

International workshop on
"Surface chemistry and Near-Ambient Pressure Photoemission:
new tools and new paradigms"

10-12 December 2014 - Synchrotron SOLEIL

10-11-12 Décembre 2014



SPECS™



NanoSaclay

IP²CT

Institut Parisien de Chimie Physique et
Théorique (FR2622)
SORBONNE UNIVERSITÉS



UPMC
SORBONNE UNIVERSITÉS



MiChem LabEx
SORBONNE UNIVERSITÉS



International workshop on
"Surface chemistry and Near-Ambient Pressure Photoemission:
new tools and new paradigms"

10-12 December 2014 - Synchrotron SOLEIL

Wednesday, December 10th, 2014
9:45-14:30

09:45 - 10:15	Registration and welcome coffee
10:15 - 10:25	Welcome word Paul Morin , Director of Research, Synchrotron SOLEIL, <i>Gif sur Yvette (FRANCE)</i>
10:25 - 10:35	Welcome word, Stéphane Carniato , Representative of University Pierre et Marie Curie, <i>Paris (FRANCE)</i>
10:35 - 10:50	Presentation of the workshop, François Rochet , UPMC & SOLEIL, <i>Paris (FRANCE)</i>
	Environnemental Chemistry Chair: Philippe Parent, CINAM Marseille (FRANCE)
10:50 - 11:40	Environmentally relevant aqueous liquid/vapor interfaces probed by liquid-jet photoelectron spectroscopy John Hemminger - University of California, <i>Irvine (USA)</i>
11:40 - 12:00	Composition of the sea-salt solution–air interface as affected by organics Ming Tao Lee - PSI, <i>Villigen (SWITZERLAND)</i>
12:00 - 12:30	Ambient pressure XPS at SOLEIL: First results in the field of environmental chemistry and future outlooks Jean-Jacques Gallet - UPMC Sorbonne Universités, <i>Paris (FRANCE)</i>
12:30 - 13:00	Chemical state and depth resolved concentration profiles of solid/liquid and liquid/gas interfaces obtained by a standing-wave approach Slavomir Nemšak - Forschungszentrum Juelich, Juelich, Germany
13:00 - 14:30	Lunch

Wednesday, December 10th, 2014
14:30-21:30

	Environmental Chemistry and Bio-chemistry Chair: Jacques Jupille, UPMC, France
14:30 - 15:20	Photoelectron spectroscopy under ambient relative humidity Hendrik Bluhm - DOE Berkeley labs, <i>Berkeley</i> (USA)
15:20 - 15:50	Photoelectron spectroscopy on ice, mineral oxides and aqueous solutions of atmospheric relevance Markus Amman - PSI, <i>Villigen</i> (SWITZERLAND)
15:50 - 16:10	Interfacial chemistry of water and Ga-based semiconductor surfaces Sylvia Ptasinska - Notre Dame University, <i>Notre Dame</i> (USA)
16:10 - 16:40	Coffee break
16:40 - 17:00	Electrical double layer structure at the water-nanoparticle interface probed by XPS from a liquid microjet Matthew Brown - PSI, <i>Villigen</i> (SWITZERLAND)
17:00 - 17:30	Modification of molecular adsorbates under ambient pressure conditions Georg Held - Reading University and Diamond Light Source, <i>Reading</i> (UK)
	Catalysis Chair: Catherine Louis, UPMC, Paris (FRANCE)
17:30 - 18:00	Surface segregation of Pt ₃ Ni(111) alloys under oxygen environment Simon Mun - Gwangju University, <i>Gwangju</i> (KOREA)
18:00 - 18:30	Ambient pressure XPS at ALBA light source: First results Virginia Perez-Dieste - Alba Synchrotron, <i>Barcelona</i> (SPAIN)
18:30 - 18:50	Surface restructuring of core-shell metal nanoparticles during CO ₂ or CO reduction Sophie Carencio - Collège de France – UPMC – CNRS, <i>Paris</i> (FRANCE)
18:50 - 19:10	Mechanism study for salen ligand homogeneous: Catalyst in a heterogeneous catalysis system Niclas Johansson - <i>Lund</i> (SWEDEN)
20:00 - 21:30	Dinner at SOLEIL
21:30	Transfer to RER

