Cells (A0906) M. Haydn (1), Th. Franco (1), R. Mücke (2), M. Rüttinger (1), N. H. Menzler (2), H. P. Buchkremer (2), A. Venskutonis (1), L. S. Sigl (1), (1) PLANSEE SE, Innovation Services; Reutte/Austria, (2) Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research; Jülich/Germany	14:30	Cell materials development II (IT & Proton Conducting SOFC) (B09) 14:30 Nanostructured Electrodes for Low-Temperature Solid Oxide Fuel Cells (B0901) Zhongliang Zhan, Da Han, Tianzhi Wu, Shaorong Wang, Tinglian Wen, Chinese Academy of Sciences (SICCAS), Shanghai Institute of Ceramics, CAS Key Laboratory of Materials for Energy Conversion; Shanghai/China 14:45 Protonic Ceramic Fuel Cells based on reactive sintered BaCe_{0.2}Zr_{0.7}Y_{0.103-δ} electrolytes (B0902) Shay Robinson (1), Anthony Manerbino (1), (2), Sean Babinec (1), Neal P Sullivan (1), Jianhua Tong (1), W. Grover Coors (1), (2), (1) Colorado School of Mines, Department of Mechanical Engineering, Colorado Fuel Cell Center; Golden/USA-CO, (2) CoorsTek Inc.; Golden/USA-CO 15:00 ITSOFC based on innovative electrolyte and electrodes materials (B0903) Messaoud Benhamria (1), Annelise Brüll (2), Anne Morandi (4), M. Letilly (1), A. Le Gal La Salle (1), J. Bassat (2), J. Salmi (3), R. Laucournet (5), M. Caldes (1), M. Marrony (4), O. Joubert (1), (1) Inst. des Matériaux Jean Rouxel (IMN); Nantes/France, (2) Inst. de Chimie de la Matière Condensée de Bordeaux; PESSAC/France, (3) Marion Technologie (MT); Verniole/France, (4) European Inst. for Energy Research; Karlsruhe/Germany, (5) CEA-Grenoble/LITEN/DTBH/LTH; Grenoble/France 15:15 New Cerber Cathodes of Electronic and Proton Conducting Ceramic Composites for Proton Conducting Solid Oxide Fuel Cells (B0904) Cecilia Solís, Vicente B. Vert, María Fabuel, Laura Navarrete (1), José M. Serra (1), Francesco Bozza (2), Nikolaos Bonanos (2), Universidad Politécnica de Valencia, Instituto de Tecnología Química; Valencia/Spain, (2) DTU, Riso National Laboratory for Sustainable Energy, Fuel Cells and Solid State Chemistry Department; Roskilde/Denmark 15:30 Cathode Materials for Low Temperature Protonic Oxide Fuel Cells (B0905) M.D. Sharp, J.A. Kilner, Imperial College London, Department of Materials; London/UK 15:45 Characterisation of PCFC-Electrolytes Deposited by Reactive Magnetron Sputtering (B0906) Mohammad Arab Pour Yazdi (1), Pascal Briois (1), Samuel Georges (2), Alain Billard (1), (1) LERMPS-UTBM; Belfort cedex/France, (2) LEPMI, INPG, ENSEEG; Saint Martin d'Hères Cedex/France
16:00	Coffee Break – Ground Floor in the Exhibition and 2nd Floor in the Poster Session		

10 _A	Luzerner Saal	10 _B	Auditorium
16:30	Cell operation (A10)	16:30	Diagnostic, advanced characterisation and modelling II (B10)
16:30	Ni-agglomeration in Solid Oxide Fuel Cells under different operating conditions (A1001) Boris Iwanschitz (1), Lorenz Holzer, Andreas Mai (1), Michael Schütze, (1) Hexis Ltd.; Winterthur/Switzerland	16:30	Elementary Kinetics and Mass Transport in LSCF-Based Cathodes: Modeling and Experimental Validation (B1001) Vitaliy Yurkiv (1), (2), Rémi Costa (1), Zeynep Ilhan (1), Asif Ansar (1), Wolfgang G. Bessler (1), (2) (1) German Aerospace Centre (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany (2) Universität Stuttgart, Institute of Thermodynamics and Thermal Engineering (ITW); Stuttgart/Germany
16:45	Durability and Performance of High Performance Infiltration Cathodes (A1002) Martin Søgaard, Alfred J. Samson, Nikolaos Bonanos, J. Hjelm, P. Hjalmarsson, S.P.V. Foghmoes, T. Ramos, Technical Univ. of Denmark, Risø National Lab for Sustainable Energy, Fuel Cells and Solid State Chemistry Division; Roskilde/Denmark	16:45	Three dimensional microstructures and mechanical properties of porous LSCF cathodes (B1002) Zhangwei Chen, Xin Wang, Finn Giuliani, Alan Atkinson, Imperial College London, Dep. of Materials; London/UK
17:00	Chromium Poisoning of LaMnO₃-based Cathode within Generalized Approach (A1003) Harumi Yokokawa (1), Teruhisa Horita (1), Katsuhiko Yamaji (1), H. Kishimoto (1), T. Yamamoto (2), M. Yoshikawa (2), Y. Mugikura (2), T. Kabata (3), K. Tomida (3), (1) National Inst. of Advanced Industrial Science and Technology, Energy Technology Research Inst.; Nagasaki/Japan, (2) Central Research Inst. of Electric Power Industry (CRIEPI); Kanagawa/Japan, (3) Mitsubishi Heavy Industry, Ltd.; Nagasaki/Japan	17:00	Modelling of Coupled Transport Phenomena within Detailed Oxide Fuel Cell Electrode Microstructures (B1003) Duncan A. W. Gawel, Jon G. Pharoah, Queen's University, Department of Mechanical and Materials Engineering; Kingston/Canada
17:15	Chromium poisoning of La_{0.8}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-δ} in Solid Oxide Fuel Cells (SOFCs) (A1004) Soo-Na Lee, Alan Atkinson, John A Kilner, Imperial College London, Department of Materials; London/UK	17:15	Mechanical Characteristics of Electrolytes assessed with Resonant Ultrasound Spectroscopy (B1004) Wakako Araki (1), Hidenori Azuma (1), Takahiro Yota (1), Y. Arai (1), J. Malzbender (2), (1) Saitama University, Graduate School of Science and Engineering; Saitama/Japan, (2) Forschungszentrum Jülich GmbH; Jülich/Germany
17:30	Evaluation of Sulfur Dioxide Poisoning for LSCF Cathodes (A1005) Fangfang Wang, Katsuhiko Yamaji, Manuel E. Brito, Do-Hyung Cho, Taro Shimonosono, Mina Nishi, Haruo Kishimoto, Teruhisa Horita, Harumi Yokokawa, National Institute of Advanced Industrial Science and Technology (AIST); Ibaraki/Japan	17:30	3D FEM Impedance Model for LSCF-Cathodes (B1005) Andreas Häffelin (1), Jochen Joos (1), Jan Hayd (1), (2), A. Weber (1), E. Ivers-Tiffée (1), (2), Karlsruhe Institut für Technologie (KIT), (1) Institut für Werkstoffe der Elektrotechnik (IWE), (2) DFG Center for Functional Nanostructures (CFN); Karlsruhe/Germany
17:45	Reversibility of Cathode Degradation in Anode Supported Solid Oxide Fuel Cells (A1006) Cornelia Endler-Schuck (1), (2), André Leonide (1), André Weber (1), Ellen Ivers-Tiffée (1), (2), Karlsruher Institut für Technologie (KIT), (1) Institut für Werkstoffe der Elektrotechnik (IWE), (2) DFG Center for Functional Nanostructures (CFN); Karlsruhe/Germany	17:45	Detailed electrochemical characterisation of large SOFC stacks (B1006) R. R. Mosbæk (1), J. Hjelm (2), R. Barfod (2), J. Høgh (1), L. Mikkelsen (1), P.V. Hendriksen (1), (1) Technical University of Denmark, Fuel Cells and Solid State Chemistry Division, Risø National Laboratory for Sustainable Energy; Frederiksborgvej/Denmark, (2) Topsoe Fuel Cell A/S; Lyngby/Denmark
18:00	End of Sessions		
19:20	Dinner on the Lake Boarding 19:20, Lakeside of KKL pier 5/6 – back 23:30 (short stop in Brunnen 22:30 for early return by train)		



11 _A	Luzerner Saal	11 _B	Auditorium
09:00	SOE cell and stack operation (A11)	09:00	Fuels bio reforming (B11)
09:00	High Temperature Co-electrolysis of Steam and CO₂ in an SOC stack: Performance and Durability (A1101) Ming Chen (1), Jens Valdemar Thorvald Høgh (1), Jens Ulrik Nielsen (2), Janet Jonna Bentzen (1), Sune Dalgaard Ebbesen (1), Peter Vang Hendriksen (1), (1) Technical University of Denmark, Fuel Cells and Solid State Chemistry Division, Risø National Laboratory for Sustainable Energy; Roskilde/Denmark, (2) Topsoe Fuel Cell A/S, Nymøllevej 66, Lyngby/Denmark	09:00	Electrochemistry of Reformate-Fueled Anode-Supported SOFC (B1101) Alexander Kromp (1), André Leonide (1), André Weber (1), Ellen Ivers-Tiffée (1), (2), (1) Karlsruher Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany, (2) DFG Center for Functional Nanostructures (CFN), Karlsruher Institut für Technologie (KIT), Karlsruhe/Germany
09:15	4 kW Test of Solid Oxide Electrolysis Stacks with Advanced Electrode-Supported Cells (A1102) J.E. O'Brien (1), X. Zhang (1), R. C. O'Brien (1), G. K. Housley (1), L. Moore-McAteer (1), G. Tao (2) (1) Idaho National Laboratory; Idaho Falls/USA-ID, (2) Materials and Systems Research, Inc.; Salt Lake City/USA-UT	09:15	Catalytic properties of a Ni-based anode under dry reforming of methane (B1102) Cosimo Guerra (1), Andrea Lanzini (1), Pierluigi Leone (1), Massimo Santarelli (1), Nigel Brandon (2) (1) Department of Energetics, Politecnico di Torino; Torino/Italy, (2) Imperial College London, Department of Earth Science and Engineering; London/UK
09:30	Enhanced Performance and Durability of a High Temperature Steam Electrolysis stack (A1103) A. Chatroux, K. Couturier, M. Petitjean, M. Reyrier, A. Brevet, J. Mouglin, F. Lefebvre-Joud CEA-Grenoble, LITEN; Grenoble/France	09:30	Minimising the Sulphur Interactions with a SOFC Anode based on Cu-Ca Doped Ceria (B1103) Araceli Fuerte (1), Rita X. Valenzuela (1), María José Escudero (1), Loreto Daza (2), (1) Centro de Investigaciones Energéticas Medioambientales y Tecnológicas (CIEMAT); Madrid/Spain, (2) ICP-CSIC; Madrid/Spain
09:45	Electrolysis and Co-electrolysis performance of a SOEC short stack (A1104) Stefan Diethelm (1), Jan Van Herle (1), Dario Montinaro (2), Olivier Bucheli (3), Ecole Polytechnique Fédérale de Lausanne, STI-IGM-LENI, ME A2 435; Lausanne/Switzerland, (2) SOFCPOWER; Mezzolombardo/Italy, (3) Htceramix; Yverdon-les-bains/Switzerland	09:45	Gas Transport and Methane Internal-Reforming Chemistry in Ni-YSZ and Metallic Anode Supports (B1104) Amy E. Richards, Neal P. Sullivan, Colorado School of Mines, Colorado Fuel Cell Center, Mechanical Engineering Department; Golden/USA-CO
10:00	SOEC enabled Methanol Synthesis (A1105) John Bogild Hansen (1), Claus Friis Petersen (1), Ib Dybkjær (1), Jens Ulrik Nielsen (2), Niels Christiansen (2) (1) Haldor Topsoe A/S; Lyngby/Denmark, (2) Topsoe Fuel Cell A/S; Lyngby/Denmark	10:00	High-efficient biogas electrification by an SOFC-system with combined steam- & dry-reforming (B1105) Jana Oelze, Ralph-Uwe Dietrich, Andreas Lindermeier, Clausthaler Umwelttechnik-Institut GmbH; Clausthal-Zellerfeld/Germany
10:15	Direct and Reversible Solid Oxide Fuel Cell Energy Systems (A1106) Nguyen Q. Minh, Center for Energy Research, University of California, San Diego; La Jolla/USA-CA	10:15	Adiabatic prereforming of ultra-low sulfur diesel: Potential for marine SOFC-systems and experimental results (B1106) Pedro Nehter (1), Hassan Modarresi (1), Nils Kleinohl (2), John Bogild Hansen (3), Ansgar Bauschulte (2), Jörg vom Schloss (2), Klaus Lucka (2), (1) TOPSOE FUEL CELL; Lyngby/Denmark, (2) Oel Waerme-Institut GmbH; Lyngby/Denmark, (3) Halder Topsoe A/S; Lyngby/Denmark
10:30	Coffee Break – Ground Floor in the Exhibition		

