

MONDAY, JANUARY 30, 2017

11 am - 4 pm	EU-Workshop SUPER-SOFC	11 am - 6 pm	EU-Workshop @outback.com	12 am - 6 pm	EU-Workshop Second Act
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Welcome Reception

TUESDAY, JANUARY 31, 2017

REGISTRATION												
PLENARY König-Karl-Halle												
COFFEEBREAK at Maria-Seeger-Halle												
König-Karl-Halle				Conference Room Reutlingen				Conference Room Karlsruhe				
Time	Session	Chair	Lecture	Speaker	Session	Chair	Lecture	Speaker	Session	Chair	Speaker	
09:00-09:15 am	KEYNOTE LECTURES	K. A. Friedrich	Welcome	K. Andreas Friedrich / n.n.								
09:15-10:00 am			Smart Energy Systems and Fuel Cells	Henrik Lund								
10:00-10:30 am			Fuel Cell and Hydrogen Joint Undertaking: New Developments	Bart Bebuycq								
10:30-11:00 am			DOE Fuel Cell R&D Activities: Strategy, Advancements and Opportunities	Dimitrios Papageorgopoulos								
10:45-11:15 am	COFFEEBREAK at Maria-Seeger-Halle											
11:35-11:55 am	Fuel Cell Systems	Dimitrios Papageorgopoulos	Power Sharing in a Multi Fuel Cell System Based on Real Time Performance Identification	Alvaro Macias Fernandez	PEMFC Electroanalysts	Christophe Coutanceau	Investigation of Corrosion Resistant Carbon and Non-Carbon Based Cathode Catalyst Supports for Low Temperature Polymer Electrolyte Membrane Fuel Cell (PEMFC)	Pantosh Kumar Mohanta	SOFC Materials	Mogens Mogensen	Synthesis and Properties of Doped Ba3Ti3O6B032: A New SOFC Electrolyte	Jean-Marie DOUX
11:55-12:15 am			Efficient Coupling of SOEC and Fischer-Tropsch Synthesis for the Production of High-Valuable Products	G. Herz			Towards Ultrathin Platinum Films on Carbon Nanofibres for the Fuel Cell Cathode by Self-Limited Electrodeposition	Giorgio Ercolano			Cathode Contacting in SOFCs: Materials and Methods	Kathrin Schönauer
12:15-12:35 am			The DEMOSOC Project: Industrial-Size Demonstration of a Biogas-Fed Solid Oxide Fuel Cell	Marta Gandiglio			Hierarchical Titanium Nitride Nanostructures by Pulsed Laser Deposition as PEMFC Catalyst Support	Andrea Perigo			Feasibility of Ni-GDC/GDC Half-Cell Elaborated by Tape Casting and Reactive Magnetron Sputtering Processes	Carlos Ignacio Hernandez Londoño
12:35-12:55 am			SOFC plant: Efficient Design and Operation Behavior	Matthias Frank			PH Matters: The Influence of the Catalyst Ink on the ORR Activity Determined in RDE Measurements	Masanori Inaba				
12:55-02:00 pm	LUNCH Maria-Seeger-Halle											
02:00-02:40 pm	AEM Fuel Cells and Electrolyzers	Carsten Cammer and Flaminia Adamo	Controlling Heterogeneity in Fuel Cell Membranes for Better Chemical and Mechanical Durability	Deborah Jones	PEMFC Components - Membranes	Dolores Jones	Impact of Compressive Stress on Water Sorption and Diffusion in Nafion Membranes by I1H NMR	Asma El kadhiri	Fuel Cell & Electrolyzer Control	Daniel Hissel	PEM Electrolyzer Operation Optimisation based on Pressure Control	Abdulkader Tabarjet
