AREAS OF INTEREST

Topics cover all fuel cell technologies with a particular focus on applications. The following list summarizes the main topics:
- Cell, stack, system operation and applications
- Products presentation
- Market analysis
- Non-conventional fuels
- Balance of Plant design
- Environmental analysis
- Cost analysis
- Cell, stack, system modeling
- Materials and fabrication processes

CALL FOR PAPERS

An extended abstract of about 1000 words must be submitted by September 20, 2007. Look in the conference web site for possible deadline extensions.

All the accepted extended abstracts will be published in a proceedings book that the attendees will receive at the conference.

In addition, the Scientific Committee will select a limited number of extended abstracts and will invite their authors to submit a full paper. The full paper will have to be submitted by December 2, 2007.

The submitted full papers will go through a peer review process and the accepted papers will be published in a special issue of the ASME Journal of Fuel Cell Science and Technology.

FEES AND REGISTRATION

Online registration will be available at the ASME website: www.asmeconferences.org/EFC07

Early registration fees are:
- Regular attendee: 550 euro
- Academic: 450 euro
- Student: 200 euro
- Additional late fee: 100 euro
ORGANIZING COMMITTEE

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The Netherlands
Duncan MacLeod, Shell

Roberto Bove, Joint Research Centre

USA
Dan Rastler, EPRI

Subhash Singhal, PNNL

Mark Williams, FECS

WHO SHOULD ATTEND

The conference represents an exciting opportunity for policy makers, professors, students, researchers, technologists, end users, manufacturers, designers, industrial representatives, contractors to be up-dated with fuel cells, hydrogen, and non-conventional fuels state of the art.

The conference will also be a remarkable opportunity for establishing relationships with key global partners responsible for fuel cell development representing industry, academia and government.

CONFERENCE SCOPE

The European Fuel Cell Technology and Applications Conference intends to put together fuel cell developers, scientists, academies, policy deciders, as well as end users and industry representatives, giving particular emphasis to operational experiences and applications. The conference will address technical, scientific and market issues related to successfully bring fuel cells to the marketplace.
December 11th, 2007

16.00 → 18.00 Registration
Location: Registration Desk

16.00 → 19.00 Welcome Cocktail

December 12th, 2007

08.00 → 09.00 Registration
Location: Registration Desk

09.00 → 09.45 Welcome and communication from the organizing committee
Location: Auditorium

Plenary Session: JTI a new framework for public & private initiatives
Session Chair: Raffaele Vellone, ENEA, Italy
Duration: 09.45 → 11.15
Location: Auditorium

09.45 → 10.00 Introduction – Raffaele Vellone

10.00 → 10.25 Raffaele Liberali – Director of Energy Directorate, European Commission, DG RTD – “JTI: EU policy and strategies”

10.25 → 10.50 Alberto Ravagni – CEO SofcPower “Industry and the JTI: management and implementation”

10.50 → 11.15 Alain Bugat - Chairman of CEA – “JTI: Research grouping expectancies”

11.15 → 11.45 Coffee break

Plenary Session: Fuel Cells degradation: status and outlook
Session Chairs: Angelo Moreno, ENEA, Italy, Georgios Tso tridis, JRC, European Commission
Duration: 11.45 → 13.30
Location: Auditorium

11.45 → 12.00 Introduction – Angelo Moreno, Georgios Tso tridis and Roberto Bove

12:00 → 12:30 Robert Selman – Illinois Institute of Technology – Chicago – “MCFC perspectives”

12:30 → 13:00 Robert Steinberger - Wilckens – FZJ- Jülich – “SOFC perspectives”

13:00 → 13:30 Ludwig Jörissen – ZSW – Ulm – “PEMFC perspectives”

13.30 → 14.40 Lunch
December 12th, 2007 (continued)

Parallel Session 1a: SOFC Materials and Fabrication Processes
Session Chair: Nigel Sammes Colorado School of Mines, USA
Duration: 14.40 → 16.00
Location: Auditorium

14.40 → 15.00 EFC2007-39108 - Characterization Of ZrO2-In2O3 Thin Layers With Gradual Ionic To Electronic Composition Produced By Atomic Layer Deposition For SOFC Application - Michel Cassir Ecole Nationale supérieure de Chimie de Paris

15.00 → 15.20 EFC2007-39090 - Considerations on the Kinetics of the Oxygen Reduction Mechanism at a SOFC Cathode by a Comparison of Different Configurations Experiments - Antonio Barbucci University of Genova

15.20 → 15.40 EFC2007-39113 - Structure, Mechanical And Conductive Properties Of Ceria Doped With Gadolinia - Oleksandr Vasylyev Frantsevich Institute for Problems of Materials Science

15.40 → 16.00 EFC2007-39028 - Lanthanum ferrite-based cathode materials with Cu substitution for anode-supported solid oxide fuel cells - Josef Mertens FZI

Parallel Session 1b: Lab and Field Tests of Fuel Cell, Stacks and Modules
Session Chair: Frano Barbir University of Split, Croatia/UNIDO-ICHET, Rodolfo Taccani, University of Trieste, Italy
Duration: 14.40 → 16.00
Location: Sala Latini