12 _A	Luzerner Saal	12 _B	Auditorium
11:00	Cell and stack operation (A12)	11:00	Interconnects, coatings & seals (B12)
11:00	Chemical Degradation of SOFCs: External impurity poisoning + internal diffusion-related phenomena (A1201) Kazumari Sasaki (1), (2), (3), Kengo Haga (2), Tomoo Yoshizumi (2), H. Yoshitomi (2), K. Miyoshi (2), S. Taniguchi (1), Y. Shiratori (1), (2), (3), Kyushu Univ., (1) Intern. Research Center for Hydrogen Energy; Fukuoka/Japan, (2) Faculty of Engineering; Fukuoka/Japan, (3) Intern. Inst. for Carbon-Neutral Energy Research; Fukuoka/Japan	11:00	SOFC Stack with Composite Interconnect (B1201) Sergey Somov, Heinz Nabielek, Solid Cell, Inc.; Rochester/USA-NY
11:15	Effect of pressure variation on power density and efficiency of solid oxide fuel cells (A1202) Moritz Henke, Caroline Willlich, Christina Westner, Florian Leucht, Josef Kallo, K. Andreas Friedrich German Aerospace Center (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany	11:15	Recent Development in Pre-coating of Stainless Strips for Interconnects at Sandvik Materials Technology (B1202) Håkan Holmberg, Mats W Lundberg, Jörgen Westlinder AB Sandvik Materials Technology, Surface Technology R&D Center; Sandviken/Sweden
11:30	CFY-Stack Technology: from electrolyte supported cells to high efficiency SOFC-stacks (A1203) Stefan Megel (1), Mihails Kusnezoff (1), Nikolai Trofimenko (1), V. Sauchuk (1), J. Schilm (1), A. Michaelis (1), C. Bienert (2), M. Brandner (2), A. Venskutonis (2), S. Skrabbs (2), L.S. Sigi (2), (1) Fraunhofer Institute of Ceramic Technologies and Systems; Dresden/Germany, (2) PLANSEE SE Innovation Services; Reutte/Austria	11:30	Corrosion behaviour of steel interconnects and coating materials in solid oxide electrolysis cell (SOEC) (B1203) Ji Woo Kim (1), Cyril Rado (2), Aude Brevet (2), Seul Cham Kim (3), Yong Seok Choi (3), Karine Couturier (2), Florence Lefebvre-Joud (2), Kyu Hwan Oh (3), Ulrich F. Vogt (1), Andreas Züttel (1) (1) Swiss Federal Laboratories for Materials Science and Technology, Hydrogen and Energy; Dübendorf/Switzerland, (2) CEA-Grenoble, LITEN; Grenoble Cedex 9/France, (3) Seoul National University, Dept. of Materials Science and Engineering; Seoul/South Korea
11:45	Development of Robust and Durable SOFC Stacks (A1204) Rasmus G. Barfod, Kresten Juel Jensen, Thomas Heiredal-Clausen, Topsoe Fuel Cell; Lyngby/Denmark	11:45	Multifunctional nanocoatings on FeCr steels – influence on chromium volatilization and scale growth (B1204) J. Frotzheim, S. Canovic, R. Sachitanand, M. Nikumaa, J. E. Svensson The High Temperature Corrosion Centre, Chalmers University of Technology; Göteborg/Sweden
12:00	Long-term Testing of SOFC Stacks at Forschungszentrum Jülich (A1205) Ludger Blum, Ute Packbier, Izaak Vinke, L.G.J. (Bert) de Haart, Forschungszentr. Jülich GmbH, Inst. of Energy + Climate Research (IEK); Jülich/Germany	12:00	Characterization of a Cobalt-Tungsten Interconnect Coating (B1205) Anders Harthoej, The Technical University of Denmark; Lyngby/Denmark
12:15	Study on Durability of Flattened Tubular Segmented-in-Series Type SOFC Stacks (A1206) Kazuo Nakamura (1), Takaaki Somekawa (1), Kenjiro Fujita (1), K. Horiuchi (1), Y. Matsuzaki (1), S. Yamashita (1), H. Yokokawa (2), T. Horita (2), K. Yamaji (2), H. Kishimoto (2), M. Yoshikawa (3), T. Yamamoto (3), Y. Mugikura (3), N. Kasagi (4), N. Shikazono (4), K. Eguchi (5), T. Matsui (5), S. Watanabe (6), K. Sato (6), T. Hashida (6), T. Kawada (6), K. Sasaki (7), Y. Shiratori (7), (1) Tokyo Gas Co., Ltd., (2) Nat. Inst. of Advanced Industrial Science + Technology, (3) Central Research Inst. of Electric Power Industry, (4) The Univ. of Tokyo; Tokyo/Japan, (5) Univ. Kyoto/Japan, (6) Univ. Tohoku/Japan, (7) Univ. Kyushu/Japan	12:15	Barium-free sealing materials for high chromium containing alloys (B1206) Dieter Gödeke, Jens Suffner, SCHOTT Electronic Packaging GmbH, Product Division Glass; Landshut/Germany
12:30	Lunch – 2nd Floor on the Terrace		Coffee – Ground Floor in the Exhibition

Afternoon

Friday, June 29, 2012

Afternoon

13 _A	Luzerner Saal	13 _B	Auditorium
13:30	Stack integration, system operation and modelling (A13)	13:30	Seals (B13)
13:30	Coupling and thermal integration of a solid oxide fuel cell to a magnesium hydride tank (A1301) Baptiste Delhomme (1), (3), Andrea Lanzini (2), Gustavo Adolfo Ortigoza-Villalba (2), Paolo Squillari (2), Patricia De Rango (3), Simeon Nachev (3), Philippe Marty (1), Massimo Santarelli (2), (1) UJF-Grenoble 1 – Grenoble-INP – CNRS; Grenoble/France, (2) Politecnico di Torino, Dipartimento di Energetica; Torino/Italy, (3) Institut Néel – CRETA; Grenoble cedex/France	13:30	Synthesis and characterization of glass ceramic seals for solid oxide fuel cells (B1301) Mavial Jose Silva (1), Sonia R. H. de Mello Castanho (1), Signo Tadeu Reis (2). (1) Instituto de Pesquisas Energéticas e Nucleares-IPEN/USP; São Paulo/Brazil, (2) Saint-Gobain Innovative Materials; Northborough/USA-MA
13:45	Effects of Multiple Stacks with Varying Performances in SOFC System (A1302) Matti Noponen, Topi Korhonen, Wärtsilä, Fuel Cells; Espoo/Finland	13:45	Development of glass-ceramic sealants by a sol-gel route for an SOFC application (B1302) J. Puig (1), F. Ansart (1), P. Lenormand (1), J. Dailly (2), L. Antoine (3), R. Conradt (4), A. Pranger (4), S. Gross (5), Betriz Cela (5), (1) CIRIMAT; Toulouse cedex 9/France, (2) EDF/EIFER; Karlsruhe/Germany, (3) ADEME; Angers Cedex 01/France, (4) GHI, RWTH Aachen; Aachen/Germany, (5) FZJ; Jülich/Germany
14:00	CFCL SOFC system tested at GDF SUEZ CRIGEN – thermal cycles, Electric Vehicle charging, and ageing (A1303) Stéphane Hody, Krzysztof Kanawka GDF SUEZ, Research & Innovation Division, CRIGEN; Saint-Denis la Plaine cedex/France	14:00	Strength Evaluation of Multilayer Glass-Ceramic Sealants (B1303) Beatriz Cela (1), Sonja M. Gross (1), Dirk Federmann (1), Reinhard Conradt (2), (1) Forschungszentrum Jülich GmbH, Central Technology Division; Jülich/Germany, (2) RWTH-University Aachen, Department of Glass and Ceramic Composites, Institute of Mineral Engineering; Aachen/Germany
14:15	Modeling of the Dynamic Behavior of a Solid Oxide Fuel Cell System with Diesel Reformer (A1304) Michael Dragon, Stephan Kabelac Leibniz Universität Hannover, Institute for Thermodynamics; Hannover/Germany	14:15	Self-healing sealants as a solution for improved thermal cyclability of SOFC (B1304) Sandra Castanie (1), Daniel Coillot (1), François O Mear (1), Lionel Montage (1), Renaud Podor (2) (1) Université Lille Nord de France, Unité de Catalyse et Chimie du Solide; Villeneuve d'Ascq/France (2) CEA-CNRS-UM2-ENSCM, Institut de Chimie Séparative de Marcoule; Bagnols-sur-Cèze cedex/France
14:30	System Concept and Process Layout for a Micro-CHP Unit based on Low Temperature SOFC (A1305) Thomas Pfeifer, Laura Nousch, Wieland Beckert Fraunhofer Institute for Ceramic Technologies and Systems IKTS; Dresden/Germany	14:30	Long term stability of glasses in SOFC (B1305) Lars Christiansen, Jonathan Love, Thomas Ludwig, Nicolas Maier, David Selvey, Xiao Zheng, Ceramic Fuel Cells Limited; Victoria/Australia
14:45	Large SOFC Systems: Challenges and Implications of Using Multiple Stacks (A1306) Tero Hottinen Wärtsilä Finland Oy, Fuel Cells; Espoo/Finland	14:45	Impact of thermal cycling in dual-atmosphere conditions on the microstructural stability of reactive air brazed metal/ceramic joints (B1306) Jörg Brandenburg (1), Bernd Kuhn (1), Tilmann Beck (1), L. Singheiser (1), Moritz Pausch (2), Uwe Maier (2), Stefan Hornauer (2), (1) Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (IEK); Jülich/Germany, (2) ElringKlinger AG; Dettingen; Erms/Germany
15:00	Coffee Break – Ground Floor around Registration Desk, 1st Floor in front of Auditorium		

Afternoon

Friday, June 29, 2012

Afternoon

14 _A	Luzerner Saal
15:30	Plenary 4 – SOFC for Distributed Power Generation (A14)
15:30	Potential and impact of distributed power generation for Europe (A1401) Jonathan Lewis; London/UK

Afternoon

Friday, June 29, 2012

Afternoon

15 _A	Luzerner Saal
16:00	Plenary 5 – Closing Ceremony (A15)
16:00	Summary by the Chairwoman (A1501) Florence Lefebvre-Joud, CEA/DEHT/Liten; Grenoble/France
16:12	Information on Next EFCF: 4th European PEFC (including all low temperature fuel cells) and H2 Forum 2013 (A1502) Michael Spirig (1), to be announced, Olivier Bucheli (1), (1) European Fuel Cell Forum; Luzern/Switzerland
16:24	Hermann Göhr Award for the Best Paper (A1503) Norbert Wagner, German Aerospace Centre (DLR) and Zahner-Elektrik GmbH & Co. KG; Kronach/Germany
16:36	Friedrich Schönbein Award for the Best Poster, Best Science Contribution, Medal of Honour (A1504) Florence Lefebvre-Joud (1), Ulf Bossel (2), (1) CEA/DEHT/Liten; Grenoble/France. (2) European Fuel Cell Forum
16:48	Thank you and Closing by the Organizers (A1505) Olivier Bucheli, Michael Spirig, European Fuel Cell Forum; Luzern/Switzerland
17:00	End of Sessions – End of Conference

3_A Wednesday, June 27, 2012 Poster Session I – Club Room 3 – 8

Afternoon

Company & Major groups development status I (EU) A04

Overview of status in the EU and European Hydrogen and Fuel Cell Projects (A0407)

Marieke Reijdt, European Hydrogen Association (EHA); Brussels/Belgium

Company & Major groups development status II (Worldwide) A05

Approach to Industrial SOFC Production in Russia (A0507)

A. Rojdestvin (1), A. Stikhin (1), V. Fateev (2), (1) JSC TVEL; Moscow/Russia, (2) NRC, Kurchatov Institute

Cell and stack design I A07

Processing of graded anode-supported micro-tubular SOFCs via aqueous gel-casting (A0707)

M. Morales, M. E. Navarro, X. G. Capdevila, M. Segarra
Universitat de Barcelona, Centre DIOFMA, Departament de Ciència dels Materials i Enginyeria Metal; Barcelona/Spain

New Methods of Electrode Preparation for Micro-Tubular Solid Oxide Fuel Cells (A0708) K. S. Howe (1), A. R. Hanifi (2), K. Kendall (1), Thomas H. Etsell (2), Partha Sarkar (3), (1) University of Birmingham, Centre for Hydrogen and Fuel Cell Research; Birmingham/UK, (2) University of Alberta, Department of Chemical & Materials Engineering; Edmonton/Canada, (3) Alberta Innovates – Technology Futures, Environment & Carbon Management; Edmonton/Canada

Sol-Gel Process to Prepare Mesoporous Thin Films for Micro-SOFC (A0709)

Guillaume Müller (1), (4), Gianguido Baldinozzi (2), Marlu César Steil (3), Armelle Ringuedé (4), Christel Laberty-Robert (1), Clément Sanchez (1), (1) Université Pierre et Marie Curie, LCMCP, Laboratoire Chimie de la Matière Condensée de Paris; Paris/France, (2) CEA-CNRS-Ecole Centrale Paris, Matériaux fonctionnels pour l'énergie; Châtenay-Malabry/France, (3) UMR INP-CNRS-5279, Laboratoire d'Electrochimie et de Physicochimie des Matériaux et des Interfaces; Saint-Martin d'Hères/France, (4) UMR CNRS 7575, Chimie ParisTech, Laboratoire d'Electrochimie, Chimie des Interfaces et Modélisation pour l'Energie; Paris Cedex 05/France

