



10th International Conference on Inelastic X-ray Scattering (IXS2017)

DESY Hamburg, 28. Aug. – 1. Sept 2017

Conference Programme

(Status 15. August 2017)

Monday, 28th August 2017

08:00 Registration open

08:30 **Welcome**

Session 1: Theory

09:00 t.b.d.

Chi-Chang Kao

09:45 t.b.d.

Tom Deveraux

10:30 Coffee break

10:50 **Incident-energy dependent spectral weight of resonant inelastic x-ray scattering in doped cuprates**
Takami Tohyama

11:25 **First-principles calculation of the phonon contribution to RIXS spectra via the cumulant expansion**
Keith Gilmore

11:40 **Recent developments in phonon theory and anharmonicity**
Olle Hellman

12:10 Poster Speed Talks: 60s per poster

13:10 Lunch and Posters

14:50 Focus Session 1: Theory (organized by Krzysztof Wohlfeld)

RIXS spectra as a problem in many-body non-equilibrium dynamics
Eugene Demler

The anatomy of RIXS, what do we measure
Maurits Haverkort

Resonant inelastic x-ray scattering of magnons in excited systems
Michel van Veenendaal

Using RIXS to uncover elementary charge and spin excitations in correlated materials
Krzysztof Wohlfeld

16:40 Coffee break

17:00 Focus Session 2: RIXS Instruments (organized by Ignace Jarrige)

Veritas @ MAX IV
Marcus Agåker

Soft X-ray RIXS at the ESRF
Nick Brookes

Perspectives for RIXS at rare-earth N_{4,5} edges
Sorin G. Chiuzbăian

RIXS instrumentation at the ALS

Yi-De Chuang

Getting the “t” into $S(\mathbf{q}, \omega, t)$: Dynamic pathways on multidimensional potential surfaces

Alexander Föhlisch

High-Resolution and High-Efficiency RIXS using Active Gratings

Di- Jing Huang

Status update of the SIX beamline at NSLS-II

Ignace Jarrige

Upgrades and development of SX-RIXS end-station in SPring 8 BL07LSU

Jun Miyawaki

Operation experience with the RIXSCam - the new EM-CCD camera for RIXS at the ADRESS beamline

Thorsten Schmitt

The current status of Resonant Inelastic X-ray Scattering Beamline I21 at Diamond Light Source

Ke-Jin Zhou

19:20 End of Day 1

Tuesday, 29th August 2017

Session 2: Soft RIXS

09:00 **Resonant Inelastic X-ray Scattering on Iron Pnictide Superconductors**

Thorsten Schmitt

09:30 **The crossover from collective to incoherent spin-excitations in high-Tc cuprates probed by detuned Cu-L3 RIXS**

Matteo Minola

09:50 **Orbital-selective Coulomb correlations across a spin-state and a metal-insulator transitions**

Jun Okamoto

10:10 Coffee break

Group photo

10:30 **Unraveling the crystal-field states of the strongly correlated topological insulator Sb_2Te_3 using core-level non-resonant inelastic x-ray scattering**

Andrea Severing

11:00 **Non-resonant inelastic X-ray scattering at high pressures**

Christoph Sahle

11:30 **Single Crystal elasticity of bridgmanite under high-pressure conditions**

Hiroshi Fukui

11:50 **Imaging of Co(3d) orbitals responsible for the 500K spin state transition in LaCoO_3 using X-ray Compton scattering**

Yoshiharu Sakurai

12:10 Visit European XFEL, Schenefeld Site

Lunch

14:40 Coffee break

15:00 **X-ray spectroscopy at extreme low and high brilliance**

Gyorgy Vanko

15:30 **Elementary excitations in spin-chains studied with resonant inelastic x-ray scattering**

Justine Schlappa

- 16:00 **Ultrafast x-ray scattering: what can ultrafast teach us that frequency-domain can't?**
Mariano Trigo
- 16:30 **Hard x-ray split-delay optics for time-domain high-resolution x-ray spectroscopy with XFELs**
Tito Osaka
- 16:50 Coffee break
- 17:05 Focus session 3: Crystal Analyzers (organized by Alfred Baron)
- High resolution spherical analysers at the ESRF**
Roberto VERBENI
- Development of High-Energy-Resolution Spherical Quartz Analyzers for Resonant Inelastic X-ray Scattering (RIXS) at the Advanced Photon Source**
Ayman SAID
- Sub-meV & 25 meV analyzers for non-resonant IXS at SPring-8**
Daisuke ISHIKAWA
- TBD**
Hasan YAVAS
- Figured analyzers with alternative crystals for low energy X-ray spectroscopy**
Marcelo HONNICKE
- Flat-Crystal Optics for Ultra-High Energy-Resolution Resonant Inelastic X-ray Scattering**
Thomas GOG
- Development of quartz optics for high-resolution X-ray spectroscopy**
HUANG, Xianrong
- Design and performance of the Montel-CDW analyzer of the ultrahigh resolution Inelastic X-ray Scattering (IXS) beamline at NSLS-II***
Yong Cai
- 19:25 Poster session
Beer and Bretzel
- 21:30 End of Day 2