14.40 → 15.00 EFC2007-39178 - Performance analysis of HT PEMFCs under the influence of Reformates - George C Bandlamudi Zentrum für BrennstoffzellenTechnik gGmbH & University of Duisburg-Essen

15.00 → 15.20 EFC2007-39047 - Mechanical interactions between gas diffusion layers and bipolar plates in low temperature fuel cells - Torsten Knöri German Aerospace Center


15.40 → 16.00 EFC2007-39200 - Development of 10 kW-class Intermediate temperature SOFC CHP system - Futoshi Nishiwaki The Kansai Electric Power Co., Inc

Parallel Session 1c: PEMFC Cell & Stack Modelling
Session Chair: Göran Lindbergh KTH, Sweden
Duration: 14.40 → 16.00
Location: Sala Accademia


15.00 → 15.20 EFC2007-39157 - Control Oriented Model with Improved Membrane Hydration of PEM Fuel Cell Stacks - Susanta Kumar Das Kettering University

15.20 → 15.40 EFC2007-39156 - Proper Flow Channel Design for Uniform Distribution of Gas in PEM Fuel Cell Stacks - Susanta Kumar Das Kettering University


16.00 → 16.30 Coffee Break
Parallel Session 2a: SOFC Materials and Fabrication Processes
Session Chair: Robert Steinberger-Wilckens, FZJ Jülich, Germany
Duration: 16.30 → 17.50
Location: Auditorium

16.30 → 16.50 EFC2007-39001 - 10Sc1CeSZ powders, and bulk and film electrolytes: mechanical, electric and catalytic properties. - Oleksandr Vasylyev et al - Frantcevych - Institute for Problems of Materials Science

16.50 → 17.10 EFC2007-39199 - Ferritic Steels (18% Cr) With And Without Ceramic Coating For Interconnect Application In SOFC - Jan Van Herle - Ecole Polytechnique Fédérale de Lausanne

17.10 → 17.30 EFC2007-39045 - Innovative cost effective powder-metallurgical processing for ready-to-use interconnect components - Georg Kunschert Plansee SE


Parallel Session 2b: Lab and Field Tests of Fuel Cell, Stacks and Modules
Session Chair: Mauro Scagliotti CESI Ricerca, Italy
Duration: 16.30 → 17.50
Location: Sala Latini

16.30 → 16.50 EFC2007-39211 - Study on diesel autothermal reformer for kWe SOFC system - Sangho Yoon Korea Advanced Institute of Science and Technology

16.50 → 17.10 EFC2007-39038 - Standardisation and acceleration of degradation phenomena in the testing of single planar solid oxides fuel cells - Massimo Santarelli Dipartimento di Energetica. Politecnico di Torino

17.10 → 17.30 EFC2007-39120 - Study of support flat-tube material for segmented-in-series SOFC cell stacks - Kenji Horiuchi Tokyo Gas Co., Ltd

17.30 → 17.50 EFC2007-39234 - Hybrid System Test Rig: Start-up and Shutdown Physical Emulation - Mario L. Ferrari Rolls-Royce Fuel Cell Systems Ltd

Parallel Session 2c: PEMFC Cell & Stack Modelling
Session Chair: Pietro Asinari, Politecnico di Torino, Italy
Duration: 16.30 → 17.50
Location: Sala Accademia

16.30 → 16.50 EFC2007-39069 - PEM Fuel Cell Design Based on 3D Modelling - Vincenzo Mulone University of Roma Tor Vergata

16.50 → 17.10 EFC2007-39121 - The Quasi-Three Dimensional Dynamic Model of a Proton Exchange Membrane Fuel Cell with Considering the Distribution of Water Concentration in the MEA - Sanggyu Kang Seoul National University

17.10 → 17.30 EFC2007-39142 - Dynamic Modelling and Control of a PEMFC-Supercapacitor Autonomous Power System - Laura M. Ramirez Elizondo Delft University of Technology


Poster Session 1
Duration: 18.00 → 19.00
Location: Sala Etruschi and foyer Auditorium
December 13th, 2007

08.30 → 09.00 Registration

Parallel Session 3a: MCFC Materials and Fabrication Processes
Session Chair: Michel Cassir *Ecole Nationale supérieure de Chimie de Paris, France*
Duration: 9.00 → 10.20
Location: Sala Latini

9.00 → 9.20 EFC2007-39254 - MCFC components: state-of-the-art and main strategies to improve cell life – Elena Bergaglio *Ansaldo Fuel Cells*


9.40 → 10.00 EFC2007-39127 - Performance Analysis of New Cathode Materials for MCFC Consisting of a Nickel Substrate Covered by Lithium Cobaltite and Porous Nickel Stabilized by Magnesium and Iron Oxide - Elisabetta Simonetti *ENEA*

10.00 → 10.20 EFC2007-39253 - Electrochemical characterization and post-test study applied to MCFC technology – Andrea Scattolini *Ansaldo Fuel Cells*

Parallel Session 3b: Lab and Field Tests of Fuel Cell Power Systems
Session Chair: Salvatore Freni, *CNR-ITAE, Italy*
Duration: 9.00 → 10.20
Location: Auditorium

