



chipCAT Workshop Program
“Low-precious-metal-content catalysts for PEM fuel cells”

Univ. Bourgogne Franche-Comté, Faculté Mirande, Amphithéâtre Paris

Monday, June 8th			
	14:00-15:00	People arriving, coffee	
	15:00-15:15	Intro & workshop schedule by local organizers	
	15:15-16:00	chipCAT and Prague results presentations	V. Matolin
I1_Mo	16:00-17:00	Impact of catalyst support on the activity of the oxygen evolution catalyst in PEM water electrolysis	K. Bouzek
O1_Mo	17:00-17:30	Reducible oxides in low-temperature fuel cells: model studies from surface science to spectroelectrochemistry	J. Libuda
	19:00	Welcome in Dijon City Hall, salon Apollon	

Tuesday, June 9th			
I2_Tu	9:00-10:00	In Situ and Operando Characterization of Model Catalysts at Work	B. Roldán Cueva
O2_Tu	10:00-10:30	Computational studies of nanoparticulate models of catalysts in the ChipCAT project	K. Neyman
	10:30-11:00	Coffee break	
O3_Tu	11:00-11:20	Gas-fueled methanol fuel cell	V. Johanek
O4_Tu	11:20-11:40	Cheap precursor for synthesis of oxycarbide tungsten catalysts	N. Zanfoni
O5_Tu	11:40-12:00	Observation of porous Pt-CeO ₂ thin films directly grown on TEM grids	P. Simon
	12:00-14:00	Lunch	
O6_Tu	14:00-14:30	Modeling the structure and reactivity of ceria electrodes from ideal to realistic reaction environments	S. Fabris
O7_Tu	14:30-14:50	IR-spectroelectrochemistry on thin film and model catalysts	O. Brummel
O8_Tu	14:50-15:10	TEM study of Pt alloys for fuel cells	J. Lavkova
O9_Tu	15:10-15:30	PtCeO ₂ on CN _x as a anode for PEMFC	R. Fiala
	15:30-18:00	Coffee break and poster session	
	16:30-21:00	chipCAT internal meeting	chipCAT partners

Wednesday, June 10th			
I3_We	9:00-10:00	Tuning the ORR electrocatalytic properties via Pt hollow nanostructures	L. Dubau
O10_We	10:00-10:30	Tuning Pt catalysts for fuel cells by metal-oxide interactions	S. Kozlov
	10:30-11:00	Coffee break	
O11_We	11:00-11:20	Structure and reactivity of the electrode/water interface from ab-initio molecular dynamics simulations	M. Farnesi
O12_We	11:20-11:40	Modeling interactions of transition metal species with ceria nanoparticles for applications in fuel cell catalysts	A. Figueroba
O13_We	11:40-12:00	Mechanisms of High Temperature PEM Fuel Cell Catalyst Electrochemically Active Surface Area Deterioration	T. Bystron
	12:00-14:00	Lunch	
I4_We	14:00-15:00	Second generation graphene-for a rational design of Advanced Functional Architectures for Energetics	G. Granozzi
O14_We	15:00-15:20	In-situ electrochemical atomic force microscopy study of the evolution of Pt-Ni and Pt-Co thin film ORR catalyst during electrochemical aging test	I. Khalakhan
O15_We	15:20-15:40	Atomically dispersed and tin-doped noble metal model catalysts: preparation, stability, reactivity	Y. Lykhach
	15:40-16:10	Coffee break	
O16_We	16:10-16:40	Noble metals in heterogeneous catalysis: down to zero	E. Marceau
O17_We	16:40-17:00	Sputtered Platinum-Cobalt Oxygen Reduction Reaction Catalyst	M. Vaclavu
O18_We	17:00-17:30	Central-European Research Infrastructure Consortium – distributed research facility for multitechnique materials research	D. Mazur
	From 17:30	Poster, free discussion, ...	

Thursday, June 11th			
I5_Th	9:00-10:00	Using synchrotron radiation for in-situ structural investigations of model electrochemical interfaces	J. Drnec
O19_Th	10:00-10:30	Approach and main steps of microfabrication	M. Tormen
	10:30-11:00	Coffee break	
O20_Th	11:00-11:20	Mass spectrometry of fuel cell exhaust	A. Ostroverkh
O21_Th	11:20-11:40	Hydrogen activation on atomically dispersed and nanoparticulate noble metal catalysts	A. Neitzel
O22_Th	11:40-12:00	PVD of WCx and CeCx	J. Nazon
	12:00-12:10	Concluding remarks	
	12:10	End of the workshop, lunch	
	14:00-19:00	chipCAT Management Committee meeting	chipCAT partners

Posters

1	PEM water electrolysis in context of H ₂ economy	Peter Kus
2	Optimization of Electron Beam Lithography Process for Fuel Cell Patterning	Sarka Chlupova
3	Surface Composition of Magnetron Sputtered Pt-Co Thin Film Catalyst for Proton Exchange Membrane Fuel Cells	Mykhailo Vorokhta
4	Adsorption, reaction and growth behavior of carboxylic acids on well-ordered oxide films	Tao Xu / Mathias Schwarz
5	Adsorption, reaction and growth behavior of carboxylic acid anhydrides on well-ordered oxide films	Susanne Mohr / Kristin Werner
6	IR-spectroelectrochemistry on thin film and model catalysts prepared under UHV conditions	Firas Faisal / Olaf Brummel
7	Operando DRIFTS-MS studies of the CO oxidation on ceria-based catalysts prepared by solution combustion synthesis NO _x Storage on titania based photocatalysts	Fabian Kollhoff
8	In-situ spectroscopy of the interaction of Pd nanoparticles and Pd catalysts with ionic liquids	<u>Sascha Mehl</u> / Tanja Bauer
9	In-situ and operando spectroscopy of catalytic materials modified by liquid films, ionic liquids and molten salts	Andre Kaftan / Tanja Bauer
10	Thin film catalyst for on-chip PEM fuel cells	Tomas Fejt
11	Ab-initio thermodynamics of M-CeO ₂ solid solutions (M=Pt, Pd, Au) exposing flat and stepped surfaces	Luigi Bagolini / Tran Nguyen Dung
12	Photo-catalytic conversion of CO ₂ in Methanol to Methyl Formate over TiO ₂ catalyst	Alberto Navaraz/Pierre-Marie Deleuze ^a
13	Contribution of transmission electron microscopy to the study of catalytic ceria thin layers	Pardis Simon/Valérie Potin/Celine Dupont/Remi Chassagnon
14	DLI-Chemical Vapor Deposition : principle	Nicolas Zanfoni
15	Thickness-controlled elaboration of titanium dioxide thin-films on gold substrates by atomic layer deposition	Maxence Giraudet