

MONDAY, May 7, 2007

7:00 pm –

Get-together

TUESDAY, May 8, 2007

8:45 am – 9:00 am **Welcome Remarks**
Hiroshi Kawata (Chair of IXS2007), KEK

9:00 am – 9:45 am **Progress Since IXS2004: An Overview (Plenary)**
Arun Bansil (Northeastern University)

9:45 am – 10:15 am *Coffee Break*

Introductory Overviews of IXS Techniques (1): Chair Keijo Hamalainen

10:15 am – 10:45 am **Hard X-ray RIXS**
John Hill (Brookhaven National Laboratory)

10:45 am – 11:15 am **Soft X-ray RIXS (Tentative)**
Shik Shin (University of Tokyo, RIKEN/SPring-8)

11:15 am – 11:45 am **Compton Scattering: The Story So Far**
Malcolm J. Cooper (University of Warwick)

11:45 pm – 2:00 pm *Lunch*

Introductory Overviews of IXS Techniques (2): Chair Jun'ichiro Mizuki

2:00 pm – 2:30 pm **IXS with meV energy resolution**
Michael Krisch (ESRF)

2:30 pm – 3:00 pm **Nuclear Resonant Inelastic X-ray Scattering**
Ercan Alp (APS)

3:00 pm – 3:30 pm

Coffee Break

Water-related Physics: Chair Hisashi Hayashi

3:30 pm – 4:00 pm

Compton Scattering as a Probe of Hydrogen Bonds and Molecular Structure of Aqueous Systems

Mikko Hakala (University of Helsinki)

4:00 pm – 4:30 pm

Effects of Isotope Substitution, Confinement and Mixtures on the Structure of Liquid Water – an X-ray Raman Scattering Study

Uwe Bergmann (Stanford Linear Accelerator Center)

4:30 pm – 5:00 pm

Is There Any Fast Sound in Water?

Silvia Santucci (Sincrotrone Elettra, Trieste)

5:00 pm – 5:30 pm

X-ray Induced Dissociation of H₂O and Formation of an O₂-H₂ Compound at High Pressure

Wendy Mao (Los Alamos National Laboratory)

WEDNESDAY, MAY 9, 2007

Strongly Correlated Electrons (1): Chair Akio Kotani

- 8:30 am – 9:15 am **IXS in strongly correlated electron systems (Plenary)**
George Sawatzky (University of British Columbia)
- 9:15 am – 9:45 am **Charge Excitations in Low Dimensional Cuprates**
Zahid Hasan (Princeton University)
- 9:45 am – 10:15 am **Exciton Dynamics and Non-local Effects in Cuprates and Nickelates**
Abhay Shukla (Universite Pierre et Marie Curie)
- 10:15 am – 10:45 am *Coffee Break*

Strongly Correlated Electrons (2): Chair Kozo Okada

- 10:45 am – 11:15 am **Charge Excitations in High-Tc Cuprates by Resonant Inelastic X-ray Scattering**
Kenji Ishii (Japan Atomic Energy Agency)
- 11:15 am – 11:45 am **RIXS and Charge Response Function in Cuprates**
Takami Tohyama (Kyoto University)
- 11:45 am – 12:10 pm **Crystal Field Excitations in Cuprate Superconductors (Oral)**
Giacomo Ghiringhelli (Politecnico di Milano)
- 12:10 pm – 1:45 pm *Lunch*

Lattice and Vibrational Dynamics: Chair Alfred Baron

- 1:45 pm – 2:15 pm **Phonon-anomalies in La_2CuO_4 -based Compounds: Relation to Charge-ordering and High- T_c Superconductivity**
Takao Sasagawa (Stanford University)
- 2:15 pm – 2:45 pm **Formation of a New Dynamical Mode in Uranium**
Michael Manley (Lawrence Livermore National Laboratory)
- 2:45 pm – 3:15 pm **New Picture of Vibrational Dynamics of Glasses Delivered by Nuclear Inelastic Scattering**
Aleksandr Chumakov (ESRF)
- 3:15 pm – 3:45 pm **The Present Understanding of the Vibrational Dynamics in Glasses**
Giancarlo Ruocco (Universita di Roma)
- 3:45 pm – 4:00 pm *Coffee Break*
- 4:00 pm – 6:00 pm **Poster Session**
- 7:00 pm – **Banquet**