9.00 → 9.20 EFC2007-39141 - Latest info about operation of the Siemens SOFC generators CHP100 and sfc5 in a mechanical workshop – Gianmichele Orsello *TurboCare*

9.20 → 9.40 EFC2007-39143 - Experimental activity on the tubular SFC5 Generator in Italy: regression models analysis and optimization - Ferrante De Benedictis *TurboCare and Politecnico di Torino*

9.40 → 10.00 EFC2007-39026 - Operational Experiences from Wärtsilä 5 kW Test System with 4 SOFC Stacks - Tero Hottinen *Wärtsilä Finland*

10.00 → 10.20 EFC2007-39008 - Test experiences on commercial 1 kW PEFC units for back up power generation - Mauro Scagliotti *CESI Ricerca*

Parallel Session 3c: PEMFC Cell & Stack Modelling
Session Chairs: Vincenzo Mulone, *University of Rome “Tor Vergata”, Italy*
Duration: 9.00 → 10.20
Location: Sala Accademia

9.00 → 9.20 EFC2007-39101 - Analysis and Modelling of PEM Fuel Cell Stack Thermal Behavior During Variable Power Operation - Franjo Barbir *University of Split*

9.20 → 9.40 EFC2007-39154 - Validating Theoretical Models with Experimental Data in two PEM Fuel Cells Categories - Etim Ubong *Kettering University*

9.40 → 10.00 EFC2007-39078 - Water Management in a PEM Fuel Cell using two phase single-domain Model - Ebrahim Afshari *K.N.Toosi university*

10.00 → 10.20 EFC2007-39044 - A Model of Thin Layer Flow Cells aimed at Kinetic Parameter Determination - Ekkehard Holzbuecher *Weierstrass Institute for Applied Analysis and Stochastics*

10.20 → 10.40 Coffee Break
December 13th, 2007 (continued)

Parallel Session 4a: SOFC Materials and Fabrication Processes
Session Chair: Niels Christiansen Topsoe Fuel Cell A/S, Denmark – (To be confirmed)
Duration: 10.40 → 12.00
Location: Auditorium

10.40 → 11.00 EFC2007-39186 - SOFC Development for Operation at 600C - Bert Rietveld ECN


11.20 → 11.40 EFC2007-39119 - Development of Segmented-in-Series Type SOFCs with Ceramic Interconnects Operable at Reduced Temperatures - Yoshio Matsuzaki Tokyo Gas

11.40 → 12.00 EFC2007-39048 - Novel cathode materials for intermediate temperature solid oxide fuel cells (IT-SOFCs) - Vladislav Sadykov Boreskov Institute of catalysis, Russia

Parallel Session 4b: Demonstration programs
Session Chair: Robert Selman – Illinois Institute of Technology – Chicago, USA
Duration: 10.40 → 12.00
Location: Sala Latini

10.40 → 11.00 EFC2007-IP - Current Status and Future Prospect of PAFC in Japan – Y. Oka Fuji Electric Advanced Technology

11.00 → 11.20 EFC2007-IP - Status of MCFC development at Ansaldo Fuel Cells – Bartolomeo Marzenaro Ansaldo Fuel Cells


11.40 → 12.00 EFC2007-39106 - Field Test Operation with Hot Modules: Update and Results - Manfred Bischoff - CFC Solutions

Parallel Session 4c: Hybrid Systems Modelling
Session Chair: Aristide Massardo, University of Genova, Italy
Duration: 10.40 → 12.00
Location: Sala Accademia

10.40 → 11.00 EFC2007-39192 - System integration and hybridisation principles of different fuel cell types - Wolfgang Winkler Hamburg University of Applied Sciences

11.00 → 11.20 EFC2007-39107 - Matching Analysis and CFD Simulation of A MGT-SOFC Hybrid System - Antonino Pontecorvo Università di Napoli “Federico II”, Italy


11.40 → 12.00 EFC2007-39041 - A New Concept For Hybrid Systems Based In High Temperature Fuel Cells And Supercritical Carbon Dioxide - David Sánchez University of Seville
December 13th, 2007 (continued)

Parallel Session 5a: SOFC Materials and Fabrication Processes
Session Chair: Bert Rietveld ECN, The Netherlands
Duration: 12.00 → 13.00
Location: Auditorium

12.00 → 12.20 EFC2007-39022 - Synthesis and Characterization of Components for All-Perovskite Solid Oxide Fuel Cells - Alidad Mohammadi University of Connecticut


Parallel Session 5b: General Issues of Fuel Cells
Session Chair: Mauro Scagliotti CESI Ricerca, Italy
Duration: 12.00 → 13.00
Location: Sala Latini


12.40 → 13.00 Invited lecture – (To be announced)

Parallel Session 5c: Hybrid Systems Modelling
Session Chair: Mario L. Ferrari Rolls-Royce Fuel Cell Systems Ltd
Duration: 12.00 → 13.00
Location: Sala Accademia

12.00 → 12.20 EFC2007-39167 - Mathematical model of a hybrid solid-oxide-fuel-cell / micro-gas-turbine power generation system - Anestis I. Kalfas Aristotle University of Thessaloniki (AUTH)

