



The 19 / 20 / 21 of September 2016
GRENOBLE - FRANCE

«MATERIAL CHALLENGES FOR FUEL
CELL & HYDROGEN TECHNOLOGIES»
From innovation to industry



AGENDA

Monday 19/09/2016

18:00	Registration	
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Tuesday 20/09/2016 morning

08:30	Registration	
09:00	Introduction	Pierre-André Jacques (CEA)
09:10	Presentation of FCH-JU PEMFC Program	Lionel Boillot (FCH-JU)
Session on Catalysts		Chair: Nancy Garland
09:40	Pt free catalysts: current situation and major advances.	Piotr Zelenay (LANL)
10:10	Nanocat Project: development of new catalysts and MEA.	Marie Heitzmann (CEA)
10:30	<i>Coffee break</i>	
10:50	Development of Pt-alloy electro-catalysts for PEM fuel cells focusing on performance and stability	Irene Gatto (CNR/ITAE)
11 :10	SnO2 aerogel as catalyst support for PEMFC	Christian. Beauger (Mines Paris Tech.)
Session on Characterization		Chair: Joël Pauchet
11:30	Analysis of ionomer and catalyst by electronic microscopy	Laure Guetaz (CEA)
11:50	Analyzing the influence of high electrode potentials on intrinsic properties of catalyst	Robert Alink (Franhauser)

	coated membranes using impedance spectroscopy	
12:10	Diagnostics in operating cells (SANS, SAXS...)	Arnaud Morin (CEA)
12:30	<i>Lunch, networking and poster sessions</i>	

Tuesday 20/09/2016 afternoon

14:00	Spatially Resolved Characterization	Nada Zamel (Fraunhofer)
14:20	Structure and Degradation of Fuel Cell Electrodes investigated at High Humidity by Atomic Force Microscopy	Tobias Morawietz (Univ. Hesslingen)
14:40	Match Workshop info	Jèrôme Gavillet (CEA)
Session on gas quality		Chair: Pierre-André Jacques
15:10	General issues and results of Hycora project	Jari Ihonon (VTT)
15:40	Recent results for automotive and stationary applications	Sylvie Escribano (CEA)
16:00	Measurements of gas quality	Thomas Bacquart (NPL);
16:20	<i>Coffee break</i>	
Session on testing protocols		Chair: Andreas Friedrich
16:40	Stack testing protocols and characterization	Alexander Kabza (ZSW)
17:10	AST for automotive application	Andrea Casalegno (Polimi)
17:30	AST for stationary application	Irina Profatilova (CEA)
17:50	Harmonization	Georgios Tsotridis (JRC)
18:10	Closure of the day	Pierre-André Jacques (CEA)
20:00	Gala Dinner	Chateau La Beaume - Seyssins

Wednesday 21/09/2016 morning

08:30	Introduction	Pierre-André Jacques (CEA)
08:40	Presentation of DoE PEMFC Program	Nancy Garland (DoE)
Session on Degradation		
		Chair: Sylvie Escribano
09:10	Some results from DoE projects	Rod Borup (LANL)
09:40	Low Pt-loading gradient catalyst layer with locally tailored particle size for improved lifetime	Andrea Casalegno (Polimi)
10:00	Measurement of proton resistance and degradation of the MEA	Thomas Gaumont (CNRS/Lemta)
10:20	IMPACT - Improved Lifetime of Automotive Application Fuel Cells with Low Pt-Loading	Andreas Friedrich (DLR)
	Activity and Stability of PtAuMe/C (Me : Pd, Ni, Co, Cu) ternary cathode catalysts for PEMFC	Christophe Coutenceau (CNRS/IC2MP)
10:40	<i>Coffee break</i>	
Session on Modelling		
		Chair: Andrea Andreas Fredidrich
11:00	Water management in PEMFC: some results and issues	Joël Pauchet (CEA)
11:30	Influence of pore-scale material properties on the performance of proton exchange membrane fuel cells	Jürgen Schumacher (Univ. of Zurich)
11:50	Improving the electrolyte description for modelling heterogeneous electrocatalysis: from homogenous background charges to QM/MM.	Stephan Steinmann (CNRS/ENS)
12:10	Multiscale approach for analysing performance and durability	Mathias Gerard (CEA)
12:30	<i>Lunch, networking and poster sessions</i>	

Wednesday 21/09/2016 afternoon

Session : Preparing the Future		Chair: Pierre-André Jacques
14:00	MATCH WORKSHOP	Jérôme Gavillet (CEA)
16:00	Hyway project – Hykangoo demonstration	Sébastien Rosini (CEA)
16:20	Conclusions/Round the table	Pierre-André Jacques (CEA)
16:45	Closure of the Workshop	Pierre-André Jacques (CEA)