Sr₂Fe_{1.5}Mo_{0.5}O_{6.8} as symmetrical electrode for micro SOFC (A0710) Iñigo Garbayo (1), Saranya Aruppukottai (2), Guilhem Dezanneau (3), Alex Morata (2), Neus Sabaté (1), Jose Santiso (4), Albert Tarancón (2), (1) Institute of Microelectronics of Barcelona (IMB-CNM, CSIC); Barcelona/Spain, (2) Catalonia Institute for Energy Research (IREC); Barcelona/Spain, (3) Laboratoire Structures Propriétés et Modélisation des Solides (SPMS – ECP); Barcelona/Spain (4) Research Centre of Nanoscience and Nanotechnology (CIN2, CSIC); Barcelona/Spain

Fabrication of cathode supported tubular SOFC through iso-pressing and co-firing route (A0711)

Tarasankar Mahata, Raja Kishora Lenka, Sathi R. Nair, Pankaj Kumar Sinha
Bhabha Atomic Research Centre, Energy Conversion Materials Section, Materials Group; Mumbai/India

2R-Cell™: A redox anode supported cell for an easy and safe SOFC operation (A0712)

Raphaël Ihringer, Fixcell Sàrl; Lausanne/Switzerland

Chemistry of Anodes in Solid Oxide Fuel Cells (A0713)

T. W. Pike (1), P. R. Slater (2), K. Kendall (1)
Univ. of Birmingham: School of (1) Chemical Engineering, (2) Chemistry; Birmingham/UK

Anode Morphology and Performance of Micro-tubular Solid Oxide Fuel Cells Made by Aqueous

Electrophoretic Deposition (A0714) J. S. Cherng (1), W. H. Chen (1), C. C. Wu (1), T. H. Yeh (2)
(1) Mingchi University of Technology, Department of Materials Engineering; Taipei/Taiwan ROC
(2) National Taiwan University of Science and Technology, Department of Mechanical Engineering; Taipei/Taiwan ROC

Performance of microtubular solid oxide fuel cells for the design and manufacture of a fifty watts stack

(A0715) Ana M. Ferriz (1), Joaquín Mora (1), Marcos Rupérez (1), Luis Correas (1), Miguel A. Laguna-Berbero (2), Victor Orea (2), (1) Foundation for the development of new hydrogen technologies in Aragón; Huesca/Spain, (2) University of Zaragoza, Materials Science Institute in Aragón; Zaragoza/Spain

Processing of Lanthanum-doped Strontium Titanate Anode Supports in Tubular Solid Oxide Fuel Cells (A0716)

Sean Babiniec, Brian Gorman, Neal P. Sullivan, Colorado School of Mines, Colorado Fuel Cell Center; Illinois/USA-CO

Cell and stack design II (Metal Supported Cells) A09

Recent Developments in Design and Processing of the SOFCroll Concept (A0907) Mark Cassidy, Aimerly Auxemery, Paul Connor, Hermenegildo Viana, John Irvine, University of St Andrews, School of Chemistry; St Andrews/UK

Infiltrated SrTiO₃/FeCr-based anodes for metal-supported SOFC (A0908) Peter Blennow, Bhaskar R. Sudireddy, Jimmi Nielsen, Trine Klemens, Åsa H. Persson, Karl Thydén, Technical University of Denmark, Fuel Cells and Solid State Chemistry Division, Risø National Laboratory for Sustainable Energy; Roskilde/Denmark

Break-down of Losses in High Performing Metal-Supported Solid Oxide Fuel Cells (A0909) Alexander Kromp (2), Jimmi Nielsen (1), Peter Blennow (1), Trine Klemens (1), André Weber (2), (1) Technical University of Denmark, Risø National Laboratory for Sustainable Energy, Fuel Cells and Solid State Chemistry Division; Roskilde/Denmark, (2) Karlsruhe Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany

Low Temperature Thin Film Solid Oxide Fuel Cells with Metal-Oxide Composite Anodes (A0910)

Yuto Takagija (2), Suhare Adam (1), Shiram Ramanathan (1), (1) Harvard University, Harvard School of Engineering and Applied Sciences; Cambridge/USA-MA, (2) Sony Corporation, Core Device Development Group; Kanagawa/Japan

8_A Thursday, June 28, 2012 Poster Session II – Club Room 3 – 8

Afternoon

Cell materials development I B04

Microstructural and electrochemical characterization of thin La_{0.8}Sr_{0.4}CoO_{3-δ} cathodes deposited by spray pyrolysis (B0407) O. Pecho (1), (2), M. Prestat (3), Z. Yang (3), J. Hwang (4), (5), J.-W. Son (4), L. Holzer (1), T. Hocker (1), J. Marczynski (3), L.J. Gauckler (3), (1) Zurich University of Applied Sciences (ZHAW), Institute for Computational Physics; Winterthur/Switzerland, (2) ETH Zurich, Institute for Building Materials; Zurich/Switzerland, (3) ETH Zurich, Nonmetallic Inorganic Materials Zurich/Switzerland, (4) Korea Institute of Science and Technology (KIST), High-Temperature Energy Materials Research Center; Seoul/South Korea, (5) Korea University, Department of Materials Science and Engineering; Seoul/South Korea

LaNi_{0.8}Fe_{0.4}O₃ cathode performance on Ce_{0.9}Gd_{0.1}O₂ electrolyte (B0408)

M. Nishi, T. Horita, K. Yamaji, H. Yokokawa, H. Kishimoto, T. Shimonosue, F. Wang, D. H. Cho, Manuel E. Brito
National Institute of Advanced Industrial, Science and Technology (AIST); Higashi/Japan

Compatibility and Electrochemical Behavior of La₂NiO_{4.8} on La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.2}O₃ (B0409)

Lydia Fawcett, John Kilner, Stephen Skinner, Department of Materials, Imperial College London; London/UK

Single Step Process for Cathode Supported half-cell (B0410)

Angela Gondolini (1), (2), Elisa Mercadelli (1), Paola Pinasco (1), Alessandra Sanson (1)
(1) National Council of Research, Institute of Science and Technology for Ceramics (ISTEC-CNR); Faenza (RA)/Italy
(2) University of Bologna, Department of Industrial Chemistry and Materials (INSTM); Bologna/Italy

Modified oxygen surface-exchange properties by nanoparticulate Co₂O₃ and SrO in La_{0.8}Sr_{0.4}CoO_{3-δ} thin-film cathodes (B0411)

Jan Hayd (1), (2), André Weber (1), Ellen Ivers-Tiffée (1), (2)
(1) Karlsruhe Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany
(2) Karlsruhe Institut für Technologie (KIT), DFG Center for Functional Nanostructures (CFN); Karlsruhe/Germany

La_{0.8}Sr_{0.2}Si_{0.26} coatings elaborated by DC magnetron sputtering for electrolyte application in

SOFC technology (B0412) P. Briois (1), S. Fourcade (2), F. Mauvy (2), J.C. Grenier (2), A. Billard (1)
(1) LERMPS-UTBM; Belfort cedex/France, (2) Univ. de Bordeaux; Bordeaux cedex/France

A review on thin layers processed by Atomic Layer Deposition for SOFC applications (B0413)

M. Cassir (1), A. Ringuedé (1), M. Tassé (1), B. Medina-Lotta (2), L. Niinistö (3), (1) LECIME, Laboratoire d'Electrochimie; Paris/France, (2) Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica; México/México, (3) Helsinki University of Technology (TKK), Laboratory of Inorganic and Analytical Chemistry; Helsinki/Finland

Triple Mixed e⁻/O₂/H⁺ Conducting (TMC) oxides as oxygen electrodes for H⁺-SOFC (B0414)

Alexis Grimaud, Fabrice Mauvy, Jean-Marc Bassat, Sébastien Fourcade, Mathieu Marroy, Jean-Claude Grenier
(1) Université de Bordeaux, CNRS, ICMCB; Pessac Cedex/France, (2) EIFER; Karlsruhe/Germany

SrMo_{1-x}Fe_xO_{3-δ} anodes for high performance solid-oxide fuel cells (B0415)

R. Martínez, J.A. Alonso, A. Aguadero, Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC); Madrid/Spain

Understanding the Relationship between Ink Rheology and Film Properties for screen-printed

Nickel/Scandia-Stabilized-Zirconia Anodes (B0416)
Mahendra R. Somalu, Nigel P. Brandon, Imperial College London, Department of Earth Science and Engineering; London/UK

Structural and Electrochemical Properties of Impregnated (La,Sr)(Ti,Mn)O_{3-δ} with CeO₂ and

Pd as Potential Anode Materials in SOFCs (B0417)
Jung Hyun Kim (1), Harald Schlegel (2), John T.S. Irvine (2), (1) Hanbat National University, Department of Applied Materials Engineering; Daejeon/South Korea, (2) University of St Andrews, School of Chemistry; St Andrews/Scotland UK

Low Temperature Preparation of LSGM Electrolyte-based SOFC by Aerosol Deposition (B0418)

Jong-Jin Choi, Joon-Hwan Choi, Dong-Soo Park,
Korea Institute of Materials Science, Functional Ceramics Group; Gyeongnam/South Korea

Electrolytes Materials for Solid Oxide Fuel Cells (B0419)

Venkataraman Thangadurai, University of Calgary, Department of Chemistry; Alberta/Canada

Electrochemical Study of Nano-composite Anode for Low Temperature Solid Oxide Fuel Cells (B0420)

Ghazanfar Abbas, Rizwan Raza, M. Ashraf Ch., Bin Zhuel,
Department of Physics, COMSATS Institute of Information Technology; Islamabad/Pakistan

Electrochemical performance of the perovskite-type Pr_{0.6}Sr_{0.4}Fe_{1-x}Co_xO₃ cathodes for ITSOFCs (B0421)

Ricardo Pinedo (1), Idolia Ruiz de Larramendi (1), Nagore Ortiz-Vitoriano (1), Jose Ignacio Ruiz de Larramendi (1), T. Ró (1), (2), (1) Universidad del País Vasco UPV/EHU, Departamento de Química Inorgánica; Bilbao/Spain, (2) CIC Energigune, Parque Tecnológico de Álava; Álava/Spain

Effect of Composition Ratio of Ni-YSZ Anodeon Distribution of Effective Three-Phase Boundary and

Power Generation Performance (B0422) Masashi Kishimoto, Kosuke Miyawaki, Hiroshi Iwai, Motohiro Saito, Hideo Yoshida, Kyoto University, Department of Aeronautics and Astronautics; Kyoto/Japan

Effect of Sr Content Variation on the Performance of La_{1-x}Sr_xCoO₃ Thin-film Cathodes Fabricated by

Pulsed Laser Deposition (B0423) Jaeyeon Hwang (1), (2), Heon Lee (2), Hae-Weon Lee (1), Jong-Ho Lee (1), Ji-Won Son (1), (1) High-Temperature Energy Materials Research Center, Korea Institute of Science and Technology; Seoul/South Korea, (2) Korea University, Department of Materials Science and Engineering, Seoul/Korea

Cell operation A10

Multilayer tape cast SOFC – Effect of anode sintering temperature (A1007) Anne Hauch, Christoph Birkel, Peter S. Jørgensen, Risø DTU, Fuel Cells and Solid State Chemistry Division; Roskilde/Denmark

Sulphur Poisoning of Anode-Supported SOFCs under Reformate Operation (A1008)

André Weber (1), Sebastian Dierickx (1), Alexander Kromp (1), Ellen Ivers-Tiffée (1), (2)
(1) Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruher Institut für Technologie (KIT); Karlsruhe/Germany
(2) DFG Center for Functional Nanostructures (CFN), Karlsruher Institut für Technologie (KIT), Karlsruhe/Germany

Degradation of a High Performance Cathode by Cr-Poisoning at OCV-Conditions (A1009)

Michael Kornely (1), Norbert H. Menzler (3), André Weber (1), Ellen Ivers-Tiffée (1), (2)
(1) Karlsruher Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany
(2) DFG Center for Functional Nanostructures (CFN), Karlsruher Institut für Technologie (KIT), Karlsruhe/Germany
(3) Forschungszentrum Jülich GmbH, Institut für Energie- und Klimaforschung (IEK-1); Jülich/Germany

Evaluation of the chemical and electrochemical effect of biogas main components and impurities on SOFC: first results (A1010) Krzysztof Kanawka (1), (2), Stéphane Hody (1), André Chatroux (3),

Pierre Castellì (3), Julie Mouglin (3), (1) GDF SUEZ, Research & Innovation Division, CRIGEN; Saint-Denis la Plaine cedex/France, (2) Université de Versailles, UniverSud Paris, Chaire Internationale Econoving; Guyancourt Cedex/France, (3) CEA-Grenoble/LITEN; Grenoble Cedex 9/France

Study of Fuel Utilization on Anode Supported Single Chamber Fuel Cell (A1011) Damien Rembelski, Jean-Paul Viricelle, Lionel Combemale, Mathilde Rieu, Ecole Nationale Supérieure des Mines de Saint Etienne; Saint Etienne/France

Anode-supported single-chamber SOFC for energy production from exhaust gases (A1012)

Pauline Briault (1), Jean-Paul Viricelle (1), Mathilde Rieu (1), Richard Laucournet (2), Bert, Morel (2), (1) Ecole Nationale Supérieure des Mines de Saint-Etienne; Saint Etienne/France, (2) CEA-LITEN; Grenoble cedex 9/France

