

# Functional Materials for Electronics Workshop

## 3 to 5 February 2014, ESRF Auditorium

Monday 3 <sup>rd</sup> February 2014		
09:00 - 09:15	<b>Registration</b>	
09:15 - 09:35	<b>Welcome</b>	
	<b>Session 1: X-Ray spectroscopy - Chaired by Nick Brookes</b>	
09:35 - 10:05	Recent progress in EuS-based multilayers for room temperature spintronics	<b>P. Pouloupoulos</b> University of Patras - Greece
10:05 - 10:35	Zinc Oxide - From Dilute Magnetic Doping to Spin Transport	<b>M. Opel</b> Walther-Meissner-Institut - Germany
10:35 - 11:05	<b>Coffee break</b>	
11:05 - 11:35	Probing nano- and interface magnetism in hybrid systems by nuclear resonant scattering	<b>M. J. Van Bael</b> KU Leuven - Belgium
11:35 - 11:55	XAS/XMCD studies of Ga <sup>+</sup> ions irradiation driven magnetization changes in ultrathin cobalt films	<b>P. Mazalski</b> University of Białystok - Poland
11:55 - 12:15	XMCD study of magnetoelectricity in L10 FePd ultrathin films	<b>F. Bonell</b> Osaka University - Japan
12:15 - 14:00	<b>Lunch</b>	
	<b>Session 2: Devices: Structure and Strain – Chaired by Tobias Schüllli</b>	
14:00 - 14:30	Strain field determination in micro and nanotechnologies using sub-micronic X-ray beams	<b>P. Gergaud</b> CEA-LETI, Grenoble - France
14:30 - 15:00	Shedding light on silicon solar cells	<b>T. Lafford</b> ESRF, Grenoble - France
15:00 - 15:30	Getting electronic materials ready for technology by Synchrotron research: In-operando and in-line characterization needs	<b>T. Schroeder</b> IHP Frankfurt/Oder -Germany
15:30 - 16:00	<b>Coffee Break</b>	
16:00 - 16:30	Perfect crystals grown on highly mismatched interfaces investigated by submicron diffraction	<b>M. Meduna</b> Masaryk Univ., Brno - Czech republic
16:30 - 16:50	In-situ nanofocused X-ray diffraction in combination with atomic force microscopy for in-situ mechanical testing of nanostructures	<b>T.W. Cornelius</b> Université Aix-Marseille - France
16:50 - 17:20	Strain and Defects in Epitaxial Graphene on a Metal Investigated by Diffraction Experiments	<b>J. Coraux</b> CNRS Grenoble – France
17:20 - 17:40	Imaging of Strain and Lattice Orientation by Quick Scanning X-ray Microscopy combined with 3D reciprocal space mapping	<b>G. Chahine</b> ESRF, Grenoble - France
18:30 - 20:30	<b>Poster Session with Wine &amp; Cheese Party</b>	

## Tuesday 4<sup>th</sup> February 2014

08:30 - 12:30	<b>Users Meeting Plenary Session</b>	
12:35 - 14:00	Lunch	
<b>Parallel Session</b>		
14:00 - 15:00	Beamline News, Structure of Materials Group	<b>ESRF scientists and group leader</b>
15:00 - 15:30	Orbital reconstruction and interface magnetism in SrTiO <sub>3</sub> based heterostructures	<b>M. Salluzzo</b> CNR-Naples - Italy
15:30 - 16:00	Response of polar materials to electric fields studied by X-ray absorption spectroscopy	<b>V. Ney</b> J. Kepler University, Linz - Austria
16:00 - 16:30	<b>Coffee Break</b>	
16:30 - 16:50	Beamline News, Electronic Structure and Magnetism group	<b>ESRF scientists and group leader</b>
16:50 - 17:15	Applying the K-mapping technique to determine the spatial lattice tilt, strain and composition distribution in SiGe buffer layers	<b>M. H. Zoellner</b> IHP Frankfurt/Oder - Germany
17:15 - 17:40	Probing atomic charges at the electrochemical interface through Resonant Surface X-Ray diffraction	<b>Y. Gründer</b> University of Liverpool - UK
17:40 - 18:05	Arrays of preformed Pt clusters on graphene in epitaxy on Ir(111)	<b>S. Linas</b> Institut Lumière Matière Université de Lyon 1, CNRS - France
18:05 - 19:30	<b>User Meeting Poster Session</b>	

## Wednesday 5<sup>th</sup> February 2014

08:30 - 12:30	<b>Users Meeting Plenary Session</b>	
12:35 - 14:00	Lunch	
<b>Session 3: In Situ Techniques - chaired by Chiara Maurizio</b>		
14:00 - 14:30	Insight into functional modulated structures based on transition metal doped nitrides through synchrotron-based characterization	<b>A. Bonanni</b> Johannes Kepler Univ. Linz - Austria
14:30 - 14:50	Full Field Monochromatic Diffraction Imaging of Silicon based Structures with a Fresnel Lens	<b>O. Balmes</b> ESRF, Grenoble - France
14:50 - 15:10	Coherent X-ray imaging of single Au/Ag and GaN nanowires	<b>M-I. Richard</b> Université. Aix-Marseille - France
15:10 - 15:40	In Situ X-ray Studies of the Synthesis of Wide Bandgap Semiconductors	<b>P. Fuoss</b> Argonne National Lab - USA
15:40 - 16:10	<b>Coffee Break</b>	
16:10 - 16:40	Interface structure and ultrafast domain dynamics in epitaxial ferroelectric superlattices	<b>P. Evans</b> University of Wisconsin, Madison -USA
16:40 - 17:00	<b>Final Discussion</b>	
17:00 - 17:20	<b>Concluding Remarks by Thomas Schroeder</b>	