12.20 → 12.40 EFC2007-39214 - Investigation of SOFC-GT Systems for Hybridised Heavy Duty Transport Applications - Steven Wilkins Imperial College London


13.00 → 14.40 Lunch

Poster Session 2
Duration: 13.00 → 14.40
Location: Sala Etruschi and foyer Auditorium
December 13th, 2007 (continued)

Parallel Session 6a: SOFC Cell & Stack Modelling
Session Chair: Nicola Massarotti, University of Naples “Parthenope”, Italy
Duration: 14.40 → 16.00
Location: Auditorium

14.40 → 15.00 EFC2007-39188 - The Electrochemical and Mechanical Properties of Micro-Tubular - Nigel Sammes, Colorado School of Mines

15.00 → 15.20 EFC2007-39216 - Parametric Analysis of the Endogenous and Exogenous Sources of Irreversibility in a Tubular Solid Oxide Fuel Cell through Finite-Volume Analysis - Francesco Calise, University of Naples Federico II


15.40 → 16.00 EFC2007-39060 - Design of a micro-tubular SOFC reactor with CFD and validations - Vincent Lawlor, FH OO Forschungs & Entwicklungs GmbH

Parallel Session 6b: General Issues of Fuel Cells
Session Chair: Luca Andreassi, University of Rome “Tor Vergata”, Italy
Duration: 14.40 → 16.00
Location: Sala Accademia


15.20 → 15.40 EFC2007-39139 - From powder to power - Alan Chapman, Ceramic Fuel Cells Limited

15.20 → 15.40 EFC2007-IP - Cogeneration of heat and electricity. An LCA comparison of gas turbine, internal combustion engine and MCFC/GT hybrid system alternatives – Silvia Bargigli, Università di Siena

15.40 → 16.00 EFC2007-IP- Evaluation of fuel cell performance via harmonised testing procedures - George Tsotridis and Roberto Bove, JRC

Parallel Session 6c: PEM Materials and Fabrication Processes
Session Chair: Suha Yazici, UNIDO-ICHET
Duration: 14.40 → 16.00
Location: Sala Latini

14.40 → 15.00 EFC2007-39010 - The Microporous Layer in PBI-based High Temperature PEMFC- Jose J Linares, Universidad de Castilla La Mancha

15.00 → 15.20 EFC2007-39195 - PtU/C Electrocatalysts for Direct Ethanol Fuel Cell- Egberto G. Franco, Instituto de Eletrotécnica e Energia

15.20 → 15.40 EFC2007-39073 - Nanostructured Hollow Core-Mesopoous Shell Carbon as Catalyst Support in PEM Fuel Cells - Jong-Sung Yu, Hannam University

15.40 → 16.00 EFC2007-39251 - Evaluation of High Temperature Membrane Electrode Assemblies Based on Sulfonated Polysulfones - Göran Lindbergh, KTH

16.00 → 16.30 Coffee Break
December 13th, 2007 (continued)

**Parallel Session 7a: SOFC Cell & Stack Modelling**
Session Chair: Jan Van Herle EPFL, Switzerland
Duration: 16.30 → 17.50
Location: Auditorium

16.30 → 16.50 EFC2007-39173 - Finite element modeling of solid oxide fuel cells - Nicola Massarotti - *Università degli Studi di Napoli "Parthenope"

16.50 → 17.10 EFC2007-39130 - Sensitivity analyses of the tubular SOFC performance with the material properties and geometrical parameters - Yasser Mollayi Barzi Azad University of Kashan

17.10 → 17.30 EFC2007-39057 - Modeling carbon monoxide direct oxidation in solid oxide fuel cells - Stefano Ubertini *Università degli Studi di Napoli "Parthenope"

17.30 → 17.50 EFC2007-39191 - Identification of the heat flux and temperature over the solid oxide fuel cell by inverse problem method - Minoo Gholami Iran Renewable Energy Organization

**Parallel Session 7b: Fuel Processing**
Session Chair: Stefano Frangini, ENEA, Italy
Duration: 16.30 → 17.50
Location: Sala Accademia

16.30 → 16.50 EFC2007-39140 - A new approach for thermal integrated design of Pox methane catalysts - Giulio de Simone *Università di Roma "Tor Vergata"

16.50 → 17.10 EFC2007-39036 - Thermodynamic analysis of PEM fuel cell units fuelled by humid ethanol processed within innovative membrane reactors - Giampaolo Manzolini Politecnico di Milano

17.10 → 17.30 EFC2007-39002 - Experimental Assessment of a Propane Fuel Processor for PEFC Residential Applications - Francesco Cipitì CNR-ITAE

17.30 → 17.50 EFC2007-39201 - Sensitivity and Characterisation of NH3BH3 Based Compositions for Hydrogen Generation - Jerome Saillard C.E.A. Le Ripault

**Parallel Session 7c: PEM Materials and Fabrication Processes**
Session Chair: Göran Lindbergh KTH, Sweden
Duration: 16.30 → 17.50
Location: Sala Latini

16.30 → 16.50 EFC2007-39015 - Testing High Temperature PBI-Based PEMFC with Pt/C Electrodes Prepared with a New Deposition Method - Justo Lobato University of Castilla-La Mancha