Electrochemical Performance and Carbon-Tolerance of $\text{La}_{0.75}\text{Sr}_{0.25}\text{Cr}_{0.5}\text{Mn}_{0.5}\text{O}_{3-x} - \text{Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{1.95}$ Composite Anode for Solid Oxide Fuel Cells (SOFCs) (A1013) Junghee Kim, Ji-Heun Lee, Kyung Joong Yoon, Jong-Ho Lee, Hae-Ryung Kim, Hae-Weon Lee, Korea Institute of Science and Technology, High-Temperature Energy Materials Research Center; Seoul/South Korea

Chromium Poisoning Mechanism of $(\text{La}_{0.6}\text{Sr}_{0.4})(\text{Co}_{0.8}\text{Fe}_{0.2})\text{O}_3$ Cathode (A1014) Do-Hyung Cho, Teruhisa Horita, Haruo Kishimoto, Katsuhiko Yamaji, Manuel E. Brito, Mina Nishi, Taro Shimonosono, Fangfang Wang, Harumi Yokokawa, National Institute of Advanced Industrial Science and Technology (AIST); Ibaraki/Japan

Cell testing: challenges and solutions (A1015) Christian Dosch (1), Mihails Kusnezoff (1), Stefan Megel (1), Nikolai Trofimenko (1), Alexander Michaelis (1), Johannes Steiner (2), Christian Wierprecht (2), Mathias Bode (2), (1) Fraunhofer Institute of Ceramic Technologies and Systems; Dresden/Germany, (2) FuelCon AG; Magdeburg-Barleben/Germany

Diagnostic, advanced characterisation and modelling II B10

3D Quantitative Characterization of Nickel-Yttria-stabilized zirconia Solid Oxide Fuel Cell anode

Microstructure Evolution in Discharge (B1007) Zhenjun Jiao, Naoki Shikazono, Nobuhide Kasagi, University of Tokyo, Institute of Industrial Science; Tokyo/Japan

Evaluation of fuel utilization performance of intermediate-temperature-operating solid oxide fuel cell power-generation unit (B1008) Kotoe Mizuki, Masayuki Yokoo, Himeko Orui, Kimitaka Watanabe, Katsuya Hayashi, Ryuichi Kobayashi, NIT Energy and Environment Systems Laboratories; Kanagawa/Japan

Direct Measurement of Oxygen Diffusion along YSZ/MgO(100) Interface using 180 and High Resolution SIMS (B1009) Kiho Bae (1), (2), Kyung Sik Son (1), Joong Sun Park (3), Fritz B. Prinz (3), Ji-Won Son (2), Joon Hyung Shim (1), (1) Korea University, Department of Mechanical Engineering; Seoul/South Korea, (2) Korea Institute of Science and Technology; Seoul/South Korea, (3) Stanford University; Department of Mechanical Engineering; Stanford/USA-CA

CO Oxidation at the SOFC Ni/YSZ Anode: Langmuir-Hinshelwood and Mars-van-Krevelen versus Eley-Rideal Reaction Pathways (B1010) Alexandr Gorski (1), Vitaliy Yurkiv (2), (3), Wolfgang G. Bessler (2), (3), Hans-Robert Volpp (4), (1) Polish Academy of Sciences, Institute of Physical Chemistry; Warsaw/Poland, (2) German Aerospace Center (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany, (3) Universität Stuttgart, Institute of Thermodynamics and Thermal Engineering (ITW); Stuttgart/Germany, (4) Universität Heidelberg, Institute of Physical Chemistry (PCI); Heidelberg/Germany

Electrochemical Impedance Modeling of Reformate-Fuelled Anode-Supported SOFC (B1011)

Alexander Kromp (1), Helge Geisler (1), André Weber (1), Ellen Ivers-Tiffée (1), (2)
(1) Karlsruher Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany
(2) DFG Center for Functional Nanostructures (CFN), Karlsruher Institut für Technologie (KIT); Karlsruhe/Germany

Equivalent Circuit Models for LSM/8YSZ-Cathodes (B1012) Michael Kornely (1), André Weber (1) und

Ellen Ivers-Tiffée (1), (2), (1) Karlsruher Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Karlsruhe/Germany, (2) DFG Center for Functional Nanostructures (CFN), Karlsruher Institut für Technologie (KIT); Karlsruhe/Germany

Thermal diffusivities of $\text{La}_{0.9}\text{Sr}_{0.1}\text{Co}_{1-x}\text{Fe}_{0.2-3x}$ at high temperatures under controlled atmospheres (B1013)

YuCheol Shin (1), Atsushi Unemoto (2), Shin-ichi Hashimoto (1), Koji Amezawa (1), Tatsuya Kawada (1), (1) Tohoku University, A Graduate School of Environmental Studies; Tohoku/Japan, (2) Tohoku University, IMRAM; Sendai/Japan

Partial electronic conductivity measurement in Solid Oxide Electrolytes used for SOFCs (B1014)

Odile Bohne, Veyis Gunes, Jean-Yves Botquelgen, G. Corbel, P. Lacroix, M. Caldes (1), A. Belous (2), K. Kravchik (2) Université du Maine, Laboratoire des Oxydes et Fluorures UMR 6010 CNRS, Institut des Molécules et Matériaux du Mans (3M); Le Mans Cedex 9/France

Nanostructure Gd-CeO₂ LT-SOFC electrolyte by aqueous tape casting (B0424)

Ali Akbari-Fakhraei, Mangalaraja Ramalinga Viswanathan
Department of Materials Engineering, University of Conception; Concepcion/Chile

Effect of Ni infiltration on hydrogen oxidation and H₂S poisoning of Au-GDC anodes (B0425)

Behzad Mirfakhraei, Scott Paulson, Venkataraman Thangadurai, Viola Birss
Chemistry Department, Faculty of Science, University of Calgary; Calgary AB/Canada

Evaluation of MoNi-CeO₂ Cermet as IT-SOFC Anode using ScSZ, SDC and LSGM electrolytes (B0426)

María José Escudero (1), Ignacio Gómez de Parada (1), (2), Araceli Fuerte (1), Loreto Dazaá (3)
(1) Centro de Investigaciones Energéticas Medioambientales y Tecnológicas (CIEMAT); Madrid/Spain
(2) Ciudad Universitaria de Cantoblanco, UAM, Madrid/Spain, (3) ICP-CSIC, Campus Cantoblanco; Madrid/Spain

Investigation of the electrochemical stability of Ni-infiltrated porous YSZ anode structures (B0427)

Parastoo Keyvanfar, Scott Paulson, Viola Birss
Chemistry Department, Faculty of Science, University of Calgary; Calgary AB/Canada

High Electrochemical Performance of Mesoporous NiO-CGO as Anodes for IT-SOFC (B0428)

L. Almar (1), B. Colleforms (1), L. Yedra (2), S. Estradé (2), F. Peiró (2), T. Andreu (1), A. Morata (1), A. Tarancón (1)
(1) Catalonia Institute for Energy Research (IREC), Department of Advanced Materials for Energy; Barcelona/Spain
(2) University of Barcelona, Department d'Electrònica; Barcelona/Spain

Synthesis of Lanthanum Silicate Oxyapatite by Using Na₂SiO₃ Waste Solution as Silica Source (B0429)

Daniel Ricco Elias, Sabrina L. Lira, Mayara R. S. Paiva, Sonia R. H. Mello-Castanho, Chieko Yamagata
University of São Paulo, Nuclear and Energy Research Institute; São Paulo/Brazil

Layered Ruddlesden-Popper La_{n+1}Ni₂O_{3n+1} (n = 1, 2 and 3) Epitaxial Films as Solid Oxide Fuel Cell cathodes (B0430)

Kuan-Ting Wu, Stephen Skinner, Yeong-Ah Soh, Department of Materials, Imperial College London; London/UK

Prospects and Challenges of the Solution Precursor Plasma Spray Process to Develop Functional Layers for Fuel Cell Applications (B0431) Claudia Christenn, Zeynep Ilhan, Asif Ansar

German Aerospace Center (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany

Tailoring SOFC cathodes conduction properties by Mixed Ln-doped ceria/LSM (B0432)

María Balaguer, Cecilia Solís, Laura Navarrete, Vicente B. Vert, José M. Serra
Universidad Politécnica de Valencia; Instituto de Tecnología Química; Valencia/Spain

Fabrication and Electrical Characterization of RF-Sputtered Gadolinium-Doped Ceria Thin-Film at Low Temperatures (B0433) Sun Woong Kim, Gyeong Man Choi, Pohang University of Science and Technology (POSTECH),

Fuel Cell Research Center and Department of Materials Science and Engineering; Pohang/South Korea

High Energy Ball Milling for dense GDC barrier layers (B0434)

Mariangela Bellucci, Franco Padella, Stephen J. McPhail, ENEA, C.R. Casaccia; Rome/Italy

Internal stress aided co-sintering for wavy type of SOFC fabrication (B0435)

Indae Choi, Jung-sik Kim, Automotive Engineering Department of Loughborough University; Loughborough/UK

Strontium-Doped Nanostructural Lanthanum Manganite (B0436)

H. Tamaddon (1), A. Maghsoudipour (1), (1) Ceramics Department, Materials and Energy Research Center; Tehran/Iran

Diagnostic, advanced characterisation and modelling I B05

3-D Multi-scale Imaging and Modelling of SOFCs (B0508)

Farid Tariq (1), Paul Shearing (2), Vladimir Yufit (1), Qiong Cai (1), Khalil Rhazaoui (1), Alan Atkinson (1), Nigel Brandon (1)
(1) Imperial College London; London/UK, (2) University College London; London/UK

Synthesis and In Situ Studies of Cathodes for Solid Oxide Fuel Cells (B0509)

Russell Woolley, Imperial College London; London/UK

Quantification of Ni/YSZ-Anode Microstructure Parameters derived from FIB-tomography (B0510)

Jochen Joos (1), Moses Ender (1), Ingo Rotscholl (1), André Weber (1), Norbert H. Menzler (3), Ellen Ivers-Tiffée (1), (2)
(1) Karlsruher Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Jülich/Germany
(2) Karlsruher Institut für Technologie (KIT), DFG Center for Functional Nanostructures (CFN); Karlsruhe/Germany
(3) Forschungszentrum Jülich GmbH, Institut für Energie- und Klimaforschung (IEK-1); Jülich/Germany

Evolution of Microstructural Parameters of Solid Oxide Fuel Cell Anode during Initial Discharge Process (B0511) Xiaojun Sun, Zhenjun Jiao, Gyeonghwan Lee, Koji Hayakawa, Kohei Okita, Naoki Shikazono, Nobuhide Kasagi

University of Tokyo, Institute of Industrial Science; Tokyo/Japan

Cation Diffusion Behavior in the LSCF/GDC/YSZ system (B0512)

Fangfang Wang, Manuel E. Brito, Katsuhiko Yamaji, Haruo Kishimoto, Taro Shimonosono, Mina Nishi, Do-Hyung Cho, Teruhisa Horita, Harumi Yokokawa, National Institute of Advanced Industrial Science and Technology (AIST); Tsukuba/Japan

Long-term Oxygen Exchange Kinetics of La- and Nd-Nickelates for IT-SOFC Cathodes (B0513)

Andreas Egger, Werner Sitte, Montanuniversität Leoben, Chair of Physical Chemistry; Leoben/Austria

Porous YSZ Structure observed in YSZ-LSM composite (B0514)

Na Li, Manoj K. Mahapatra, Prabhakar Singh
Center for Clean Energy Engineering, University of Connecticut; Storrs/USA-CT

Electrochemical Impedance Spectroscopy (EIS) on Pressurized SOFC (B1015)

Christina Westner (1), Caroline Willich (1), Moritz Henke (1), Florian Leucht (1), Josef Kallo (1), Uwe Maier (2), K. Andreas Friedrich (1), (1) German Aerospace Centre (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany, (2) ErlingKlinger AG; Dettingen, Erms/Germany

Impedance Simulations of SOFC LSM/YSZ Cathodes with Distributed Porosity (B1016)

Antonio Bertei, Antonio Barbucci, M. Paola Carpanese, Massimo Viviani, Cristiano Nicoletta
University of Pisa, Department of Chemical Engineering; Pisa/Italy

A flexible modeling framework for multiple phase management in SOFCs and other electrochemical devices (B1017)

Jonathan P. Neidhardt (1), (2), David N. Fronczek (1), Thomas Jahnke (1), Timo Danner (1), (2), Birger Horstmann (1), (2), Wolfgang G. Bessler (1), (2), (1) German Aerospace Centre (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany, (2) Stuttgart University, Institute of Thermodynamics and Thermal Engineering (ITW); Stuttgart/Germany

Surface Chemistry Studies and Contamination Processes at the Anode TPB in SOFCs using Ab-initio Calculations (B1018)

Michael Parkes (1), Greg Offer (1), Nicholas Harrison (2), Nigel Brandon (1), (1) Imperial College London, Department of Earth Science and Engineering; London/UK, (2) Department of Chemistry

Electrical and Mechanical Characterization of $\text{La}_{0.85}\text{Sr}_{0.15}\text{Ga}_{0.80}\text{Mg}_{0.20}\text{O}_{3-d}$ Electrolyte for SOFCs using Nanoindentation Technique (B1019)

