

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



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**Wednesday, December 10<sup>th</sup>, 2014**  
**9:45-14:30**

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

**Wednesday, December 10<sup>th</sup>, 2014**  
**14:30-21:30**

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

**Thursday, December 11<sup>th</sup>, 2014**  
**9:30-14:15**

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

**Thursday, December 11<sup>th</sup>, 2014**

**14:15- 21:00**

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

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**Friday, December 12<sup>th</sup>, 2014**

**9:15 - 14:00**

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