16.50 → 17.10 EFC2007-39115 - Expanded graphite gas diffusion layer for PEM fuel cells - Suha Yazici UNIDO-ICHET

17.10 → 17.30 EFC2007-39118 - Optimization design of flow channel section for hydroformed metal bipolar plate - Linfa Peng Shanghai Jiaotong University

17.30 → 17.50 EFC2007-39129 - Macro/micro porosity generation in conductive polymer based Gas Diffusion Layers for Proton Exchange Membrane Fuel Cell applications - Yves Deyrail Laval University
December 14th, 2007

Parallel Session 8a: SOFC Cell & Stack Modelling
Session Chair: Stefano Ubertini, University of Naples “Parthenope”, Italy
Duration: 9.00 → 10.20
Location: Auditorium

9.00 → 9.20 EFC2007-39227 - Modelling of Diffusion Inside Porous Electrodes - Ismal Celik West Virginia University


9.40 → 10.00 EFC2007-39198 - Dynamic simulation of a tubular SOFC combining heat/mass transfer effects with a 2-D transient model - Y. Mollayi Barzi Azad University of Kashan

10.00 → 10.20 EFC2007-39175 - New Design Of Planar kW-class SOFC Stacks And Its Validation - Jan Van Herle EPFL

Parallel Session 8b: Non Conventional Fuels
Session Chair: Takao Watanabe Central Research Institute of Electric Power Industry, Japan
Duration: 9.00 → 10.20
Location: Sala Accademia


9.40 → 10.00 EFC2007-39116 - Demonstration of two 5 kW Solid Oxide Fuel Cells working with landfill gas and biogas from anaerobic digestion - Marianne Haberbauer Profactor Produktionsforschungs GmbH

10.00 → 10.20 Invited lecture – (To be announced)

Parallel Session 8c: Measurements on PEM Fuel Cells
Session Chair: Roberto Bove, JRC, European Commission
Duration: 9.00 → 10.20
Location: Sala Latini

9.00 → 9.20 EFC2007-39145 - Neutron radiography and tomography on operating PEM fuel cells - Ingo Manke Hahn-Meitner-Institut Berlin

9.20 → 9.40 EFC2007-39152 - In situ observation of liquid water evolution and transport in PEM fuel cells - Christoph Hartnig Zentrum für Sonnenenergie- und Wasserstoff-Forschung (ZSW)


10.00 → 10.20 EFC2007-39243 - Experimental Evaluation of Bipolar Plate Designs for Fuel Cell - Pradip Majumdar Northern Illinois University

10.20 → 10.40 Coffee Break
Parallel Session 9a: MCFC Cell & Stack Modeling
Session Chair: Manfred Bischoff - CFC Solutions, Germany
Duration: 10.40 → 12.00
Location: Sala Accademia

10.40 → 11.00 EFC2007-39092 - Analysis of Temperature Distribution on MCFC Cell Plane - Barbara Bosio University of Genova

11.00 → 11.20 EFC2007-39086 - Thermo-Electrical Characterization of a Molten Carbonate Fuel Cell in Cogenerative Arrangement - Petronilla Fragiacomo University of Calabria


11.40 → 12.00 EFC2007-39009 - A Molten Carbonate Fuel Cell Electrochemical Model - Silvia Maria Canevese CESI Ricerca

Parallel Session 9b: Non conventional Fuels
Session Chair: Stephen McPhail, ENEA, Italy
Duration: 10.40 → 12.00
Location: Sala Latin

10.40 → 11.00 EFC2007-39064 - Carbon Deposition During SOFC Operation With Biogenous Gases - Mathilde Saule Technische Universität München, Institute of Energy Systems

11.00 → 11.20 EFC2007-39176 - Biogas conversion in SOFC stacks - Jan Van Herle EPFL

11.20 → 11.40 EFC2007-39228 - Syngas production of (LaA1-x) FeO3 (A=Ba, Ca, Mg and Sr) perovskite-type oxides - S.S Khine Ma Ntu-Nanyang Technological University

11.40 → 12.00 EFC2007-IP – Lab scale study for the integration of MCFC with Anaerobic Digestion system – Erica Massi, University of Rome “La Sapienza”, Italy; Viviana Cigolotti, Angelo Moreno, ENEA, Italy

Parallel Session 9c: System Design & Optimisation
Session Chair: Wolfgang Winkler Hamburg University of Applied Sciences, Germany
Duration: 10.40 → 12.00
Location: Auditorium

10.40 → 11.00 EFC2007-39007 - Development of Estimation Method on SOFC System Performance - Fumihiko Yoshiba Central Research Institute of Electric Power Industry


11.20 → 11.40 EFC2007-39051 - Development of a Fuel Flexible, Air-regulated, Modular, and Electrically Integrated SOFC-System (FlameSOFC) - Dimosthenis Trimis Technical University of Freiberg

11.40 → 12.00 EFC2007-39170 - SOFC-based micro-CHP System Optimization - Nordahl Autissier EPFL / LENI
Parallel Session 10a: Fuel Cell Modelling
   Session Chair: Stefano Ubertini, University of Naples “Parthenope”, Italy
   Duration: 12.00 → 13.00
   Location: Sala Latini