M. Morales (1), J.J. Roa (2), A. Moure (3), J. Tartaj (3), M. Segarra (1), (1) Universitat de Barcelona, Centre DIOPMA, Departament de Ciència dels Materials i Enginyeria Metallúrgica, Facultat de Química; Barcelona/Spain, (2) CNRS-Université de Poitiers-ENSMA, Institute Prisme. Laboratoire de Physique et Mécanique des Matériaux, Futuroscope Chasseneuil Cedex/France, (3) Instituto de Cerámica y Vidrio (CSIC); Madrid/Spain

Dynamic Performances of Solid Oxide Fuel Cells (B1020)

ThinhX. Ho, Department of Fluid Mechanics, The Hochiminh City University of Technology; Hochiminh City/Vietnam

A Model of Anodic Operation for a Solid Oxide Fuel Cell Using Boundary Layer Flow (B1021)

Jamie Sandells, Jamal Uddin, Stephen Decent, Department of Applied Mathematics, University of Birmingham; Birmingham/UK

Numerical Analysis on Dynamic Behavior of a Solid Oxide Fuel Cell with a Power Output Control Scheme: Study on fuel starvation under load-following operation (B1022)

Yosuke Komatsu (1), Shinji Kimijima (1), Janusz S. Szmyd (2), (1) Shibaura Institute of Technology; Saitama/Japan, (2) AGH – University of Science and Technology; Krakow/Poland

3-D Resistance Modeling of Solid Oxide Fuel Cell Electrodes (B1023)

Khalil Rhazaoui (1), Qiong Cai (1), Claire Adjiman (2), Nigel Brandon (1), (1) Imperial College of London, Department of Earth Science and Engineering; London/UK, (2) Imperial College of London, Department of Chemical Engineering, Centre for Process Systems Engineering; London/UK

Experimental test plan and data analysis based on the Design of Experiment methodology (B1024)

Angelo Esposito, European Institute for Energy Research (EIFER); Karlsruhe/Germany

Performance Artifacts in SOFC Button Cells Arising from Cell Setup and Fuel Flow Rates (B1025)

Chaminda Perera (1), Stephen Spencer (2), (1) University of Houston, College of Technology; Houston/USA-TX, (2) Ohio University; Athens/USA-OH

Modeling of Current Oscillations in Solid Oxide Fuel Cells (B1026)

Jonathan Sands, David Needham, Jamal Uddin, University of Birmingham, Schools of Mathematics and Chemical Engineering; Birmingham/UK

Parametric Study of Single-SOFCs on Artificial Neural Network Model by RSM Approach (B1027)

Shahriar Bozorgmehr (1), Mohsen Hamed (2), Arash Haghparast Kashani (1), (1) Niroo Research Institute, Renewable Energy Department; Tehran/Iran, (2) School of Mechanical Engineering; Tehran/Iran

Electronic Structure in Degradation on SOFC (B1028)

Tzu-Wen Huang, Artur Braun, Thomas Graule
Laboratory for High Performance Ceramics, Empa, Swiss Federal Laboratories for Materials Science and Technology; Dübendorf/Switzerland

CFD evaluation of SOFC performances with different fuels (B1029)

L. Fan, P.V. Aravind, E. Dimitriou, M. J. B. M. Pourquie, A. H. M. Verkoijen, Department of Process & Energy, Delft University of Technology; Delft/Netherlands

A numerical analysis of the effect of a porosity gradient on the anode in a planar solid oxide fuel cell (B1030)

Chung Min An (1), Andreas Haffelin (2), Nigel M. Sammes (1), Pohang University of Science and Technology, department of chemical engineering; Gyeongbuk/South Korea, (2) Karlsruhe Institute of Technology (KIT), department of Physics; Enz/Germany

SOEC cell and stack operation**A11****Advanced Electrolyzers for Hydrogen Production with Renewable Energy Sources (A1107)**

Olivier Bucheli (1), Florence Lefebvre-Joud (2), Floriane Petitpas (3), Martin Roeb (4), Manuel Romero (5), (1) HTCeramic SA; Yverdon-les-Bains/Switzerland, (2) CEA Grenoble/France, (3) EIFER; Karlsruhe/Germany, (4) DLR; Köln/Germany, (5) IMDEA; Madrid/Spain

Pressurized Testing of Solid Oxide Electrolysis Stacks with Advanced Electrode-Supported Cells (A1108)

J. E. O'Brien (1), X. Zhang (1), R. C. O'Brien (1), G. K. Housley (1), K. DeWall (1), L. Moore-McAteer (1), G. Tao (2) (1) Idaho National Laboratory; Idaho Falls/USA-ID, (2) Materials and Systems Research, Inc.; Salt Lake City/USA-UT

Model Development and System Design of a Novel Solid Oxide Flow Battery System for Grid-Energy Storage (A1109)

Chris Wendel, Robert Braun, Colorado School of Mines, Department of Mechanical Engineering, College of Engineering and Computational Sciences; Golden/USA-CO

SOEC cell material development**B07****Study of the electrochemical behavior of an electrode-supported cell for the electrolysis of water vapor at high temperature (B0707)**

Aziz Nechache, Armelle Ringuède, Michel Cassir
Chimie des Interfaces et Modélisation pour l'Énergie, Laboratoire d'Electrochimie; Paris Cedex/France

Compilation of CFD Models of Various Solid Oxide Electrolyzers Analyzed at the Idaho National Laboratory (B0708)

Grant Hawkes, James O'Brien, Idaho National Laboratory; Idaho/USA-ID

Outcome of the Relhy project: Towards Performance and Durability of Solid Oxide Electrolyser Stacks (B0709)

Florence Lefebvre-Joud, M. Petitjean, J. Bowen, A. Brisse, N. Brandon, J. U. Nielsen, J. B. Hansen, D. Vanucci
CEA-LITEN; Grenoble/France

Advanced Materials for SOFC and SOEC Applications (B0710)

Andreas Glauche (1), Georg Erl (1), Thomas Betz (1), Agnes Baumgärtner (2), Martin Ise (2), André Leonide (2) (1) Kerafol GmbH; Eschenbach i. d. Opf./Germany, (2) Siemens AG; Erlangen/Germany

Nanopowders for reversible oxygen electrodes in SOFC and SOEC (B0711)

Oddgeir Randa Hegglund (1), (2), Ivar Wærnhus (1), Bodil Holst (2), Crina Ilea (1), (2) (1) Prototech AS; Bergen/Norway, (2) University of Bergen, Institute for Physics and Technology; Bergen/Norway

Co-Electrolysis of Steam and Carbon Dioxide in Solid Oxide Electrolysis Cell with Ni-Based Cermets: Performance and Characterization (B0712)

Marina Lomberg, Gregory Offer, John Kilner, Nigel Brandon, Imperial College London, Energy Futures Lab; London/UK

Detailed Study of an Anode Supported Cell in Electrolyzer Mode under Thermo-Neutral Operation (B0713)

Jean-Claude Njodzefon (1), Dino Klotz (1), Norbert H. Menzler (3), Andre Weber (1), Ellen Ivers-Tiffée (1), (2) (1) Karlsruhe Institut für Technologie (KIT), Institut für Werkstoffe der Elektrotechnik (IWE); Jülich/Germany (2) Karlsruhe Institut für Technologie (KIT), DFG Center for Functional Nanostructures (CFN); Karlsruhe/Germany (3) Forschungszentrum Jülich GmbH, Institut für Energie- und Klimaforschung (IEK-1)

Development of a solid oxide electrolysis test stand (B0714)

James Watton, Aman Dhir, Bushra Al Duri, Kevin Kendall, University of Birmingham, Chemical Engineering; Birmingham/UK

CFD simulation of a reversible solid oxide microtubular cell (B0715)

María García-Camprubi (1), Miguel Laguna-Bercero (2), Norberto Fuego (1) (1) University of Zaragoza and LITEC (CSIC), Fluid Mechanics Group; Zaragoza/Spain (2) CSIC-Universidad de Zaragoza, Instituto de Ciencia de Materiales de Aragón, ICMA; Zaragoza/Spain

Cell materials development II (IT & Proton Conducting SOFC)**B09****Synthesis and electrochemical characterization of T⁺ based cuprate as a cathode material for solid oxide fuel cell (B0907)**

Akshaya K. Satapathy, J.T.S. Irvine, University of St Andrews, School of Chemistry; St Andrews/UK

The Effect of Transition Metal Dopants on the Sintering and Electrical Properties of Cerium Gadolinium Oxide (B0908)

Samuel Taub, John A. Kilner, Alan Atkinson, Imperial College London, Department of Materials; London/UK

Enhancement of Ionic Conductivity and Flexural Strength of Scandia Stabilized Zirconia by Alumina Addition (B0909)

Cunxin Guo, Weiguo Wang, Jianxin Wang, Chinese Academy of Sciences, Ningbo Institute of Material Technology and Engineering, Division of Fuel Cell and Energy Technology; Ningbo/China

Development of proton conducting solid oxide fuel cells produced by plasma spraying (B0910)

Zeynep İlhan, Asif Ansar, German Aerospace Center (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany

Development of Solid Oxide Fuel Cells based on $\text{Ba}_{0.3}\text{Ti}_{0.7}\text{O}_{2.85}$ (BIT07) electrolyte (B0911)

Anne Morandi (1), Qingxi Fu (1), Mathieu Marrony (1), Julian Dailly (1), Jean-Marc Bassat (2), Olivier Joubert (3) (1) European Institute for Energy Research (EIFER); Karlsruhe/Germany (2) Institut de Chimie de la Matière Condensée de Bordeaux (ICMCB); Pessac cedex/France (3) Institut des Matériaux Jean Rouxel (IMN); Nantes cedex 3/France

Anode Supported Microtubular SOFCs Using Ir,Ru/YSZ Catalyst Layers With Nano LSGM Electrolytes and LaCo₃ Cathodes Operating on Methane (B0912)

Nikkia M. McDonald, Stuart Blackburn, Robert Steinberger, Aman Dhir, University of Birmingham, Centre for Hydrogen and Fuel Cell Research; Birmingham/UK

Challenges of carbonate/oxide composite electrolytes for Solid Oxide Fuel Cells (B0913)

A. Ringuède (1), B. Medina-Lott (1), (2), C. Lagergren (3), M. Cassir (1) (1) LECIME, Laboratoire d'Electrochimie, Chimie des Interfaces et Modélisation pour l'Énergie; Paris Cedex 05/France (2) Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica; México/México (3) KTH Chemical Science and Engineering, Department of Chemical Engineering and Technology; Stockholm/Sweden

Optimisation of anode/electrolyte assemblies for SOFC based on $\text{Ba}_{0.3}\text{Ti}_{0.7}\text{O}_{2.85}$ (BIT07) Ni/BIT07 using interfacial anodic layers (B0914)

M. Benamira, M. Letilly, M. T. Caldes, O. Joubert, A. Le Gal La Salle
Université de Nantes CNRS, Institut des Matériaux Jean Rouxel (IMN); Nantes Cedex 3/France

Metallic nanoparticles and proton conductivity: improving proton conductivity of $\text{BaCe}_{0.9}\text{Y}_{0.1}\text{O}_{3-\delta}$ and $\text{La}_{0.75}\text{Sr}_{0.25}\text{Cr}_{0.5}\text{Mn}_{0.5}\text{O}_{3-\delta}$ by Ni-doping (B0915)

M. T. Caldes (1), K. V. Kravchik (1), M. Benamira (1), N. Besnard (1), O. Joubert (1), O. Bohneke (2), V. Gunes (2), N. Dupré (1), (1) Université de Nantes, Institut des Matériaux Jean Rouxel (IMN); Nantes/France, (2) Université du Maine, Institut de Recherche en Ingénierie Moléculaire et Matériaux Fonctionnels (FR CNRS 2575), Laboratoire des Oxydes et Fluorures (UMR 6010 CNRS)

Cell and stack operation

A12

SOFC Module for Experimental Studies (A1207) Ulf Bossel, ALMUS AG; Oberrohrdorf/Switzerland

Post-Test Characterisation of SOFC Short-Stack after 19000 Hours Operation (A1208) Vladimir Shemet (1), Peter Batfalsky (2), Frank Tietz (1), Jürgen Malzbender (1), (1) Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (IEK); Jülich/Germany, (2) FZJ, Central Department of Technology, ZAT; Jülich/Germany

Solid Oxide Fuel Cells under Thermal Cycling Conditions (A1209)

Andrea Janics (1), Jürgen Karl (2), (1) Institute of Thermal Engineering, Graz University of Technology; Graz/Austria, (2) University of Erlangen-Nuremberg, Chair for Energy Process Engineering; Nuremberg/Germany

500 W-Class Solid Oxide Fuel Cell (SOFC) Stack Operating with CH₄ at 650 C Developed by Korea Institute of Science and Technology (KIST) and Ssangyong Materials (A1210) Kyung Joong Yoon (1), Hae-Ryoung Kim (1), Jong-Ho Lee (1), Hae-June Je (1), Byung-Kook Kim (1), Ji-Won Son (1), Hae-Weon Lee (1), Jun Lee (2), Ildoo Hwang (2), Jae Yuk Kim (2), (1) Korea Institute of Science and Technology, High-Temperature Energy Materials Research Center; Seoul/South Korea, (2) Ssangyong Materials, R&D Center for Advanced Materials; Daegu/South Korea

