



## COST TO BE FALL MEETING 2017

11-13 September, 2017

Institute of Solid State Physics, University of Latvia (ISSP, UL)  
(Kengaraga street 8, Riga, Latvia)

### PROGRAMME



#### 11th September (MONDAY)

09:00	Core group meeting (closed meeting)
10:00-10:30	Registration (ISSP, 1st floor)
10:30	Management Committee meeting (closed meeting)
12:30-13:30	LUNCH (own expenses)
11:30-13:30	Registration (ISSP, 1st floor)
13:30	OPENING (Martins Rutkis, Juris Purans)

#### WG2 Oxides Growth and Fabrication Methods

Chairman:	Gertjan Koster / Carmela Aruta	
14:00	Judith Driscoll	Invited talk: Nanocomposite Films with Strong Room Temperature Converse Magnetolectric Effect
14:40	Saeedeh Farokhipoor	Invited talk: Mottronics in magnetic domain walls
15:10	Mariona Coll	Compositional tuning of multiferroic BiFeO <sub>3</sub> thin films for next generation PV by low-cost chemical deposition methodologies
15:25-15:50	COFFEE BREAK	

#### WG1 Fundamental Understanding of oxides for electronics: Theory and Experiments

Chairman:	Geetha Balakrishnan / Bernhard Keimer	
15:50	Rosalba Tatiana Fittipaldi	Invited talk: The intriguing Mott insulating state of Ca <sub>2</sub> RuO <sub>4</sub>
16:20	Vladislav Kataev	Insights into the spin-orbital entanglement in complex iridium oxides from high-field ESR spectroscopy
16:35	Pavan Nukala	On the origin of ferroelectricity in HfO <sub>2</sub> -ZrO <sub>2</sub> thin films
16:50-17:00	SMALL BREAK	

#### WG3 Oxide-based applications and devices

Chairman:	Lambert Alff / Monica Burriel	
17:00	Carmela Aruta	Invited talk: Oxygen ion conduction and surface exchange reaction tuned by rare earth dopant cations in ceria epitaxial thin films
17:30	Guido Faglia	Oxide based chemical gas sensing at the nanoscale
17:45	Ana M Sanchez	Exploring oxide boundaries by Scanning Transmission Electron Microscopy

18:00-...	Welcome Party
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**12th September (TUESDAY)**

8:30-9:00	Registration (ISSP, 2nd floor)	
<b>WG1 Fundamental Understanding of oxides for electronics: Theory and Experiments</b>		
Chairman:	Juris Purans / Alexei Kuzmin	
09:00	Antonio Bianconi	<b>Invited talk:</b> Fano resonances in superconducting gaps near Lifshitz transitions in inhomogeneous transition metal oxides with filamentary hyperbolic interface geometry
09:40	Federico Baiutti	Space-charge effects inducing high-temperature superconductivity in La <sub>2</sub> CuO <sub>4</sub> - based heterostructures
09:55	Tony Schenk	The Rayleigh Element – Rayleigh Behavior and its Implications for Impedance Spectra of Ferroelectrics
10:10	Roberto Di Capua	Angle-Resolved Photoemission Spectroscopy studies on EuTiO <sub>3</sub> thin films and related heterostructures
10:25-10:50	<b>COFFEE BREAK</b>	
Chairman:	Bernhard Keimer / Carmela Aruta	
10:50	Michael Sing	<b>Invited talk:</b> Electronic structure of layered 3d and 5d transition metal oxide architectures
11:20	Daniel Khomskii	<b>Invited talk:</b> Orbital-selective effects in transition metal compounds: “molecules” in solids against magnetism
11:50	David Keeble	Point Defect Characterization in Complex Oxides
12:05	Sandeep Kumar Chaluvadi	Thickness dependent magnetic anisotropy studies of bi-axially strained La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> thin films on LSAT (001) by Magneto-Optical Kerr Magnetometry
12:20	Dennis Christensen	Coexistence of high electron mobility, colossal magnetoresistance and magnetism at the $\gamma$ -Al <sub>2</sub> O <sub>3</sub> /SrTiO <sub>3</sub> heterointerface
12:35-14:05	<b>LUNCH (own expenses)</b>	
<b>WG2 Oxides Growth and Fabrication Methods</b>		
Chairman:	Daniele Marrè / Lambert Alff	
14:05	Salvatore Amoruso	<b>Invited talk:</b> Plume dynamics in pulsed laser deposition with nanosecond and femtosecond pulses
14:35	Alexis Boileau	Synthesis and characterisation of SrVO <sub>3</sub> thin films deposited on varied substrates at low temperature as a new strategic transparent conductive oxide
14:50	Mathieu Mirjolet	Growth and Characterization of Transparent Conducting SrVO <sub>3</sub> Thin Films
15:05 - 15:30	<b>COFFEE BREAK</b>	
Chairman:	Carmela Aruta / Judith Driscoll	
15:30	Gennady Logvenov	<b>Invited talk:</b> World of high quality complex oxide interfaces: Oxide Molecular Beam Epitaxy - tour de force
16:00	Michael Lorenz	Multiferroic magnetoelectric BiFeO <sub>3</sub> -BaTiO <sub>3</sub> superlattices: Chemical interface features by TOF-SIMS and STEM-EDX
16:15	Chiara Sacco	Growth and characterization of SrCuO <sub>2</sub> /Sr <sub>0.9</sub> La <sub>0.1</sub> CuO <sub>2</sub> /SrCuO <sub>2</sub> quantum wells
16:30-16:40	<b>SMALL BREAK</b>	
16:40-18:30	<b>Joint Work Group meeting and POSTER SESSION</b>	
~19:00-...	<b>CONFERENCE DINNER at LIDO (30 EUR)</b>	