12.00 → 12.20 EFC2007-39193 - The Reversible Fuel Cell as a general basic solution of modelling - Wolfgang Winkler Hamburg University of Applied Sciences
12.40 → 13.00 EFC2007-39014 - Fundamental Thermodynamic Studies of Fuel Cells Using MALT2 - Mark Williams University of Utah

Parallel Session 10b: Biomass & Fuel Cells
   Session Chair: Sergio De Sanctis, Sapio Srl, Italy
   Duration: 12.00 → 13.00
   Location: Sala Accademia

12.00 → 12.20 EFC2007-39025 - Hot syngas cleaning of biomass gasification using molten carbonate - Makoto Kawase Central Research Institute of Electric Power Industry
12.20 → 12.40 EFC2007-39147 - H2 production from agriculture waste ethanol to feed a MC fuel cells - Vitaliano Chiodo CNR
12.40 → 13.00 EFC2007-39148 - Bioethanol Processing System for feeding a 300 kW Fuel Cell - Belén Sarmiento Hynergreen Technologies, S.A.

Parallel Session 10c: System Design & Optimisation
   Session Chair: Roberto Bove, JRC, European Commission
   Duration: 12.00 → 13.00
   Location: Auditorium

12.00 → 12.20 EFC2007-39081 - The development of a 6 kW fuel cell generator based on Alkaline Fuel Cell technology - Peter Coenen VITO dept. Energy Technology
12.40 → 13.00 EFC2007-39076 - Modeling and Simulation of a fuel cell powered motorcycle in a standard driving cycle - Masoumeh Mirzaei Yazd University

Conclusive remarks from the chairman
   Duration: 13.00 → 13.30
   Location: Auditorium
POSTER SESSION

December 12th, 2007

Poster Session 1
Duration: 18.00 → 19.00
Location: Sala Etruschi and foyer Auditorium

Material & Fabrication processes

1. EFC2007-39089 - Optimisation of composite electrodes for SOFCs - Antonio Barbucci University of Genova
2. EFC2007-39052 - Performance of an Anode-supported Solid Oxide Fuel Cell with a thin film SDC electrolyte in a Single-chamber Configuration - Sung Pil Yoon KIST
3. EFC2007-39053 - Synthesis and Characterization of PBI Derivatives for High Temperature PEMFC Operation - Sung Pil Yoon KIST
4. EFC2007-39204 - Impedance spectroscopy and electrochemical studies in h2/o2, methanol/o2 and ethanol/o2 proton exchange membrane fuel cell - Antonio Rodolfo dos Santos Nuclear and Energy Research Institute
5. EFC2007-39005 - Spatially-Resolved Measuring Technique for SOFC - Guenter Schiller German Aerospace Center (DLR)
6. EFC2007-39046 - Investigation and assessment of basic flow field designs for the cathodic gas supply in low temperature fuel cells - Torsten Knöri DLR
8. EFC2007-39067 - Characterization of GDE for polymer electrolyte fuel cells - Pozio, Cemmi, Carewska, Paoletti, Zaza ENEA CR Casaccia
9. EFC2007-39163 - The Role of Non-Stoichiometric Barium on BaxCe0.65Zr0.2Y0.15O3-d Proton Conductors, Cecilia Mortalò Istituto Energetica e Interfasi - CNR
10. EFC2007-39249 - Chemical reactivity and elemental interdiffusion across the LSM/LSGM interface, Giovanni Dotelli Politecnico di Milano
11. EFC2007-39248 - Characterization of GDL materials for Polymer Fuel Cells, Paola Gallo Stampino Politecnico di Milano
13. EFC2007-39212 - Elastomer Based Bipolar Plate Material for HT-PEM Fuel Cell Applications - Torsten Schwarz Fraunhofer ICT
14. EFC2007-39165 - High Temperature Proton Conducting Composite Membranes Based on Nafion/Azole Composite Systems - Unal Sen Gebze Institute of Technology
15. EFC2007-39054 - The Oxidation of High Chromium Containing Alloys in Simulated Solid-Oxide Fuel-Cell Atmospheres - Vladimir Shemet Research Centr Juelich
16. EFC2007-39018 - Preparation and characterization of ceria-based anode-supported MEAs for intermediate temperature SOFCs - Silvia Leonardi Università di Pavia
17. EFC2007-39062 - Development of low platinum loading electro catalysts in proton exchange membrane fuel cell systems - Sophie Mailley *CEA Grenoble*

18. EFC2007-39033 - Improving power densities and lifetime of micro-tubular SOFCs - Gerhard Buchinger *Upper Austria University of Applied Sciences*

19. EFC2007-39206 - Fabrication of High Precision PEMFC Membrane Electrode Assemblies by Sieve Printing Method - Edgar F. Cunha *IPEN/CNEN-SP*

20. EFC2007-39017 - PBI-Based Membranes for Polymer Electrolyte Fuel Cells: Study of the Effect of the MEA Preparation Procedure - Maria Jesus Rodriguez-Douton *Università di Pavia*

