

## Thursday, September 11

08:30	Workshop Opening	
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Interfaces (H. Koinuma)			page
08:45	<b>G. Sawatzky</b>	Surfaces and Interfaces of Strongly Correlated Electron Systems: A Path to New Materials with Exotic Properties	16
09:15	<b>M. Lippmaa</b>	Probing the Electronic Structure of Oxide Interfaces	17

High $\kappa$ and Ferroelectricity I (J.-M. Triscone)			page
09:40	<b>Ph. Ghosez</b>	Critical Thickness for Ferroelectricity in Perovskite Ultrathin Films	20
10:05	D. D. Fong	X-Ray Observation of Ferroelectricity in Ultrathin Perovskite Films	21

10:20	Coffee	
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High $\kappa$ and Ferroelectricity II (J. Schubert)			page
10:45	T. W. Noh	Mechanism of Charge Retention Loss in Ferroelectric Pt/Pb(Zr,Ti)O <sub>3</sub> /Pt Capacitors and its Relation to Imprint	22
11:00	M. Guilloux-Viry	SrBi <sub>2</sub> Nb <sub>2</sub> O <sub>9</sub> Thin Films Epitaxially Grown on Pt Epitaxial Bottom Layers : Structural Characteristics and Nanoscale Characterization of the Ferroelectric Behaviour by AFM	23
11:15	R. Woerdenweber	Tuneability of the Dielectric Properties and Nonlinear Microwave Behavior of Ferroelectric Thin Films	24
11:30	H. N. Lee	Ferroelectric Multi-Color Superlattices and the Stability of SrRuO <sub>3</sub> Grown by High-Pressure Pulsed Laser Deposition	25
11:45	<b>D. G. Schlom</b>	Si-Compatible Alternative Gate Dielectrics with High $\kappa$ and High Bandgap	26

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12:15	Lunch at St. Ulrich	
13:30 – 15:30	Poster Session I with Coffee	100
18:30	Dinner at St. Ulrich	

High- $T_c$ Superconductivity (J. Aarts)			page
19:30	<b>Ø. Fischer</b>	High Temperature Superconductors seen by Scanning Tunnelling Spectroscopy	30
19:55	<b>N. P. Ong</b>	Vortex Nernst Effect in Cuprates	31
20:20	A. Rüfenacht	Temperature and Magnetic Field Dependence of the In-Plane Magnetic Penetration Depth in Ultrathin Superconducting $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Films	32
20:35	M. G. Blamire	Normal State Resistance as a Probe of Grain Boundaries in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$	33
High- $T_c$ Superconductivity (D. Blank)			page
20:50	<b>K. Takada</b>	Superconducting Sodium Cobalt Oxide	34
21:15	<b>R. L. Greene</b>	Probing the Normal State of the Electron-doped Cuprates	35
21:40	B. Welter	Doping Dependence of Pseudogap and Superconductivity in Electron Doped High-Temperature-Superconductors: a Tunneling Study	36
21:55	Y. W. Park	Two Pseudogap Behavior in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ : Thermoelectric Power at High Temperature	37

## Friday, September 12

Magnetic and Superconducting Oxides (T. Claeson)			page
08:30	<b>T. H. Geballe</b>	Paying Attention to $T_c$	40
09:00	<b>Y. Tokura</b>	New Magneto-Optical Phenomena in Noncentrosymmetric Crystals and Superlattices of Magnetic Oxides	41

09:30	Coffee and Group Photo		
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Magnetic Oxides (H. Y. Hwang)			page
10:00 <b>A</b>	B. Mercey	Controlled Growth of Manganite Films and Superlattices by Laser-MBE in an Oxygen-Ozone Atmosphere.	44
10:15 <b>A</b>	D. J. Huang	Tetragonal Jahn-Teller Distortion and Ferro-Orbital Ordering in Strained $\text{La}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ Thin Films	45
10:30 <b>A</b>	C. Dubourdieu	Manganite-Based Devices Involving Spin-Dependent Transport	46

ZnO (M. Kawasaki)			page
10:45 <b>A</b>	M. Lorenz	ZnO Nanostructures Grown by Thermal Evaporation and High-Pressure Pulsed Laser Deposition - Morphology and Optical Properties	50
11:00 <b>A</b>	<b>D. P. Norton</b>	Doping ZnO for Charge and Spin Electronics	51
11:30 <b>A</b>	<b>G.-C. Yi</b>	Fabrication and Photoluminescent Properties of ZnO/ZnMgO Quantum Structure Nanorods	52