**13th September (WEDNESDAY)**

8:40-9:00	Registration (ISSP, 2nd floor)	
<b>WG1 Fundamental Understanding of oxides for electronics: Theory and Experiments</b>		
Chairman:	Alexei Kuzmin / Juris Purans	
09:00	Bernhard Keimer	<b>Invited talk:</b> Magnetic order and excitations in metal-oxide heterostructures
09:40	Yunzhong Chen	Two-Dimensional Electron Gases at Modulation-doped Oxide Interfaces
09:55	Alessia Sambri	Epitaxial ultra thick LAO/STO films
10:10	Roberts Eglitis	First principles calculations of ABO <sub>3</sub> perovskite (001), (011) and (111) surfaces, interfaces and defects therein

10:25-10:50	<b>COFFEE BREAK</b>	
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<b>WG3 Oxide-based applications and devices</b>		
Chairman:	Gunnar Niklasson / Daniele Marrè	
10:50	Monica Burriel	<b>Invited talk:</b> Nano engineering of manganites for miniaturized devices
11:20	Lambert Alff	<b>Invited talk:</b> Control of Switching Modes and Conductance Quantization in Oxygen Engineered HfO <sub>x</sub> based Memristive Devices
11:50	Catarina Dias	Multi-mode Resistive Switching in Pt/MgO/TaO <sub>x</sub> /Ta/Ru nanostructures
12:05	Sarunas Bagdzevicius	Interface-type Resistive Switching in double-perovskite GdBaCo <sub>2</sub> O <sub>5+δ</sub> thin film devices
12:20	Eric Sandana	Commercial Perspectives for Ga <sub>2</sub> O <sub>3</sub>

12:35-14:05	<b>LUNCH (own expenses)</b>	
Chairman:	Daniele Marrè / Alexei Kuzmin	
14:05	Gunnar Niklasson	<b>Invited talk:</b> Electrochromic Films for Smart Windows: Coloration and Degradation Mechanisms
14:35	Qin Wang	Applications of photon-induced phenomena in ZnO based hybrids
14:50	Jike Lyu	Tailoring lattice strain and ferroelectric polarization of epitaxial ferroelectric BaTiO <sub>3</sub> films on Si(001)
15:05	Vasilis Binas	Room Temperature sensing of ozone by p-type Cu <sub>2</sub> O nanocubes
15:20	Lars Österlund	Novel self-cleaning films for the built environment: Functionalized and textured TiO <sub>2</sub> multilayer coatings

15:40-16:00	<b>CLOSURE</b>	
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