Dynamic Evaluation of Ni/YSZ Anode-Supported and Electrolyte-Supported Cells (A1211)

Pin Shen, Wei Guo Wang, Jianxin Wang, Changrong He, Yi Zhang, Division of Fuel Cell and Energy Technology, Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences; Ningbo/China

Manufacturing and Testing of Anode-Supported Planar SOFC Stacks and Stack Bundles (A1212)

Xinyan Lv, Le Jin, Jinqi Niu, Wu Liu, Cheng Xu, Wanbing Guo, Wei Guo Wang, Fuel Cell and Energy Technology Division Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences; Ningbo/China

Effects of Current Polarization on Stability and Performance Degradation of La_{0.6}Sr_{0.4}Co_{0.8}Fe_{0.2}O₃ Cathodes of Intermediate Temperature Solid Oxide Fuel Cells (A1213) Yihui Liu, Bo Chi, Jian Pu, Li Jian,

Huazhong University of Science and Technology, School of Materials Science and Engineering, State Key Laboratory of Material Processing and Die & Mould Technology; Hubei/China

Fabrication and performance evaluation based on external gas manifold planar SOFC stack design (A1214)

Jian Pu, Dong Yan, Dawei Fang, Bo Chi, Jian Li, Jian Li, Huazhong University of Science and Technology, School of Materials Science and Engineering, State Key Laboratory of Material Processing and Die & Mould Technology; Wuhan/China

Interconnect cells tested in real working conditions to investigate structural materials of a stack for SOFC (A1215) Paolo Piccardo (1), Massimo Viviani (1), Francesco Perrozzini (1), Roberto Spotorino (1); Syed-Asif Ansar (2), Rémi Costa (2), DCCl, Università degli Studi di Genova; Genoa/Italy, (2) German Aerospace Center, Institute of Technical Thermodynamics; Stuttgart/Germany

Characterization of SOFC Stacks for Stationary and Mobile Applications (A1216) Michael Lang (1), Christina Westner (1), Andreas Friedrich (1), Thomas Kiefer (2), (1) German Aerospace Centre (DLR), Institute of Technical Thermodynamics; Stuttgart/Germany, (2) ElingKlinger AG; Dettingen, Erms/Germany

Experimental evaluation of the operating parameters impact on the performance of anode-supported solid oxide fuel cell (A1217) Hamed Aslannejad, Hamed Mohebbi, Amir Hosein Ghobadzaadeh, Moloud Shiva Davari, Masoud Rezaie, Niroo Research Institute; Tehran/Iran

Round Robin testing of SOFC button cells – towards a harmonized testing format (A1218) Stephen J.

MCPhal (1), Giovanni Cinti (2), Gabriele Discepoli (2), Daniele Penchini (2), Annarita Contino (3), Stefano Modena (3), (1) ENEA; Rome/Italy, (2) University of Perugia, FCLAB; Perugia/Italy, (3) SOFCpower S.r.l.; Mezzolombardo/Italy

Stack integration, system operation and modelling

A13

System Integration of Micro-Tubular SOFC for a LPG-Fueled Portable Power Generator (A1307)

Thomas Pfeifer, Markus Barthel, Dorothea Männel, Stefanie Koszyk Fraunhofer Institute for Ceramic Technologies and Systems IKTS; Dresden/Germany

System Analysis of Anode Recycling Concepts (A1308) Ludger Blum (1), Robert Deja (1), Roland Peters (1), Jari Pennanen (2), Jari Kiviaho (2), Tuomas Hakala (3), (1) Forschungszentrum Jülich GmbH; Jülich/Germany,

(2) VTT, Technical Research Centre of Finland; Espoo/Finland, (3) Wartsila Finland Oy; Espoo/Finland

A model-based approach for multi-objective optimization of solid oxide fuel cell systems (A1309)

Sebastian Reuber (1), Olaf Strelow (2), Achim Dittmann (3), (1) Fraunhofer Institute for Ceramic Technologies and Systems (IKTS); Dresden/Germany, (2) University of Applied Sciences Giessen; Giessen/Germany, (3) Technical University of Dresden (TUD); Dresden/Germany

Portable LPG-fueled microtubular SOFC (A1310) Sascha Kuehn (1), Lars Winkler (1), Stefan Käding (1),

Thomas Pfeifer (2), (1) eZelleron GmbH; Dresden/Germany, (2) Fraunhofer Institute for Ceramic Technologies and Systems (IKTS); Dresden/Germany

Experimental characterization of a μ -CHP unit based on SOFC stack (A1311)

Angelo Esposito, European Institute for Energy Research (EIFER); Karlsruhe/Germany

SOFC System Model and SOFC-CHP Competitive Analysis (A1312)

Buyun Jing, United Technologies Research Center (China), Ltd.; Shanghai/China

SOFC stack modelling in SUAV Project (A1313) Paulina Pianko-Oprych, Zdzislaw Jaworski, Barbara Zakrzewska

West Pomeranian University of Technology, Faculty of Chemical Technology and Engineering, Institute of Chemical Engineering and Environmental Protection Processes; Szczecin/Poland

Fuels bio reforming

B11

Simple and robust biogas-fed SOFC system with 50 % electric efficiency – Modeling and experimental results (B1107) Marc Heddrich, Matthias Jahn, Alexander Michaelis, Ralf Näge, Aniko Weder

Fraunhofer Institute for Ceramic Technologies and Systems, IKTS; Dresden/Germany

Fuel Processing Ceramic Microchannel Reactors for SOFC Applications (B1108)

Danielle M. Murphy, Margarite Parker, Justin Blasi, Anthony Manerbio, Robert J. Kee, Huayong Zhu, Neal P. Sullivan Colorado School of Mines, Colorado Fuel Cell Center, Mechanical Engineering Department; Golden/USA-CO

Electro-catalytic Performance of a SOFC comprising Au-Ni/GDC anode, under varying CH₄ ISR conditions (B1109) Michael Athanasiou (1), (2), Dimitris K. Niakolas (1), Symeon Bebelis (1), (2), Stylianos G. Neophytides (1)

(1) Foundation for Research and Technology, Institute of Chemical Engineering and High Temperature Chemical Processes (FORTH/ICE-HT); Rion Patras/Greece, (2) University of Patras, Department of Chemical Engineering; Patras/Greece

Performance of Tin-doped micro-tubular Solid Oxide Fuel Cells operating on methane (B1110)

Lina Troskialina, Kevin Kendall, Waldemar Bujalski, Aman Dhir, University of Birmingham, Hydrogen and Fuel Cell Research Group; Birmingham/UK

Coverage dependent energetics for sulfur poisoning of Ni based anodes (B1111)

Dayadeep Monder (1), Kunal Karan (2), (1) Indian Institute of Technology Hyderabad; Yeddumailaram/India, (2) Queen's – RMC Fuel Cell Research Centre; Kingston/Canada

Oxylene project – SOFC operations under methane and re-oxidation tolerance of Ni-YSZ based cells (B1112)

Krzysztof Kanawka (1), (2), Stéphane Hody (1), Jérôme Laurencin (3), Virginie Roche (4), Marlu César Steil (4), Muriel Braccini (5), Dominique Léguillon (6), (1) GDF SUEZ, Research and Innovation Division CRIGEN; Saint Denis La Plaine Cedex/France, (2) Université de Versailles, UniverSud Paris, Chaire Internationale Econving; Guyancourt Cedex/France, (3) CEA/LITEN; Grenoble/France, (4) LEPMI, Laboratoire d'Electrochimie et de Physico-chimie des Matériaux et des Inter-faces de Grenoble; St Martin d'Hères/France, (5) SIMaP; St Martin d'Hères cedex/France, (6) Université Pierre et Marie Curie, Institut Jean le Rond d'Alembert; Paris Cedex 05/France

Experimental investigation on the cleaning of biogas from anaerobic digestion as fuel in an anode-supported SOFC under direct dry-reforming (B1113) Davide Papurello (1), (2), Christos Soukoulis (2), Lorenzo Tognana (3), Andrea Lanzini (1), Pierluigi Leone (1), Massimo Santarelli (1), Lorenzo Forlin (2), Silvia Silvestri (2), Franco Biasioli (2), (1) Politecnico di Torino, Energy Department (DENER); Turin/Italy, (2) Fondazione Edmund Mach, Biomass bioenergy Unit; San Michele all'Adige/Italy, (3) SOFCpower spa; Mezzolombardo/Italy

Design and Manufacture of a micro-Reformer for SOFC Portable Applications (B1114)

D. Pla (1), M. Salleras (2), I. Garbayo (2), A. Morata (1), N. Sabaté (2), A. Tarancón (1)

(1) Catalonia Institute for Energy Research (IREC), Department of Advanced Materials for Energy; Barcelona/Spain (2) National Center of Microelectronics, CSIC, Institute of Microelectronics of Barcelona; Barcelona/Spain

Experimental evaluation of a SOFC in combination with external reforming fed with biogas.

An opportunity for the Italian market of medium scale power systems (B1115) Massimiliano Lo Faro, Antonio Vita, Maurizio Minutoli, Massimo Laganà, Lidia Pino, Antonino Salvatore Arico, CNR-ITAE; Messina/Italy

Fuel Variation and Operational Limits in Pressurized SOFC (B1116) Caroline Willich, Moritz Henke, Christina

Wuestner, Florian Leucht, Josef Kalló, K. Andreas Friedrich, German Aerospace Center (DLR); Stuttgart/Germany

Technical Issues of Direct Internal Reforming SOFC (DIRSOFC) operated by Biofuels (B1117)

Yuto Wakita, Yusuke Shiratori, Tran Tuyen Quang, Yutaro Takahashi, Kazunari Sasaki Kyushu University, Department of Mechanical Engineering Science, Faculty of Engineering; Fukuoka/Japan

Steam Reforming of Methane using Ni-based Monolith Catalyst in Solid Oxide Fuel Cell System (B1118)

Jun Peng, Ying Wang, Qing Zhao, Shuang Ye, Wei Guo Wang, Division of Fuel Cell and Energy Technology, Ningbo Institute of Material Technology & Engineering, Chinese Academy of Sciences; Ningbo City/China

Modeling and experimental validation of SOFC operating on reformed fuel (B1119)

Vikram Menon (1), (2), Vinod M. Janardhanan (4), Steffen Tischer (1), (2), Olaf Deutschmann (1), (3)

(1) Karlsruhe Institute of Technology (KIT), Institute for Chemical Technology and Polymer Chemistry; Karlsruhe/Germany

(2) Helmholtz Research School, Energy-Related Catalysis; Karlsruhe/Germany

(3) Institute for Catalysis Research and Technology; Karlsruhe/Germany

Experimental Study on the Burner/Reformer for a SOFC System (B1120) Shih-Kun Lo, Cheng-Nan Huang,

Hsueh-I-Tan, Wen-Tang Hung, Ruey-Yi Lee, Institute of Nuclear Energy Research; Taoyuan Country/Taiwan ROC

An Analysis of Heat and Mass Transfer in an Internal Indirect Fuel Reforming Type Solid Oxide Fuel Cell (B1121) Grzegorz Brus (1), Shinji Kimijima (2), Janusz S. Szymid (1)

(1) AGH – University of Science and Technology; Kraków/Poland, (2) Shibaura Institute of Technology; Saitama/Japan

Experimental Study of a SOFC Burner/Reformer (B1122) Shih-Kun Lo, Cheng-Nan Huang, Hsueh-I-Tan, Wen-Tang

Hung, Ruey-Yi Lee, Institute of Nuclear Energy Research; Longtan Township/Taiwan ROC

Double-Perovskite-Based Anode Materials for Solid Oxide Electrolyte Fuel Cells Fueled by Syngas (B1123)

Kun Zheng, Konrad Swierczek AGH University of Science and Technology, Department of Hydrogen Energy, Faculty of Energy end Fuels; Kraków/Poland

Internal Steam Reforming of Methane and Biofuels over Nanocomposite Anode Catalysts:

Design, Performance and Mathematical Modeling (B1124) Vladislav Sadykov (1), (2), Natalia Mezentseva (1), (2), Vladimir Pelipenko (1), Lyudmila Bobrova (1), Galina Alkina (1), Alevtina Smirnova (3), Oleg Smrongo (4),

(1) Boreksov Institute of Catalysis; Novosibirsk/Russia, (2) Novosibirsk State University; Novosibirsk/Russia,

(3) South Dakota School of Mines and Technology; Dakota/USA, (4) Institute of Powder Metallurgy; Minsk/Belarus

Modeling a start-up procedure of a singular Solid Oxide Fuel Cell (A1314)

Jaroslaw Milewski, Janusz Lewandowski, Warsaw University of Technology, Institute of Heat Engineering; Warsaw/Poland

Bringing mass scale safety components solutions to Solide Oxide Fuel Cells microgeneration appliances (A1315)