Thursday, December 11th, 2014
9:30-14:15

	Catalysis Chair: Hendrik Bluhm - Berkeley, USA
09:30 - 10:20	In-situ studies of heterogeneous interfaces relevant to catalysis and energy research: Status and outlook Axel Knop Gericke - BESSY Light source <i>Berlin</i> (GERMANY)
10:20 - 10:50	Coffee break
10:50 - 11:20	From electronic structure to macroscopic flow patterns in heterogeneous catalysis Sebastian Matera - Freie Universität <i>Berlin</i> (GERMANY)
11:20 - 11:40	Near ambient pressure XPS at the Photon Factory. Its application to catalytic surface chemistry Hiroshi Kondoh - Keio University, <i>Yokoyama</i> (JAPAN)
11:40 - 12:00	The active species for ethylene epoxidation on Ag: Experiment and theory Tulio C. R. Rocha - Brazilian Synchrotron Light Laboratory, <i>Campinas</i> (BRAZIL)
12:00 – 12:20	Ambient pressure XPS studies of the interface formation during the atomic layer deposition of TiO ₂ on RuO ₂ (110) Ashley Head - <i>Lund</i> (SWEDEN)
	Instrumentation
12:20 - 12:45	Recent developments in near ambient pressure XPS instrumentation Andreas Thissen - CCO, SPECS, <i>Berlin</i> (GERMANY)
12:45 - 14:15	Lunch

Thursday, December 11th, 2014
14:15- 21:00

	Catalysis and Thin Film Deposition Processes Chair: Philippe Sautet, ENS Lyon (FRANCE)
14:15 - 14:45	CO oxidation on bimetallic catalytic surfaces studied by ambient-pressure X-ray photoelectron spectroscopy Francisco Cadete Santos Aires - IRCE LYON, <i>Lyon</i> (FRANCE)
14:45 - 15:15	Atomic scale understanding of industrial catalysts : A combined theoretical and experimental approach Pascal Raybaud - IFPEN, <i>Paris</i> (FRANCE)
15:15 - 15:45	Real-time studies of atomic layer deposition and chemical vapor deposition using ambient pressure X-ray photoemission spectroscopy Joachim Schnadt - MAXLAB Lund, <i>Lund</i> (SWEDEN)
	Instrumentation Chair: Fausto Sirotti Synchrotron SOLEIL, Saint-Aubin (FRANCE)
15:45 - 16:10	VG Scienta high pressure photoemission instrumental development: New tricks and old wisdom Robert Moberg - VG Scienta AB, <i>Uppsala</i> (SWEDEN)
16:10 - 16:30	Combining infrared and photoelectron spectroscopies for surface chemistry Paul Dumas - SOLEIL, <i>Saint-Aubin</i> (FRANCE)
16:30 - 18:00	Coffee break - Posters discussion and visit of SOLEIL
18:00	Transfer to Paris
21:00	Social Dinner
	Transfer to SOLEIL

Friday, December 12th, 2014
9:15 - 14:00

	Solid State Chemistry and Electrochemistry Chair: John Hemminger, USA
09:15 - 10:05	Ion Insertion Reactions at the Gas-solid Interface William Chueh - Stanford University, <i>Stanford</i> (USA)
10:05 - 10:25	Application of near ambient pressure XPS in electrochemical studies Spyridon Zafeiratos – <i>Strasbourg</i> (FRANCE)
10:25 - 10:55	Coffee Break
10:55 - 11:45	Using "Tender" X-ray ambient pressure X-ray photoelectron spectroscopy as a direct probe of solid-liquid interface Zhi Liu - SIMIT, CAS & Shanghai Tech University, <i>Shanghai</i> (CHINA)
11:45 - 12:15	Electron spectroscopy for liquid interfaces Hans Siegbahn - <i>Uppsala</i> (SWEDEN)
12:15 - 12:35	Probing chemical composition of a solid-liquid interface in a fully-functioning electrochemical cell A. Shavorsky - <i>Berkeley</i> (USA)
12:35 - 12:55	Direct observation of Au oxidation at the liquid-solid interface using operando APXPS E. J. Crumlin - ALS, Lawrence Berkeley Laboratories, <i>Berkeley</i> (USA)
12:55 - 14:00	Lunch
14:00 -	Round table and concluding remarks