

**Sixth Taiwan-Korea-Japan Symposium on  
Strongly Correlated Electron Systems**

**Fourth Workshop on Physics of Metal Oxides**

**Dec. 1-3, 2005**

**Ten-Shien, Taroko National Park, Taiwan**

**Organized by**

**National Synchrotron Radiation Research Center, Taiwan  
Center for Condensed Matter Sciences, National Taiwan University**

## Acknowledgement

*The organizers acknowledge the financial support by  
National Science Council of Taiwan, ROC  
National Synchrotron Radiation Research Center  
Center for Condensed Matter Sciences, National Taiwan University  
National Condensed Theoretical Sciences*

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H. D. Yang (*National Sun Yat-sen University*)

## *Program*

### **Dec. 1 (Thursday)**

8:00 *Registration*

#### ***Session I*** (Chair: A. Fujimori)

8:30 S. Uchida Effect of Disorder on Tc and Nanoscale Electronic Inhomogeneity of High-Tc Cuprates

9:00 H. Takagi Local spectroscopy of criticality in correlated transition metal oxides and chalcogenides

9:30 J. Yu O(N) LDA+U Approach to the Nanoscale Correlated Materials

10:00 *Break*

#### ***Session II*** (Chair: J. Yu)

10:30 J. Zaanen Superconductivity, as orderly as it gets (from cuprates to gravity)

11:00 T. K. Lee Supersolid phase in spin-dimer XYZ model

11:30 S. Suga New bulk sensitive photoelectron spectra of V, Mn, and Cu oxides

12:00 S. Shin Ultra-high-resolution photoemission study of superconducting diamond and heavy Fermion  $\text{LiV}_2\text{O}_4$

12:30 *Lunch*

#### ***Session III*** (Chair: W. F. Pong)

14:00 H. C. Ku Critical fields and spontaneous vortex state in the weak-ferromagnetic superconductor  $\text{RuSr}_2\text{GdCu}_2\text{O}_8$

14:30 K. Char Possibility of New Superconducting State Created by Interaction with Ferromagnets

15:00 J. Matsuno Systematic Synthesis of Layered Perovskites  $\text{Sr}_2\text{MO}_4$

15:30 S. S. A. Seo Optical spectroscopic investigation on oxide artificial superlattices of band insulators and Mott insulators

16:30 - 18:00 *Poster*

19:00 *Banquet*

**Dec. 2 (Friday)**

**Session IV** (Chair: Grace Lin)

- 8:00 S. W. Cheong Overview of Multiferroics Nanoscale  
8:30 T. Kimura Magneto-electric and magneto-dielectric effects in frustrated spin systems  
9:00 R. S. Liu Role of Chemical Pressure in (Tb,Na)MnO<sub>3</sub>  
9:30 J. Okamoto Resonant Soft X-ray Diffraction Study of the Multiferroic System in TbMn<sub>2</sub>O<sub>5</sub>  
10:00 *Break*  
10:30 K. H. Kim High Magnetic Field Investigations of Multiferroic RMn<sub>2</sub>O<sub>5</sub> (R=Tb, Dy, Bi, and Y)

**Session V** (Chair: S. W. Cheong)

- 11:00 F. C. Chou Successive Phase Transitions in Low Dimensional Na<sub>0.5</sub>CoO<sub>2</sub> and TiOCl  
11:30 H.-J. Lin Orbital polarization and spin ordering of Na<sub>x</sub>CoO<sub>2</sub>  
12:00 J.-Y. Lin Impurity effects on the electronic structure and superconductivity of Na<sub>x</sub>CoO<sub>2</sub>·yH<sub>2</sub>O  
12:30 *Lunch*

**Session VI** (Chair: K. Char)

- 14:00 H. D. Yang Calorimetric study on two-gap superconductors  
14:30 S.-I. Lee Two gap Superconductivity of MgB<sub>2</sub>  
15:00 *Break*  
15:15 *Hiking*: Baiyang trail  
18:00 *Dinner*

**Informal Session on Inelastic X-ray Scattering** (Chair: D. J. Huang)

- 19:30 H. S. Fung; 19:45 Y. Cai; 20:00 Tohyama; 20:30 Z. Zaanen

**Dec. 3 (Saturday)**

**Session VI** (Chair: S. Suga)

- 8:00 A. Fujimori Temperature Evolution of Pseudogaps and Chemical Potential in High-Tc Cuprates
- 8:30 S.-J. Oh Missing xy-band Fermi Surface in 4d transition-metal oxide  $\text{Sr}_2\text{RhO}_4$ : Effect of the octahedra rotation on the electronic structure
- 9:00 J. H. Park Role of Anisotropic Orbital States in  $\text{GaFeO}_3$  and  $\text{Ca}_{2-x}\text{Sr}_x\text{RuO}_4$
- 9:30 *Break*

**Session VII** (Chair: S.-J. Oh)

- 10:00 T. Tohyama Theory of Resonant Inelastic X-Ray Scattering in Cuprates
- 10:30 Y. J. Kao Anisotropic spin and charge excitations in superconductors: signature of electronic nematic order
- 11:00 W. F. Pong Electronic and Atomic Structures of Quasi-One-Dimensional  $\text{K}_{0.3}\text{MoO}_3$

**Closing remark:** C. H. Chen

11:45 *Lunch*

13:15 *Tour:* Taroko National Park