

# Hard X-ray Photoelectron Spectroscopy and Standing Waves : Status and Trends

MONDAY 6 FEBRUARY

VENUE: ESRF AUDITORIUM

08:15 – 08:45	Registration	
08:45 - 09:00	Welcome	<b>Harald Reichert</b> <b>Christian Kumpf</b> <b>Jorg Zegenhagen</b>
<b>Session 1: 09:00 – 10:20 Chair : Christof Kunz</b>		
09:00 - 09:40	Doing it the hard way: an exciting new dimension of photoemission	<b>Charles S. Fadley</b> University of California, Davis, USA
09:40 - 09:55	HAXPES to investigate advanced devices for microelectronic applications	<b>Eugénie Martinez</b> CEA-Leti, Grenoble
09:55 - 10:20	Electronic properties of buried interfaces and diluted systems probed by HAXPES	<b>Giancarlo Panaccione</b> Elettra, Italy
10:20 – 10:45	<b>Coffee break</b>	
<b>Session 2: 10:45 – 12:05 Chair : Ivan Vartanyants</b>		
10:45 - 11:25	X-Ray Standing Waves – Status and Perspectives	<b>Gerhard Materlik</b> Diamond Light Source, Didcot, UK
11:25 - 11:40	Investigation of doped ZnO with kinematical X-Ray standing waves	<b>Martin Tolkieln</b> DESY, Hamburg, Germany
11:40 - 12:05	Quantitative vertical structure of functional interfaces based on organic molecules	<b>Sergey Subach</b> Forschungszentrum Jülich, Germany
12:05 – 13:30	<b>Lunch</b>	
<b>Session 3: 13:30 – 15:30 Chair : Charles S. Fadley</b>		
13:30 - 13:55	Correlation between the transport properties, atomic structure and oxygen vacancies of La <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> thin films	<b>Juan Rubio Zuazo</b> SpLine Spanish CRG beamline, ESRF
13:55 - 14:20	HAXPES at BESSY II - present experiments and new opportunities	<b>Michaela Gorgoi</b> BESSY II, Berlin, Germany
14:20 - 14:45	Hard X-ray photoemission spectroscopy at NIMS Contract Beamline at SPring-8: present and future	<b>Shigenori Ueda</b> Spring 8, Japan
14:45 - 15:00	Angle resolved photoemission under extreme conditions high energy and high pressure	<b>Robert Moberg</b> VG Scienta
15:00 - 15:15	Focus GmbH: all about electrons	<b>Michael Merkel</b> Focus GmbH
15:15 - 15:30	The PHOIBOS analyzer series: electron spectrometers for Hard X-ray photoemission spectroscopy	<b>Monica Blum</b> SPECS
15:30 – 16:00	<b>Coffee break</b>	

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**MONDAY 6 FEBRUARY cont.**

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**Session 4: 16:00 – 18:15 Chair : Mark Simon**

<b>16:00 - 16:25</b>	X-ray standing waves – structural tool of high versatility	<b>Jens Falta</b> University of Bremen, Germany
<b>16:25 - 16:40</b>	The Structure of L-Cysteine on Au(110)	<b>Robert Jones</b> University of Nottingham, UK
<b>16:40 - 16:55</b>	Modification of the PTCDA/Ag(111) interaction by the formation of a hetero-organic interface with CuPc	<b>Benjamin Stadtmüller</b> Forschungszentrum Jülich, Germany
<b>16:55 - 17:10</b>	Tuning the interface bonding of a large organic molecule on a metal surface: K-doped PTCDA on Ag(110)	<b>Oliver Bauer</b> Universität Bonn, Germany
<b>17:10 - 17:25</b>	Ab-initio description of satellites in photoelectron spectroscopy of valence vand: theory and experiments	<b>Matteo Guzzo</b> Ecole Polytechnique, Palaiseau, France
<b>17:25 - 17:50</b>	Core level spectroscopy of thin film oxide heterointerfaces	<b>Mark Golden</b> University of Amsterdam, the Netherlands
<b>17:50 - 18:15</b>	Local correlations, non-local screening, multiplets, and band formation in NiO	<b>Liu Hao Tjeng</b> MPI-CPFS, Dresden, Germany

**18:15 – 21:00 Poster Session with buffet, Chair : M. Tolkieln (best poster committee)**

**21:00 Presentation of the Best Poster Award**

*(Transport will be organised at 21:30 from the ESRF to Grenoble downtown)*

# SURFACE AND INTERFACE SCIENCE

## PARALLEL SESSION

### Programme

## Venue: ESRF Auditorium

### Organizers:

**Christian KUMPF** (Jülich Research Center, Germany & Users Organization Committee)

For further information, please contact **C. Kumpf** ([c.kumpf@fz-juelich.de](mailto:c.kumpf@fz-juelich.de))