Salvatore Pappalardo, Sit la Precisa SpA; Padova/Italy

3D-Modeling of an Integrated SOFC Stack Unit (A1316)Gregor Ganzer, Jakob Schöne, Wieland Becker, Stefan Megel, Alexander Michaelis
Fraunhofer Institute for Ceramic Technologies and Systems (IKTS); Dresden/Germany**Feasibility Study of SOFC as Heat and Power for Buildings (A1317)**B. N. Taufiq (1), T. Ishimoto (2), M. Koyama (1), (2), (3)
(1) Kyushu University, Department of Hydrogen Energy Systems, Graduate School of Engineering; Fukuoka/Japan
(2) Kyushu University, Inamori Frontier Research Center; Fukuoka/Japan
(3) Kyushu University, International Institute for Carbon-Neutral Energy Research (I2CNER); Fukuoka/Japan**An Innovative Burner for the Conversion of Anode Off-Gases from High Temperature****Fuel Cell Systems (A1318)** Isabel Frenzel, Alexandra Loukou, Dimosthenis Trimis, TU Bergakademie Freiberg, Institute of Thermal Engineering; Freiberg/Germany**Technical progress of partial anode offgas recycling in propane driven Solid Oxide Fuel Cell system (A1319)**Christoph Immisch, Ralph-Uwe Dietrich, Andreas Lindermeir
Clausthaler Umweltechnik-Institut GmbH; Clausthal-Zellerfeld/Germany**Lower Saxony SOFC Research Cluster: Development of a portable propane driven 300 W SOFC-system (A1320)**Christian Szepeanski, Ralph-Uwe Dietrich, Andreas Lindermeir
Clausthaler Umweltechnik-Institut GmbH; Clausthal-Zellerfeld/Germany**Portable 100 W Power Generator based on Efficient Planar SOFC Technology (A1321)**

Chr. Wunderlich, S. Reuber, A. Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS); Dresden/Germany

SCHIBZ – Application of SOFC for onboard power generation on oceangoing vessels (A1322)

Keno Leites, Blohm + Voss Naval GmbH; Hamburg/Germany

Bio-Fuel Production Assisted with High Temperature Steam Electrolysis (A1323)

Grant Hawkes, James O'Brien, Michael McKellar, Idaho National Laboratory; Idaho Falls/USA-ID

Operating Strategy of a Solid Oxide Fuel Cell system for a household energy demand profile (A1324)

Sumant Gopal Yaji, David Diarra, Klaus Lucka, OWI – Oel Waerme Institut GmbH; Herzogenrath/Germany

Leading the Development of a Green Hydrogen Infrastructure – The PowerToGas Concept (A1325)

Raphaël Goldstein, Energy Storage/Fuel Cell Systems, Germany Trade and Invest GmbH; Berlin/Germany

Dynamics of Solid Oxide Fuel Cell Systems for Commercial Building Applications (A1327)

Andrew Schmidt, Robert Braun, College of Engineering and Computational Sciences, Department of Mechanical Engineering; Golden/USA-CO

Evaluating the Viability of SOFC-based Combined Heat and Power Systems for Biogas Utilization at Wastewater Treatment Facilities (A1328)

Anna Trendewicz, Robert Braun, College of Engineering and Computational Sciences, Department of Mechanical Engineering; Golden/USA-CO

Synthesis of LaAlO₃ based electrocatalysts for methane-fueled solid oxide fuel cell anodes (B1125)

Cristiane Abrantes da Silva, Valéria Perfeito Vicentini, Paulo Emilio V. de Miranda, (1) Hydrogen Laboratory, Coppe – Federal University of Rio de Janeiro, Rio de Janeiro/Brazil, (2) Oxiteno S.A.; São Paulo/Brazil

Interconnects, coatings & seals**B12****Damage and Failure of Silver Based Ceramic/Metal Joints for SOFC Stacks (B1207)** Tim Bause (1), Moritz Pausch (2), Jürgen Malzbender (1), Tilmann Beck (1), Lorenz Singheiser (1), (1) Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research (IEK); Jülich/Germany, (2) ErlingKlinger AG; Dettingen, Erms/Germany**Production of Pore-free Protective Coatings on Crofer Steel Interconnect via the use of an Electric Field during Sintering (B1208)** Anshu (1), Dario Montinaro (2), Vincenzo M. Sglavo (1), (1) University of Trento; Trento/Italy, (2) SOFCpower SpA; Mezzolombardo/Italy**Metallic-ceramic composite materials as cathode/interconnect contact layers for solid oxide fuel cells (B1209)** A. Morán-Ruiz, A. Larrañaga, A. Martínez-Amesti, K. Vidal, M.I. Arriortua, Universidad del País Vasco/Euskal Herriko Unibertsitatea (UPV/EHU), Facultad de Ciencia y Tecnología; Leioa (Vizcaya)/Spain**Oxidation and Cr evaporation evaluation of selected FeCr alloys used as SOFC Interconnects (B1210)**Rakshith Sachitanand, Jan Froitzheim, Jan Erik Svensson
Chalmers University of Technology, The High Temperature Corrosion Centre; Göteborg/Sweden**A study of the oxidation behavior of selected FeCr alloys in environments relevant for SOEC applications (B1211)**

P. Alnegren (1), R. Sachitanand (1) C. F. Pedersen (2), J. Froitzheim (1), (1) High Temperature Corrosion Centre, Chalmers University of Technology; Göteborg/Sweden, (2) Haldor Topsøe A/S; Lyngby/Denmark

Thermo-Mechanical Fatigue Behavior of a Ferritic Stainless Steel for Solid Oxide Fuel Cell Interconnect (B1212)

Yung-Tang Chiu, Chih-Kuang Lin, National Central University, Department of Mechanical Engineering; Jhong-Li/Taiwan ROC

Reduction of Cathode Degradation from SOFC Metallic Interconnects by MnCo₂O₄ Spinel Protective Coating (B1213)V. Miguel-Pérez, A. Martínez-Amesti, M. L. Nó, A. Larrañaga, M. I. Arriortua
Universidad del País Vasco/Euskal Herriko Unibertsitatea (UPV/EHU), Facultad de Ciencia y Tecnología; Leioa (Vizcaya)/Spain**Dual-Layer Ceramic Interconnects for Anode-Supported Flat-Tubular Solid Oxide Fuel Cells (B1214)**

Jong-Won Lee (1), Beom-Kyeong Park (1), (2), Seung-Bok Lee (1), Tak-Hyoung Lim (1), Seok-Joo Park (1), Rak-Hyun Song (1) Dong-Ryul Shin (1), (1) Korea Institute of Energy Research, Fuel Cell Research Center; Daejeon/South Korea (2) University of Science and Technology, Department of Advanced Energy Technology; Daejeon/South Korea

Initial Oxidation of Ferritic Interconnect Steel, Effect due to a Thin Ceria Coating (B1215)

Ulf Bexell (1), Mikael Olsson (1), M.W. Lundberg (2), (1) Dalarna Univ.; Borlänge/Sweden, (2) AB Sandvik Materials Technology; Sandviken/Sweden

Fabrication of spinel coatings on SOFC metallic interconnects by electrophoretic deposition (B1216)

Hamid Abdoli (1), (2), Seyed Reza Mahmoodi (2), (3), Hamed Mohebbi (2), Parvin Alizadeh (1), Mahnam Rahimzadeh (2) (1) Tarbiat Modares Univ., Department of Materials Science and Engineering; (2) Niroy Research Inst. (NRI), Renewable Energy Department; (3) Iran Univ. of Science and Technology, School of Metallurgy and Materials Engineering; Tehran/Iran

Chromium evaporation from alumina and chromia forming alloys used in solid oxide fuel cell-balance of Plant applications (B1217)

Le Ge (1), Atul Verma (1), Prabhakar Singh (1), Richard Goettler (2), David Lovett (2) (1) University of Connecticut, Center for Clean Energy Engineering, and Department of Chemical, Materials & Biomolecular Engineering; Storrs/USA-CT, (2) Rolls-Royce fuel cell systems (US) Inc.; North Canton/USA-OH

High Performance Oxide Protective Coatings for SOFC Components (B1218)

Matthew Seabaugh, Neil Kidner, Sergio Ibanez, Kellie Chenault, Lora Thrun, NextTech Materials; Lewis Center/USA-OH

Seals**B13****Atmospheric plasma-sprayed (APS) Cr-evaporation barriers (B1307)**Robert Vaßen, Georg Mauer, Jürgen Malzbender, Ludger Blum
Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research; Jülich/Germany**Lanthanum Chromite – Glass Composite Interconnects for Solid Oxide Fuel Cells (B1308)**Seung-Bok Lee, Seuk-Hoon Pi, Jong-Won Lee, Tak-Hyoung Lim, Seok-Joo Park, Rak-Hyun Song, Dong-Ryul Shin
Korea Institute of Energy Research, Fuel Cell Research Center; Daejeon/South Korea**High-Temperature Joint Strength and Durability Between a Metallic Interconnect and Glass-Ceramic Sealant in Solid Oxide Fuel Cells (B1309)**

Chih-Kuang Lin (1), Jing-Hong Yeh (1), Lieh-Kwang Chiang (2), Chien-Kuo Liu (2), Si-Han Wu (2), (1) National Central University, Department of Mechanical Engineering; Jhong-Li/Taiwan ROC, (2) Institute of Nuclear Energy Research, Nuclear Fuel & Material Division; Lung-Tan/Taiwan

Characterization of the mechanical properties of solid oxide fuel cell sealing materials (B1310)

Yilin Zhao, Jürgen Malzbender, Sonja M. Gross, Forschungszentrum Jülich GmbH; Jülich/Germany

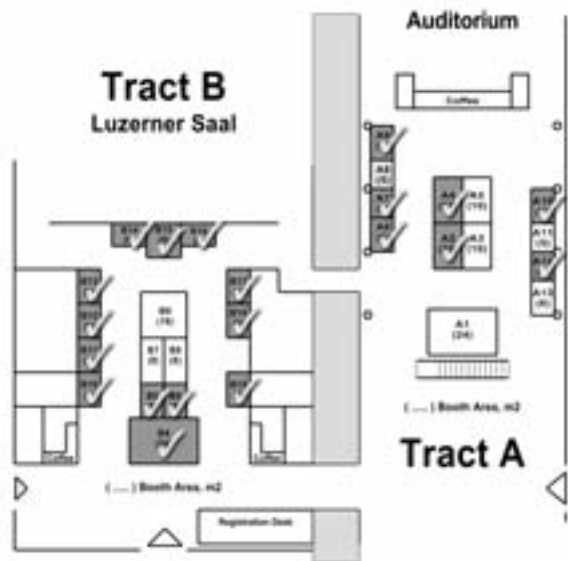
A Calcium-Strontium Silicate Glass for Sealing Solid Oxide Fuel Cells: Synthesis and its interfacial reaction with stack parts (B1311)

Hamid Abdoli (1), (2), Parvin Alizadeh (1), Hamed Mohebbi (2) (1) Tarbiat Modares University, Department of Materials Science and Engineering; Tehran/Iran (2) Niroy Research Institute (NRI), Renewable Energy Department; Tehran/Iran

Optimizing Sealing in Solid Oxide Fuel Cell Systems (B1312)Sherwin Damdar, Wayne Evans, James Drago
Garlock Sealing Technologies; Palmyra/USA-NY

List of Exhibitors

On February 29th, 2012, the following developers, material, measurement tool and component supplies as well as research institutions have registered for the exhibition:



Booth B14
FuelCon AG
 Steinfeldstr. 1
 39179 Magdeburg-Barleben/
 Germany
 Contact: Ms Andrea Bartels
 0049 (0)392 03 51 4400
 info@fuelcon.com

Booth B04
Forschungszentrum Jülich GmbH
 52425 Jülich/Germany
 Contact: Dr. Manfred Wilms
 +49 (0)2461 61 3693
 m.wilms@fz-juelich.com

Booth B12
Fraunhofer IKTS
 Winterbergstraße 28
 01277 Dresden/Germany
 Contact: Ms Katrin Schwarz
 0049 (0)351 2553 7699
 katrin.schwarz@ikts.fraunhofer.de

Booth A02
H.C. Starck Ceramics GmbH
 Lorenz-Hutschenreuther-Str. 81
 95100 Selb/Germany
 Contact: Ms Sandra Blechschmidt
 0049 (0)9287 807 149
 sandra.blechschmidt@hcstarck.com

Booth B15
HERAEUS PRECIOUS METALS GmbH & Co. KG
 Heraeusstraße 12 – 14
 63450 Hanau/Germany
 Contact: Ms Anette Kolb
 0049 (0)6181 35 3094
 anette.kolb@heraeus.com

Booth B19
Hexis AG
 Hegfeldstrasse 30
 8404 Winterthur/Switzerland
 Contact: Mr Volker Nerlich
 0041 (0)52 262 63 11
 volker.nerlich@hexis.com

Booth B16
HTceramix SA
 26 Avenue des Sports
 1400 Yverdon-les-Bains/
 Switzerland
 Contact: Mr Olivier Bucheli
 0041 (0)24 426 10 81
 olivier.bucheli@htceramix.ch

Booth B10
KERAFOL GmbH
 Stegenthumbach 4 – 6
 92676 Eschenbach i.d.Opf./
 Germany
 Contact: Ms Rilana Weissel
 0049 (0)96 45 88300
 marketing@kerafol.com

Booth A06
KNF Flodos AG
 Wassermatte 2
 6210 Sursee/Switzerland
 Contact: Mr Jean Delteil
 0041 (0)41 925 00 25
 jean.delteil@knf-flodos.ch