03:00-03:20 pm			Development of a Core-Shell Catalyst for Anion-Exchange Membrane Direct Methanol Fuel Cells	Tilman Jurzinsky			Crosslinked Acid-Base Blend Membranes for High Temperature PEM Fuel Cells	Rowitha Zeis			Fault-Tolerant Interleaved DC/DC Buck Converter for Electrolyzer Applications	Damen Guilbert
03:20-03:40 pm			Degradation and Performance Testing for Materials in Alkaline Anion Exchange Membrane Fuel Cells	Corinna Hams			Ionic Structure of Non-Fluorinated Ionomer Membranes Measured by Conductive AFM	Michael Handl			From Non-Model Based Diagnostic to Fault Tolerant Control Dedicated to Proton Exchange Membrane Fuel Cell System	Eloise Pahan
03:40-04:00 pm			Degradation Mechanisms of Metal-Based Carbon-Supported Electrocatalysts for Alkaline Fuel Cells: Similarities and Differences Compared to Acidic Fuel Cells	Marian Chateret			Nanocellulose Fuel Cells	Thomas Bayer			Comparative Analysis of Real-Time Identification Methods in a Fuel Cell System	Mohsen Kandi Dayeni
04:00 - 04:30 pm	COFFEEBREAK Maria-Seeger-Halle											
04:30-04:50 pm	AEM Fuel Cells and Electrolyzers	Carsten Cammer and Flaminia Adamo	Activated Nickel Catalyst	Hans-Joachim Kohne	Fuel Cell Systems (Modelling)	Nadia Youafi Steiner	Performance Analysis of Micro-CHP System Based on PEMFC for Building Application	Jouher ROMDHANE	PEM Electrolysis	Aldo Gago	H ₂ /N ₂ Filter-Based Fault Detection for Polymer Electrolyte Membrane Fuel Cell	Mohamed Zerrouga
04:50-05:10 pm			Raney Nickel Alloy Electrodes for Alkaline Water Electrolysis	Regine Reilner			Modelling and Simulation of the PV/PEMWE System Installed on the Myrte Platform	Manuel Felipe Espinosa Lopez			Determining Flow Regime Dominance Criteria of Oxygen Transport in Polymer Electrolyte Membrane Electrolyzer Porous Transport Layers	Faraz Arbabi
05:10-05:30 pm			Benchmarking Membrane Materials for Alkaline Water Electrolysis	Marcelo Carmo			Off-Design Operation of a PEMFC Stack Integrated into a Micro-CHP System with Membrane Reforming	Stefano Foresti			Low Pressure PEMWE: Two-Phase Flow Regimes vs Electrochemical Performances	Aubrey Fard
05:30-05:50 pm			Platinum Group Metal-Free Catalysts for Alkaline Membrane Fuel Cells	Pamen Atanasov			Development of High-Resolution Reference Load Profiles for Scientific Evaluation of CHP Systems in Buildings	Tobias Thomsen			Synthesis and Dissolution Behaviour of Bi-SrO ₂ as a Corrosion Resistant Material for Anodic Catalyst Support in PEM Electrolysis Cells	Filippo Fenu
05:50-06:00 pm							Direct Passive Hybridization of PEMFC with Small Aqueous Supercapacitors	Oliver Lottin	Sponsor Presentation		Cost Effective and Highly Active Catalysts for Anodes of Proton Exchange Membrane Electrolysis	Aldo Gago
06:00-06:20 pm											A Novel Multi Sine Excitation Procedure for Impedance Spectroscopy Supports Automatic Drift Correction and Online Error Determination	S. Feilth
06:30-06:30 pm	Poster Session											