Growth (C. W. Schneider)			page
10:00 <b>B</b>	G. Rijnders	Growth Kinetics During Oxide Thin Film Deposition	56
10:15 <b>B</b>	X. Q. Pan	Epitaxial Stabilization and Structural Evolution of Hexagonal Close-Packed Ni on Single Crystal MgO	57

Parallel Sessions:

Parallel Session A, large lecture theater

Parallel Session B, small lecture theater

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Oxide Electronics and Multi-Functional Oxides (G. Hammerl)			page
10:30 B	<b>J. Levy</b>	Oxide-Semiconductor Materials for Quantum Computation	60
11:00 B	N. Nakagawa	Electron Confinement in Oxide Quantum Wells	61
11:15 B	H.-U. Habermeier	Physics and Technology Aspects of Oxide Superconductor - Ferromagnet Superlattices	62
11:30 B	K. Frohlich	Metal Oxide Gate Electrodes For Advanced CMOS Technology	63
11:45 B	J. Wang	Multiferroic BiFeO <sub>3</sub> Thin Film Heterostructure	64

12:15	Lunch at St. Ulrich	
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$\pi$ -Junctions (R. P. Hübener)			page
13:45	<b>J. R. Kirtley</b>	Studies of Thin Film Cuprate Superconductors with the Scanning SQUID Microscope	68
14:15	<b>H. Hilgenkamp</b>	Hybrid Josephson Structures Combining high- $T_c$ and low- $T_c$ Superconductors	69
14:45	D. Koelle	Imaging of Supercurrent in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> -Nb Zigzag Ramp Josephson Junctions	70

15:00 – 17:00	Poster Session II with Coffee	107
18:00	Reception in the "Goldener Saal" (Townhall)	
19:30	Workshop Dinner (Zeughaus)	

## Saturday, September 13

Switching (P. Martinoli)			page
08:30	<b>J. G. Bednorz</b>	Charge Induced Insulator-Metal Transition and Resistive Memory in Doped Perovskites	74
09:00	<b>C. W. Chu</b>	The Polarity-Dependent Field-Induced Hysteretic and Reversible Resistive Switches in Oxides	75
09:30	<b>R. Waser</b>	Electronic Oxide Based RAM Concepts	76

10:00	Coffee	
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Field Effect (J. Mannhart)			page
10:30	<b>C. H. Ahn</b>	Epitaxial Complex Oxide Heterostructures: Electrostatic Modulation of Correlated Electron Behavior	80
10:55	<b>I. H. Inoue</b>	Electronic Properties of Charged Interfaces with a Perovskite Oxide SrTiO <sub>3</sub> .	81
11:20	D. Matthey	Field Effect Experiments in NdBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-<math>\delta</math></sub> Ufilms Using a SrTiO <sub>3</sub> Single Crystal Gate Insulator	82
11:35	L. Pellegrino	Resistance Modulation of Conducting SrTiO <sub>3</sub> Thin Films by Side Gate Field Effect Devices	83
11:50	A. Ohtomo	Wide-Gap Oxide Semiconductor Field Effect Transistors	84

12:15	Lunch at St. Ulrich	
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Applications / Magnetics (H. Rogalla)			page
13:30	M. Bibes	Tunneling Magnetoresistance with Sr <sub>2</sub> FeMoO <sub>6</sub> in Submicronic Junctions Fabricated by Nanoindentation Lithography	88
13:45	M. A. Todd	Colossal Magnetoresistive Manganite Thin-Films for Infrared Detection and Imaging	89
14:00	A. K. M. A. Hossain	Magnetoresistance Properties of the Zn <sub>1-x</sub> Ni <sub>x</sub> Fe <sub>2</sub> O <sub>4</sub> Spinel	90
14:15	<b>T. Venkatesan</b>	Application of Scanning SQUID Imaging to Semiconductor Failure Analysis	91
14:40	<b>S. S. P. Parkin</b>	Magnetic Tunnel Transistors: A Source of Highly Spin Polarized Electron Current	92

15:10	Workshop Closing	
16:30	Labtour Experimental Physics VI please contact workshop desk	