Booth B18
AVL List GmbH
 Hans-List-Platz 1
 8020 Graz/Austria
 Contact: Mr Jürgen Rechberger
 0043 (0)361 7873426
 juergen.rechberger@avl.com

Booth B06
Bronkhorst (Schweiz) AG
 Nenzlingerweg 5
 4153 Reinach/Switzerland
 Contact: Ms Chantal Gschwind
 0041 (0)61 715 9070
 c.gschwind@bronkhorst.ch

Booth A04
CEA LITEN
 17, rue des Martyrs
 38058 Grenoble/France
 Contact: Mr Nicolas Bardi
 0033 (0)4 38 78 10 41
 nicolas.bardi@cea.fr

Booth B17
Ningbo Institute of Materials Technology and Engineering
 Chinese Academy of Sciences
 Division of Fuel Cell and Energy
 Technology
 No. 519 Zhuangshi Road
 Ningbo City, 315201/P.R. China
 Contact: Ms Yi Zhang
 0086 574 8668 5153
 zhangyi@nimtec.ac.cn

Booth B13
Plansee SE
 6600 Reutte/Austria
 Contact: Ms Brigitte Plangger
 0043 (0)5672 600 2144
 brigitte.plangger@plansee.com

Booth B16
SOFpower SpA
 Via Al Dos de la Roda, 60 –
 loc. Ciré
 38057 Pergine Valsugana/Italy
 Contact: Mr Olivier Bucheli
 0039 0461 518932
 olivier.bucheli@htceramix.ch

Booth A10
Deutsches Zentrum für Luft- und Raumfahrt DLR e.V.
 Pfaffenwaldring 38 – 40
 70569 Stuttgart/Germany
 Contact: Ms Sabine Winterfeld
 0049 (0)711 6862 635
 sabine.winterfeld@dlr.de

Booth B05
eZelleron GmbH
 Winterbergstraße 28
 01277 Dresden/Germany
 Contact: Ms Jenny Richter
 0049 (0)351 2508 8980
 jenny.richter@ezelleron.de

Booth A07
FLEXITALLIC
 Scandinavia Mill, Hunsworth Lane
 Cleckheaton BD19 4LN/UK
 Contact: Mr John Hoyes
 0044 (0)1274 851 273
 jhoyes@novussealing.com

Booth B11
Staxera
 Gasanstaltstr. 2
 01237 Dresden/Germany
 Contact: Mr Björn Erik Mai
 0049 (0)351 896 7970
 Bjoern-Erik.Mai@staxera.de

Booth A09
Treibacher Industrie AG
 Auer v. Welsbachstr. 1
 9330 Althofen/Austria
 Contact: Ms Gudrun Leitgeb
 0043 (0)4262 50 5253
 gudrun.leitgeb@treibacher.com

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 Dr. Martin Smith (Uni St. Andrews/United Kingdom)
 Prof. Constantinos Vayenas (University of Patras/Greece)
 Prof. Martin Winter (Uni Munster/Germany)
 Dr. Christian Wunderlich (IKTS/Germany)

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 Dr. Robert Steinberger-Wilckens, FZ Jülich, Jülich/Germany
 Dr. Jan Van Herle, EPFL, Lausanne/Switzerland

The Scientific Advisory Committee has been formed to structure the technical program of the EUROPEAN FUEL CELL FORUM 2012. This panel has exercised full scientific independence in all technical matters.

Scientific Organizing Committee

Dr. Florence Lefebvre-Joud, CEA-LITEN, Grenoble/France (Chair)

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 Dr. Julie Mouglin, CEA-LITEN, Grenoble/France
 Dr. Marie Petitjean, CEA-LITEN, Grenoble/France

Special Events

Welcome Gathering

Tuesday, 26 June: 18:00, near the registration area. Meet old friends, find new ones and enjoy the splendid view of lake and historic town – a perfect starter to the conference.

Swiss Surprise (optional, limited to 100 participants)

Wednesday, 27 June: 18:30, place to be announced. Again, a special surprise is offered in an unusual place close to Lucerne: Enjoyable evening with Swiss folklore, music, drinks and dinner. Tickets are sold at a first-come-first-serve-basis for CHF 120 per person. Please choose this option during your on-line registration or use the registration form at www.efcf.com to purchase tickets in advance for you and your guests.

Dinner on the Lake

Thursday, 28 June: 19:30 Pier 6 (“Brücke 6”) next to Congress Center: Historic paddle wheel steamers “Stadt Luzern & Uri” (1927, flagship of the fleet) will take us past a magnificent landscape to the “Rütli” glade, birthplace of Switzerland (1291). Enjoy the unique blend of music, drinks and candle-light dinner while gliding past beautiful scenery. Live music contributes to this unforgettable evening. This event is included in the registration fee. Please choose this option during your on-line registration or use the registration form at www.efcf.com to purchase additional tickets for your guests (CHF 120 per person).

Entertainment for Accompanying Persons

The Lucerne Tourist Office offers an entertainment program for accompanying persons from visits to the medieval part of the town to delightful excursions to the picturesque surroundings of Lucerne. All excursions are arranged locally on a daily base depending on weather

conditions and requests. A representative of the Luzern Tourist Office will be present in the registration area. Accompanying persons may participate in the “Swiss Surprise” and “Dinner on the Lake”. Please choose this option during your on-line registration or use the registration form at www.efcf.com to purchase additional tickets for your guests (each CHF 120 per person).



Tutorial Fee

The fee for the optional Fuel Cell Tutorial by Dr. Gunther G. Scherer (PSI Villigen) and Dr. Jan Van Herle (EPF Lausanne) covers the lectures with complete documentation of the six hour program, a business lunch and refreshments. You do not necessarily need to register for the Scientific Conference to participate in the Tutorial. Please indicate your choice on the Registration Form downloaded from www.efcf.com.

Tutorial Fee 500 CHF

Conference Fees

All participants enjoy full conference privileges, but accompanying persons and guests are kindly asked to buy tickets for meals and social events at the registration desk. The following conference privileges are contained in the conference package:

- Participation in the conferences and access to the exhibition
- One copy of the electronic proceedings
- Participation in the following networking events:
 - Tuesday: Welcome Reception with drinks and snacks
 - Thursday: Dinner on the Lake with the historic paddle wheel steamers
- Three business lunches (Wednesday to Friday)
- Refreshments during intermissions and breaks.

Not included: Swiss Surprise on Wednesday night. Please order tickets when registering for the conference.

The following admission fees apply

Students, Trainees, Unemployed

Full-time students (age 26 or younger), trainees and no-income persons
Student fee (with valid identification) 700 CHF

Academic Staff, Government, Consultants

Admission of academic staff, etc. 1,400 CHF

Industry, Trade and Commerce

Fuel cell developers, manufacturers and distributors pay an extra 600 CHF to support the participation of students and trainees. The 10th EUROPEAN SOFC FORUM will provide an excellent platform for recruitment. Participants from industry and commerce benefit from the student support contribution.

Admission of industry, etc. 2,000 CHF

Surcharge for Late Registration

Extra fee for late registration after 01 May 2012 100 CHF
Extra fee for on-site registration after 23 June 2012 250 CHF

One-Day Tickets

Registration includes one conference proceedings in electronic form and one Forum Agenda as well as all conference privileges of the day. Please register on-line at www.efcf.com in advance or pay at the registration desk. 700 CHF

Swiss Surprise (optional)

Tickets for the entertaining evening event "Swiss Surprise" on Wednesday (27 June 2012) are sold on a first-come-first-serve basis. Participation is limited to 100 persons and is not included in the conference fee. Please order your tickets on-line at www.efcf.com with your registration for the 10th EUROPEAN SOFC FORUM. 120 CHF (8 % VAT is included)

Conference Registration

➔ www.efcf.com

Please register on-line for all Forum events (conference, tutorial, side events) and pay by credit card or via bank if sufficiently in advance. Please use the on-line registration option also for your **hotel reservation**. Credit cards are needed to reserve your hotel room, but hotel bills are paid when you leave Lucerne.

www.efcf.com Registration Button or Manual Link Input:
<https://secure.event-booker.com/booking1.asp?EventID=791&MainID=6&LanguageFE=1>

In case you cannot register on-line, please download the off-line **Registration Form** and the **Hotel Reservation Form** from www.efcf.com. Complete these forms and return them by e-mail or fax to the address shown on the bottom of each form.

Exhibition Registration

➔ www.efcf.com

Companies wishing to participate in the exhibition should complete and return the **Exhibition Registration Form** to the European Fuel Cell Forum AG – address shown on the bottom of the form.

Free Project Meeting Organisation Support Service Enquiry

➔ www.efcf.com

Stakeholders interested in the Free Organization Support Service for their project-, set-up- or other issue-meetings should complete and return the **Free Project Meeting Organisation Support Enquiry Form** to Luzern Incoming – the address shown on the bottom of the form.

Payment of the Registration Fee

All conference registrations and hotel reservations will be handled on-line by Luzern Incoming GmbH. The registration can be paid by credit card or bank transfer if sufficiently ahead of time. Payments are acknowledged in writing. Institutions and companies may request invoices for registration of employees on company stationery. Please accept all bank charges related to the transfer expenses of your payment. All payments must be made in Swiss Francs (CHF). Foreign currency exchange rates for February 2012: 1 CHF ≈ 0.84 EUR ≈ 1.09 USD ≈ 86 JPY. Registrations are accepted as long as space is available.

Cancellation of Registration

Written cancellations of confirmed registrations should reach Luzern Incoming GmbH before 31 May 2012. Fees already paid will be refunded, except for a charge of 300 CHF to cover administrative expenses and the cost of the Electronic Proceedings that will be mailed to the registrant after the event. No refunds can be made for cancellations received after 31 May 2012. All withdrawing registrants will receive the Electronic Proceedings 2012.

Hotel Reservation

➔ www.efcf.com

There are 2 options for hotel reservation. 1: On-line Hotel Reservation. Please find the link on our website www.efcf.com, use the on-line "Hotel Reservation" button of Luzern Incoming GmbH. 2: You can download the HOTEL RESERVATION FORM at www.efcf.com and send it by first class mail or fax to the Luzern Incoming GmbH, fax +41 41 445 1009. Luzern Incoming GmbH will confirm all hotel reservations and send you information about Lucerne. Hotel expenses are paid directly to the hotel management. **The European Fuel Cell Forum is not responsible for hotel accommodations. Please make sure to register ONLY ONCE!**

The event is endorsed by

ALPHEA
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FR-57600 Forbach/France

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Effingerstrasse 19
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Lucerne

Lucerne is located in the heart of Switzerland on the Lake of Lucerne admired for its beauty and tranquillity. Nostalgic paddle wheel steamers connect the romantic town to charming sites. From there you may ascend picturesque "Mount Rigi" and steep "Mount Pilatus", or reach the high regions in the Alps of Switzerland. Cogwheel mountain trains, cable cars or aerial tramways take you past alpine scenery to breath-taking panoramic views of the Top of Switzerland. Most of the places can be reached between 1 – 3 hours travel.

Lucerne itself is built along the "Lake of Lucerne" and the "Reuss River", outflow of the lake. The medieval part is closest to the waterfront. Bridges connect both banks. The famous wooden "Kapellbrücke" has been perfectly rebuilt by local artisan after total destruction by a catastrophic fire in 1993.

Lucerne is located in the heart of Western Europe. You may ideally combine your conference participation with business visits or private trips before and after the event.

Travel Arrangements



Official Carrier

Travel Information

Swiss International Air Lines is proud to be the Official Carrier for the 10th EUROPEAN SOFC FORUM and is offering special Congress Fares to all participants. These Congress Fares offer reductions of up to 25 % depending on the fare type, route and space availability.

Congress Fares are valid on the entire SWISS route network for flights to Switzerland, including flights operated by partner airlines under an LX flight number. These fares are now bookable for the travel period 14 days prior to and 14 days after the event.

Only **registered congress participants** can take advantage of this offer. After successful on-line registration (see also button Registration and Hotel Reservation) the EVENT-CODE will be provided for an easy and convenient booking through SWISS.COM via the following link www.swiss.com/event
Please enter your email address and the **given EVENTCODE**

The special SWISS congress fare is marked with a "C". It may not necessarily be the lowest fare but it offers flexibility in the event of rebooking or cancellation.

How to get to Lucerne

By car or train:

The Gotthard trans-alpine autobahn and railway pass through Lucerne and provide easy access by car or train from north or south.

By airplane:

Zurich is the gateway for the annual Lucerne fuel cell conference of the 10th EUROPEAN SOFC FORUM. Choose Zurich as your destination. The Official Carrier SWISS offers special conference rates for convenient direct flights to Zurich from all major locations. Take the direct train from Zurich Airport to Lucerne. The train station is below the airport terminal complex. Direct trains leave every hour at hr:47. There are three more trains per hour that require to change once in Zurich. The pleasant ride takes a little bit more than one hour. Most hotels are within walking distance from the Lucerne train station.

Have a pleasant journey! We look forward to welcoming you in Lucerne!



European Fuel Cell Forum

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Please remember the dates of the next conferences

- 4th European PEFC* and
H2 Forum 2013: 2 – 5 July
- 11th European SOFC Forum 2013:
1 – 4 July

*including all low temperature fuel cells