WEDNESDAY, FEBRUARY 1, 2017

REGISTRATION												
PLENARY König-Karl-Halle												
COFFEEBREAK at Maria-Seeger-Halle												
König-Karl-Halle				Conference Room Reutlingen				Conference Room Karlsruhe				
Time	Session	Chair	Lecture	Speaker	Session	Chair	Lecture	Speaker	Session	Chair	Speaker	
09:00-09:05 am	KEYNOTE LECTURES	Prof. Dr. A. Friedrich	Remarks and Information	K. Andreas Friedrich								
09:05-09:45 am			Electrode Evolution in Solid Oxide Cells	John Irvine								
09:45-10:25 am			How Theory and Modeling can Drive Fuel Cell Electrocatalysis	Michael Eickerting								
10:25-11:00 am	COFFEEBREAK at Maria-Seeger-Halle											
11:00-11:20 am	Electrode Structure and Catalyst Layer	Radinka Maric	Quantifying the Effects of Liquid Water Accumulation on Oxygen Transport Resistance in a PEMFC Cathode via Limiting Current Experiments with in operando Synchrotron X-ray Radiography	Daniel Muirhead	SOFC/SOEC	John Irvine	Application of Ceramics in Electrolysis Cells	Mogens Mogensen	HT PEMFC Components	Joachim Scholta	Characterization and Modeling of a Commercially Available High Temperature PBI-H3PO4 Based Membrane Electrode Assembly in Various Operating Conditions	Sylvain Rigal
11:20-11:40 am			Water Distribution and Ionomer Microstructure in PEMFC Using in-situ Operando Using X-Ray and Neutron Scattering Techniques	Arnaud Monin			Techno-Economic Analysis of an SOFC-Based Energy Storage System Designed for Combined Hydrogen Generation and Arbitrage Applications	Domenico Ferrero			Pore Network Modeling of Phosphoric Acid Distribution in High Temperature PEM Fuel Cells	Samuele Galbati
11:40-12:00 am			Insight into Degradation Mechanism in Non-Precious Metal Composite Catalysts for PEMFC	Andrea Bacci			Performances and limitations of metal supported cells with strontium titanate based fuel electrode: a step towards the next generation solid oxide cells	Reni Costa			New Materials for Composite Bipolar Plates for HT-PEM Fuel Cells	Rouven Henkel
12:00-12:20 pm			Quantitative in Situ Analysis of Ionomer Structure, Conductivity, and Degradation in Fuel Cell Catalytic Layers	Renate Hiesgen			Electrolysis with CO and H ₂ Recovery Using Soft Mica Sealing	Raphael Bringer				
12:20-01:30 pm	LUNCH Maria-Seeger-Halle											
01:30-02:10 pm	KEYNOTE LECTURES	Yann Buetel	Model-Assisted System Analysis of Fuel Cell Systems: Designing the Next Generation	Ulrike Krewer	PEMFC Modelling	Michael Eickerting	A 2D Two-Phase Model to Investigate the Performance and Degradation of PEMFCs	Thomas Jahnke	HT PEMFC Operation	Ulrich Gross-Ludwig Jorissen	Comparison of Performance Degradation of HTEEM Subjected to Different Ageing Tests	Rodolfo Taccani
02:10-02:50 pm			Low Pt-loading Gradient Catalyst Layer with Locally Tailored Particle Size and Loading for Improved Lifetime of Polymer Electrolyte Fuel Cell	Radinka Maric			Modelling Analysis of Flow Field Geometrical Features in Polymer Electrolyte Fuel Cells Porous Media	Marko Meusaegh			Recent Results from the Projects H3PO4 and CSTEM	Nadine Pilinski
02:50-03:10 pm			New Insights into Pt/Ionomer Interactions from Analyses with Voltammetry and Spectroscopy	Kensaku Kodama			Nano-Scale Monte Carlo Study on Liquid Water Distribution within the PEMFC MPL, CL and their Interfacial Region	Anahid Pourmehmet			Operation Strategies Based on Carbon Corrosion and Lifetime Investigations for High Temperature Polymer Electrolyte Membrane Fuel Cell Stacks	Joachim Scholta
03:10-03:30 pm			Contribution of Transmission Electron Microscopy to Proton Exchange Membrane Fuel Cell Electrode Development and Degradation Understanding	Laure Guillet			Cathodic Carbon Corrosion: from a 1D-Model to a Full 2D-Model	Bolahaqa Rendiannazaly			Heating of PEM and HTEEM Fuel Cells with Alternating Current	Timo Kurz
03:30-04:00 pm	COFFEEBREAK Maria-Seeger-Halle											
04:00-04:20 pm	H ₂ Storage and Purification	Klaus Tübbe	CEA Previous Experience on Compressed Gaseous Hydrogen Composite Pressure Vessel	Stephane Villalonga	PEMFC Modelling	Ulrike Krewer	Time Constant Based Method for PEM Fuel Cell Model Characterization	Sami El Aabid	PEM Fuel Cell Operation	Marie-Cécile Péra	Characterization of an H ₂ /O ₂ PEMFC Short-Stack Performance Under Normal and Abnormal Operating Conditions Aimed to the Health-Status Monitoring and Diagnosis	Marie-Cécile Péra
04:20-04:40 pm			Low Temperature Metal Hydride Materials, Tanks and Systems for Practical Applications	Chris Christodoulou			A Transient 2D PEMFC Cell Model to Investigate Degradation Heterogeneities in Reformate Conditions	Marion Chardeiris			Investigation of a Two-Phase Dummy Load Shut-Down Strategy for PEMFCs	Qian Zhang
04:40-04:00 pm			Medium Temperature Hydrides - Overview and Application Perspectives	Jose Bellota von Coble			From Pore-Scale Material Properties to Macro-Homogeneous PEFC Modeling	Jürgen Schumacher			Direct Coupling of PEM Fuel Cell to Supercapacitors for Higher Durability and Better Energy Management	Caroline Bonnet
05:00-05:20 pm			Hydrogen Storage in High Temperature Metal Hydride: State of Art and Future Applications	Claudio Pistida			Investigation of Proton Exchange Membrane Fuel Cells Degradation in Automotive Application Using a Pseudo-3D Multiphysics Model	Yann Buetel			PEM fuel cell management system: How to improve performance and durability?	Maxime Piffard
05:20-05:40 pm			Liquid Organic Hydrogen Carriers - Technical Status and Commercial Projects	Daniel Teichmann			Identification of Local Heterogeneities in Direct Methanol Fuel Cells with a Physical 2D Model	Marc-Dominique Baum			Redefinition of Stack Efficiency and Optimization of Stack Performance for PEMFCs	Jens Mittel
05:40-6:00 pm			Celtec: Electrochemical Hydrogen Separation - Contribution to an Affordable Hydrogen Infrastructure	Carsten Henrichel							Experimental investigation of performance degradation on an open cathode Proton Exchange Membrane Fuel Cell stored at sub-zero temperatures	YI-FANG
7:00 PM	CONFERENCE DINNER											