21. EFC2007-39006 - Concentration of carbon black dispersion for MPL of PEMFC - Nagakazu Furuya *University of Yamanashi*

22. EFC2007-39034 - Electrodes for Alkaline Fuel Cells and Electrolysers Prepared by Thermal Spraying - Trine Tønnessen *University of Agder*

23. EFC2007-39068 - Preparation of Self-humidified Membranes using Supercritical Impregnation for PEMFC - Jungyeon Byun *Seoul National University*

24. EFC2007-39102 - Development of Innovative Fabrication Process for HTFC Porous Components - Cristina Amelio *FN Nuove Tecnologie e Servizi Avanzati S.p.A.*

25. EFC2007-39128 - Study on the Au-Pd-Ni electrocatalysts and fuel additives for direct borohydride fuel cell - Seong Youn Park *Korea University*

26. EFC2007-39161 - Functional Cathode Materials for Solid Oxide Fuel Cells - Janina Molenda *AGH University of Science and Technology*

27. EFC2007-39171 - Superprotonic phase transition and thermal stability of the highly conductive phase in CsH2PO4 - Evgeny Kopnin *Pirelli Labs SpA*

28. EFC2007-39224 - Synthesis of solid proton conducting Y-doped BaZrO3 membrane for intermediate temperature fuel cell - Dongho Seo *Yonsei University*

29. EFC2007-39225 - Performance and characterization of pulse electroplating with Au for improving the micro-DMFC current collectors - Na Young Shin *Yonsei University*

30. EFC2007-39236 - New Polymer Electrolyte for DMFC Operating with Concentrated Methanol - Paola Caracino *Pirelli Labs SpA*

31. EFC2007-39238 - Synthesis and Structure Investigation of Composite Ti-O Based Materials with Addition of NiO for SOFC Anode Application - Yana Tsvetkova *University of Chemical Technology and Metallurgy*

32. EFC2007-39239 - Synthesis and Characterisation of New Solid Electrolyte in the System La2O3-CdO-Ga2O3-MgO - Mariya Ivanova *University of Chemical Technology and Metallurgy*

33. EFC2007-39247 - Design and performance of glass-ceramic sealants for planar SOFCs - Federico Smeacetto *Politecnico di Torino*

34. EFC2007-39252 - Conductivity of Samarium Doped Ceriumoxide (SDC) and (Li/Na)2CO3 Composite Electrolytes in Anode and Cathode Atmospheres - Göran Lindbergh *KTH Chemical Science and Engineering*
Fuel cell modelling

35. EFC2007-39220 - Influence of the cathode electrochemical characteristics of a direct ethanol PEMFC on the parasitic current and the cell performance - Panagiotis Tsiakaras University of Thessaly
37. EFC2007-39158 - CFD analysis of the performances of a PEM fuel cell - Maria Grazia De Giorgi Università del Salento
38. EFC2007-39164 - Design Optimization of 100 cm² PEMFC Stack - Joachim Scholta ZSW
40. EFC2007-39024 - Numerical Analysis of Two-Phase Transport in GDL of Polymer Electrolyte Fuel Cell - Gen Inoue Kyushu University
41. EFC2007-39231 - Performance of two combined internally reformed HT-SOFC/IT-SOFC and HT-SOFC/MCFC cycles - Abdullatif Musa Ghent university
42. EFC2007-39117 - Thermodynamic evaluation of the hydrogen generation from light fuel oil or Diesel for HTPEM fuel cell applications - Daniel Wichmann Oel-Wärme-Institut gGmbH
43. EFC2007-39122 - Effect of Clustered Water on Diffusion Coefficient of Water and on Proton Conductivity in Nafion® - Yuko Mamiya Kyushu University
44. EFC2007-IP - Numerical and experimental investigation of heat transfer in an intermediate temperature Solid Oxide Fuel Cell (IT-SOFC)- Mahmut et al. Nigde University

Non conventional fuels and fuel processing

45. EFC2007-39237 - Exergetic Efficiency of a Disk-shaped Packed Bed Micro-Reactor for Butane-to-syngas Processing - Nico Hotz ETH Zurich
46. EFC2007-39135 - Formation of Hydrogen from Catalytic Decomposition of Methane - Jung Whan Yoo Korea Institute of Ceramic Engineering and Technology
47. EFC2007-39153 - Desulphurisation technologies and materials for multi-fuel processors for hydrogen production - Jean-Christophe Huguet APTL/CERTH/CPERI
48. EFC2007-39042 - Design of a HTPEM fuel cell system based on methanol steam reforming in a micro-structure device - Daniel Wichmann Oel-Wärme-Institut GmbH
49. EFC2007-39190 - Study of Borohydride Crossover On Direct Borohydride Fuel Cell - Hyang Mee Lee Korea university
December 13th, 2007

Poster Session 2
Duration: 13.00 → 14.40
Location: Sala Etruschi and foyer Auditorium