THURSDAY, May 10, 2007

New Scientific Frontiers in IXS (1): Chair Yong Cai

- 8:30 am – 9:00 am **Chemical Applications of X-Ray Emission Spectroscopy**
Pieter Glatzel (ESRF)
- 9:00 am – 9:30 am **Inelastic X-ray Scattering Study of Exciton Properties in an Organic Molecular Crystal**
Ke Yang (Japan Synchrotron Radiation Research Institute)
- 9:30 am – 10:00 am **Ab-initio Investigation of Charge Excitations in Complex Materials: Interplay with NIXS**
Adolfo Eguiluz (University of Tennessee)
- 10:00 am – 10:30 am *Coffee Break*

New Scientific Frontiers in IXS (2): Chair John Tse

- 10:30 am – 11:00 am **RIXS at Extreme Conditions: A New Window on the Electronic Properties**
Jean-Pascal Rueff (Synchrotron SOLEIL)
- 11:00 am – 11:30 am **Electrostatic Levitation Method for Inelastic X-ray Scattering**
Junpei Okada (The University of Tokyo)
- 11:30 am – 11:55 am **Sub-femtosecond Nuclear Motion in Cl 1s Core-Excited Chlorinated Molecules Probed by Resonant Inelastic X-ray Scattering: Experiment and Theory (Oral)**
Marc Simon (Laboratoire de Chimie Physique-Matiere et Rayonnement)
- 12:00 pm – *Excursion to Himeji*

FRIDAY, MAY 11, 2007

Raman Scattering and Theory: Chair Toshiaki Iwazumi

8:30 am – 9:15 am **X-ray Raman Scattering, Resonant and Non-resonant
(Plenary)**

Yasuo Udagawa (Tohoku University)

9:15 am – 9:45 am **Modern Approaches to the Theory of X-ray Raman
Scattering**

Aleksi Soininen (University of Helsinki)

9:45 am – 10:10 am **Particle-size Dependence of X-ray Raman Scattering of
BaTiO₃ Nanoparticles**

Nobuo Nakajima (Hiroshima University)

10:10 am – 10:40 am

Coffee Break

Basic Physics of Electronic Structures: Chair Bal Sharma

10:40 am – 11:10 am **A Compton Scattering Study of the Electronic Structure of
Ni-Al and the Na Cobaltates**

Stephen Dugdale (University of Bristol)

11:10 am – 11:40 pm **Two-dimensional Momentum Density Reconstructed from
High-resolution Compton Profiles Measured in a Bilayer
Manganite**

Akihisa Koizumi (University of Hyogo)

11:40 am – 12:05 pm **Coherent Double-plasmon Excitations in Simple Metal
Studied by Inelastic X-ray Scattering (Oral)**

Giulio Monaco (ESRF)

12:05 pm – 13:30 pm

Lunch

New Techniques and Future X-ray Sources: Chair Yoshiharu Sakurai

13:30 pm – 14:00 pm

The Characterization of the Scattered Beam in Soft X-rays RIXS. What Can We Learn from New Instrumentation Options on Energy Resolution, Angular Dependence and Polarization Measurement.

Lucio Braicovich (Politecnico di Milano)

14:00 pm – 14:30 pm

Novel High-resolution Spectrometer for Inelastic X-ray Scattering

Simo Huotari (ESRF)

14:30 pm – 14:55 pm

New Optics for Very High Resolution IXS Spectroscopy (Principles and Progress) (Oral)

Yuri Shvyd'ko (APS)

14:55 pm – 15:25 pm

Studying Dynamics with an X-ray Free-Electron Laser

John Arthur (SLAC)

15:25 pm – 15:55 pm

Coffee Break

Conference Summary and Closing: Chair Hiroshi Kawata

15:55 pm – 16:25 pm

Summary

Winfried Schülke (University of Dortmund)

16:25 pm

Closing