THURSDAY, FEBRUARY 2, 2017

REGISTRATION												
PLENARY König-Karl-Halle												
COFFEEBREAK at Maria-Seeger-Halle												
König-Karl-Halle				Conference Room Reutlingen				Conference Room Karlsruhe				
Time	Session	Chair	Lecture	Speaker	Session	Chair	Lecture	Speaker	Session	Chair	Speaker	
09:00-09:05 am	KEYNOTE LECTURES	Prof. Dr. A. Friedrich	Remarks/Information	K. Andreas Friedrich								
09:05-09:45 am			Oxygen Reduction on PGM-free Electrocatalysts	Piotr Zelenay								
09:45-10:25 am			The Role of Hydrogen in the Energy Transition	Pascal Mauburger								
10:15-10:55 am			Insight into SOFC/SOEC systems	Ludger Blum								
10:55-11:25 am	COFFEEBREAK at Maria-Seeger-Halle											
11:25-11:45 am	Degradation of PEMFC	Sylvia Eschbach-Person Gutzdek	Local Investigations of Membrane Electrode Assemblies' Degradation During and After Ageing in PEMFC Stacks Operated Under Reformate	Sylvie Escribano	Diagnostics of PEMFC	Jens Mittel	Analysis of Impedance Spectra of PEMFC under Various Operation Parameters	Steffen French	Stacks and Stack Components	Ludger Blum	AutoStack-CORE: Progress Towards the Development of a Competitive European PEM-Fuel Cell Stack for Automotive Applications	Ludwig Jorissen
11:45-12:05 am			Local Degradation Effects in Polymer Electrolyte Fuel Cells	Merit Bodner			Proton Exchange Membrane Fuel Cell Diagnostics by Electrochemical Noise Analysis	Radouane Maizis			Review of SOFC Stack Performance at Forschungszentrum Jülich	David Kenouche
12:05-12:25 pm			Influence of Platinum Oxides Formation on Temporary Degradation in PEMFC	Andrea Casalegno			Distribution of Relaxation Times Analysis of High Temperature PEMFC Impedance Spectra	Rowitha Zeis			Electrochemical Characterization of SOFC and SOEC Stacks	Michael Lang
12:25-12:45 pm			Impact of Quasi-Static Load Profile on PEMFC Durability for Automotive Application: Reference and Accelerated Stress Tests	Raffaele PETRONE			Development of an Original Indicator for the H ₂ Internal Leak First Level Assessment in PEMFC Stacks	Malik Tognan			Metallic Bipolar Plates Suitable for Large-Scale Production	Philipp Jendras
12:45-01:45 pm	LUNCH Maria-Seeger-Halle											
01:45-02:05 pm	Degradation of PEMFC	Sylvia Eschbach-Person Gutzdek	Insights into on-the-field PEMFC Degradation: Linking Cell Performance to Local Materials Degradation	Marian Chateret	Diagnostics of PEMFC	Rowitha Zeis	Neutron Imaging and Modeling of Autonomous Hydration-Dehydration Cycles in PEMFCs Operated with Saturated Anode and Dry Cathode Feed	Daniel Garcia				
02:05-02:25 pm			Palladium Films on Thin Nafion XL® Membrane as DMFC Crossover-Blocking Barriers	Fabio Di Fonzo			Novel Methodology to Diagnose Fuel Cell Air Channel Velocities Based on ES Measurements	Stephane Chevaller				
02:25-02:45 pm			Accelerated Stress Tests for Gas Diffusion Layers	Manem Behajji			PEMFC in Aircraft: Determination of Mechanical Tightening of a Single Cell via Electrical Measurements	Kamil Miszewska				
02:45-03:05 pm			Degradation of PEMFC at Low Pt Loadings	Pawel Gazdzicki			Voltage Singularity-Based Diagnostic for PEM Fuel Cell Stack Designed for Operation in µCHP Units	Dyedyja Benououa				
03:05-03:30 pm	COFFEEBREAK Maria-Seeger-Halle											
03:30-04:00 pm	Closing Remarks			K.A. Friedrich, Daniel Hissel, Nadia Youafi Steiner, Yann Buetel								

FRIDAY, FEBRUARY 3, 2017

11:30 AM	Bus transfer from Haus der Wirtschaft (conference site)										
01:30-3:30 pm	Visit of the Damier site in Sriedelingen										
5:00 PM	Arrival at Haus der Wirtschaft										

Special Session

Sponsors