Material & Fabrication processes

1. EFC2007-39031 - A Novel Pd3Fe1/WC Electrocatalyst for Oxygen Reduction Reaction in Direct Alcohol Fuel Cells - Shuqin Song Sun Yat-Sen University
2. EFC2007-39071 - Investigation of Composite Ni-Doped Perovskite Anode Catalyst for Electrooxidation of Hydrogen and Hydrocarbons in Solid Oxide Fuel Cells - Massimiliano Lo Faro CNR-ITAE
3. EFC2007-39072 - Recent Advances On The Development Of NiCu Alloy Catalysts For IT-SOFCs - Daniela La Rosa CNR-ITAE
5. EFC2007-39091 - Sulfur-Containing Impurity Effect in Hydrogen on Solid Oxide Fuel Cell Anodes - Matteo Spagna FBK -irst
7. EFC2007-39134 - Fabrication of kW class anode-supported tubular SOFC stack for APU application - Seungbok Lee Korea Institute of Energy Research
8. EFC2007-39168 - Structure of PtCo/C catalytic layers prepared by plasma sputtering and catalytic performance - Osman Ozturk Gebze Institute of High Technology

Lab and field tests

13. EFC2007-39159 - Effects of Control Strategies on the Performance of a PEM Fuel Cell Module - Rodolfo Taccani University of Trieste
15. EFC2007-39037 - Analysis of the control of the air distribution system inside the scalarpha5 SOFC generator - Massimo Santarelli Dipartimento di Energetica. Politecnico di Torino
16. EFC2007-39185 - PEFC systems demonstration and development activities at CNR-ITAE - Marco Ferraro CNR-ITAE
   *Iran Renewable Energy Organization*
18. EFC2007-39197 - Experimental investigation of sub-freezing temperatures effects on PEMFC cell behaviour during startup - Eric Pinton *CEA*
19. EFC2007-IP - Fuel cell performance: software to obtain current-voltage curves – Lo Presti *ENEA*
20. EFC2007-39030 – DSP-Controlled Test Facility of an Autonomous Power System Based on a PEM Fuel Cell - Bruno Belvedere *DIEM - University of Bologna*
21. EFC2007-39056 - Industrial Experience of Energy Recovery through PEM Fuel Cells Integrated into a Chlorate Production Plant: case history after 1 year from start up - Rosanna Santorelli *Uhdenora SpA*
22. EFC2007-39110 - A Novel Test Rig for Locally Resolved Degradation Studies in PEFC - Gabriel A. Schuler *Paul Scherrer Institut PSI*
23. EFC2007-39123 - Electronic test bed for AC impedance measurements on fuel cells on load - El-Hassane Aglzim *Laboratoire LIEN*
24. EFC2007-39166 - Hydrogen Production by Alkaline Electrolysis and Brazing Applications of Hydrogen Flame - Isilay Ulusoy *Gebze Institute of Technology*
25. EFC2007-39210 - Experimental and Numerical Investigation of Fluid Dynamics of a Bounded Equilateral Triangular Jet - Reza Riahi *Sharif University of technology*

**System design & optimization**

26. EFC2007-39075 - Design, modeling and optimization of a PEM fuel cell system based on an electrochemical semi-empirical model - Masoumeh Mirzaei *Yazd university*
27. EFC2007-39063 - Reduction of paracitics in design of Hydrogen fuel cell Auto Rickshaw - Ikhlaq Khattak *Pakistan National university of Science and technology*
28. EFC2007-39150 - A study of the future transport industry; fuel cells verses ICE’s - James G. Carton *Dublin City University*
29. EFC2007-39235 - Engineering of Balance of Plant for Pressurised SOFC hybrid systems - Alberto Traverso *University of Genoa*
30. EFC2007-39080 - The development of an Advanced Cell Voltage Monitoring device - Grietus Mulder *VITO dept. Energy Technology*

**General issues on fuel cells**

32. EFC2007-39097 - The bioethanol scenario for electricity production by the aid of solid oxide fuel cells: a state-of-the-art - Panagiotis Tsiakaras *University of Thessaly*
33. EFC2007-39099 - MICRO-CHP. Development of a micro-cogeneration unit based on PEM fuel cell system - Gabriela Benveniste *HYSYLAB-Environment Park*
34. EFC2007-39136 - Status of Fuel Cell Developments at CRIEPI – Watanabe Central Research Institute of Electric Power Industry
36. EFC2007-39099 - MICRO-CHP. Development of a micro-cogeneration unit based on PEM fuel cell system - Gabriela Benveniste HYSYLAB-Environment Park
37. EFC2007-39100 - Piedmont Hydrogen System: Program And Projects - Elisabetta Ponte Regione Piemonte
39. EFC2007-39194 - Pressure Drop in a PEM Low Temperature Fuel Cell – Numerical and Experimental Results - Heimo Walter Vienna University of Technology
40. EFC2007-39213 - Technical and economic feasibility study of a hydrogen railway in Peru - Enrico Bocci University of Rome La sapienza
41. EFC2007-39244 - Experimental Evaluation of Bipolar Plate Designs for Fuel Cell - Pradip Majumdar Northern Illinois University
42. EFC2007-39077 - Conversion of Tars on SOFCs Anodes - Nadine Frank Technische Universität München
43. EFC2007-39215 - Studies on operating parameters of a direct ethanol fuel cell - S Basu IIT Delhi