### TUESDAY 7 FEBRUARY

**14:00 – 15:45 and 16:30 – 17:40**

<b>14:00 - 14:05</b>	Welcome	<b>Christian Kumpf</b> UOC
<b>14:05 - 14:25</b>	Latest developments at ID03	<b>Olivier Balmes</b> ESRF, Grenoble, France
<b>14:25 - 14:55</b>	In-situ studies of model catalysts	<b>Edvin Lundgren</b> Lund University, Sweden
<b>14:55 - 15:25</b>	Normal incidence x-ray standing waves for understanding surface bonding of organic molecules	<b>Moritz Sokolowski</b> Universität Bonn, Germany
<b>15:25 - 15:45</b>	Capabilities of BM25 SpLine in diffraction and photoemission (HAXPES)	<b>Pilar Ferrer</b> ESRF, Grenoble, France
<b>15:45 – 16:30</b>	<b>Coffee break</b>	
<b>16:30 - 16:50</b>	Recent evolutions of BM32 (in situ UHV-CVD injector)	<b>Valentina Cantelli</b> ESRF, Grenoble, France
<b>16:50 - 17:10</b>	ID01: Focus on recent developments and outlook on the upgrade	<b>Tobias Schülli</b> ESRF, Grenoble, France
<b>17:10 - 17:40</b>	On the compliant behavior of Ge nanocrystals on free-standing Si(001) nanopillars	<b>Grzegorz Kozlowski</b> IHP, Frankfurt (Oder), Germany
<b>18:30 - 19:50</b>	Joint Poster Session with Users' Meeting and other workshops	
<b>20:00 – 22:30</b>	Users' Meeting Dinner - Young Scientist and Best Poster awards (Transport will be organised at 22:30 from the ESRF to Grenoble downtown)	

# Hard X-ray Photoelectron Spectroscopy and Standing Waves : Status and Trends

WEDNESDAY 8 FEBRUARY

VENUE: ESRF AUDITORIUM

## Session 5: 14:00 – 15:45 Chair : Ralf Claessen

14:00 - 14:25	HAXPES and materials research at the Ångström laboratory	<b>Svante Svensson</b> Uppsala University, Sweden
14:25 - 14:40	HAXPES Characterization of the nm-Thick Protecting Oxide Layer on New Al-Cr-Fe Complex Metallic Alloys (Quasicrystal Approximants)	<b>Alessandra Beni</b> EMPA, Switzerland
14:40 - 15:05	Bulk electronic structure of quasicrystals studied by hard X-ray photoemission	<b>Sudipta Roy Barman</b> UGC-DAE Consortium for Scientific Research, India
15:05 - 15:20	The role of the interfaces in novel superconducting, CaCuO <sub>2</sub> /SrTiO <sub>3</sub> superlattices	<b>Carmela Aruta</b> CNR-SPIN, Italy
15:20 - 15:45	Ambient pressure photoelectron spectroscopy using soft X-ray and hard X-ray	<b>Zhi Liu</b> ALS-LBL, Berkeley, USA

## 15:45 – 16:15 Coffee break

## Session 6: 16:15 – 18:00 Chair : Claus Schneider

16:15 - 16:40	Atomic-scale structural and chemical-state studies of complex interfaces	<b>Michael Bedzyk</b> North western University, USA
16:40 - 17:05	Unifying electronic and atomic structure at metal oxide heterointerfaces	<b>Christoph Schlüter</b> ESRF Grenoble, France
17:05 - 17:20	The early stages of corrosion of Cu <sub>3</sub> Au studied by X-ray standing waves generated by a periodic multilayer	<b>Parasmani Rajput</b> ESRF, Grenoble, France
17:20 - 17:45	Site-specific valance electronic structures revealed by X-ray standing waves	<b>Tien-Lin Lee</b> Diamond Light Source, Didcot, UK
17:45 - 18:00	Multipole contributions to the photoelectric absorption determined by XSW/HAXPES	<b>Blanka Detlefs</b> ESRF Grenoble, France
18:00 - 18:10	Information for working groups	<b>Jorg Zegenhagen</b> ESRF Grenoble, France

## 18:15 – 19:15 Buffet

## 19:00 – 20:00 Working Groups: (meeting rooms 018, 337, 248A, CTRL room, auditorium)

- Beamline and instrumentation - working group leader **Wolfgang Drube**
- Industrial applications - working group leader **Thomas Schröder**
- Catalysis and Energy research - working group leader: **Roberto Felici**
- Surface and Interface Science - working group leader: **Phil Woodruff**
- Bulk structure and electronic properties – working group leader: **Giancarlo Panaccione**

## 20:15 – 21:00 Reports from working groups and wrap up

Transport will be organised at 21:30 from the ESRF to Grenoble downtown