Wednesday, 30th August 2017

Session 3: NIXS and XES

- 08:30 **XES of liquid water at interfaces**
Yoshihisa Harada
- 09:00 **Imaging of Co(3d) orbitals responsible for the 500K spin state transition in LaCoO₃ using X-ray Compton scattering**
Terrence Jach
- 09:20 **Structure and energetics in supercooled water down to 255 K by means of non-resonant inelastic X-ray scattering**
Felix Lehmkuhler
- 09:40 **Coordination-sensitive K β '' crossover transition in germanium valence-to-core X-ray emission spectra: Evidence of germanium coordination >6 in compressed GeO₂ above 50 GPa**
Georg Spiekermann
- 10:00 Coffee break

Session 4: 5d Elements (1)

- 10:20 **Phonon spectroscopy at high x-ray energies and new insights into the physics of iridates via Nuclear Resonance Methods**
H. C. Wille
- 10:50 **Magnetic excitations and the role of spin-orbit coupling in 5d³ osmates revealed with RIXS**
Stuart Calder
- 11:20 **Quartz-based flat-crystal resonant inelastic x-ray scattering spectrometer (RIXS) with sub 10 meV energy resolution**
Jung Ho Kim
- 11:50 Lunch and Poster

Session 5: 5d Elements (2)

- 13:50 **Electronic and magnetic excitation spectra of pyrochlore Nd₂Ir₂O₇ probed with resonant inelastic x-ray scattering**
Kentaro Ueda
- 14:10 **The bond-dependent magnetic excitations of the quasi-one-dimensional CaIrO₃ revealed by resonant inelastic x-ray scattering**
Matteo Rossi
- 14:30 **Anisotropic intercalations opposing magnetocrystalline anisotropy in Sr₃NiIrO₆**
Emilie Lefrancois
- 14:50 **Lessons from Sr₂IrO₄ for iridates : strong covalency and long-range interactions in the effective low energy Hamiltonian**
Stefano Agrestini
- 15:10 **Weak coupling theory of resonant inelastic x-ray scattering in layered iridates**
Tatsuya Nagao
- 15:30 Coffee break

Session 6: Batteries and Fuel Cells

- 15:50 **Oxygen Redox in Li-Ion Battery Chemistries**
Matthew Roberts
- 16:20 **Local electronic states of Co-Fe Prussian blue analogues for Na-ion battery cathodes investigated by Co L-edge RIXS**
Hideharu Niwa
- 16:40 **Resonant inelastic soft X-ray scattering studies of cathode materials for Li batteries to clarify the redox reactions and charge-transfer effects**
Daisuke Asakura
- 17:00 **X-ray Raman scattering from La-Sr-Co-Fe-O for fuel cell technology**
Chiara Cavallari
- 17:20 Coffee break

Session 7: Soft RIXS

- 17:40 **TBD**
Nick Brookes
- 18:10 **Precursor Charge Density Waves in La_{2-x}Ba_xCuO₄ Reveal Spin-Charge Unlocked Phase**
Mark Dean
- 18:40 **RIXS study of charge order in optimal- and overdoped (Bi,Pb)₂(Sr,La)₂CuO_{6+δ}**
Giacomo Ghiringhelli
- 19:10 BBQ and Poster Session
- 22:00 End of Day 3

Thursday 31st August 2017

Session 8: Instruments

- 08:40 **TBD**
Dimosthenes Sokaras
- 09:10 **A new x-ray emission spectrometer is now available at the CLÆSS beamline of the ALBA synchrotron**
Laura Simonelli
- 09:30 **A Three Crystal X-ray Spectrometer and its Application at SSRF**
Yuying Huang
- 09:50 **X-ray Echo Spectroscopy**
Yuri Shvydko
- 10:15 Coffee break

Session 9: 3d Elements

- 10:35 **Understanding the electronic structure of 3d-transition metal oxides with Resonant Inelastic X-ray Scattering**
Valentina Bisogni
- 11:05 **Observation of a dispersive charge mode in hole-doped cuprates using resonant inelastic x-ray scattering at the oxygen K edge**
Kenji Ishii
- 11:25 **RIXS study of charge order in optimal- and overdoped (Bi,Pb)₂(Sr,La)₂CuO₆+ δ**
Yingying Peng
- 11:45 **Electronic structures of Fe oxides revealed by soft X-ray inelastic scattering**
Hsiao-Yu Huang
- 12:05 Lunch

Session 10: 4d Elements

- 13:30 **Probing the spin-orbit condensates and excitations by RIXS**
Giniyat Khaliullin
- 14:00 **Intermediate x-ray energy RIXS at P01 DESY: Technical challenges and experimental opportunities**
Hlynur Gretarsson
- 14:20 Young-June Kim
- 14:50 Ralf Röhlsberger
- 15:25 Coffee break

Session 11: DLSR and future requirements

- 15:45 Peter Abbamonte
- 16:30 Simo Huotari
- 17:00 **Coherences to amplify inelastic X-ray scattering**
Martin Beye
- 17:20 Arun Bansil
- 18:15 Departure Conference Dinner
- 19:00 Conference Dinner
Boat trip and buffet

Friday, 1st September 2017

Session 12: Phonons

- 09:00 **Recent Results of Non-Resonant High-Resolution IXS at SPring-8**
Alfred Baron
- 09:40 **Exploring a new frontier: phonon propagation in complex and hybrid metamaterials**
Alessandro Cunsolo
- 10:10 **Phonon and phonon-like excitations in KNbO₃ and KTa_{0.65}Nb_{0.35}O₃**
Alexei Bosak
- 10:30 **Charge Order in the Cuprates: Effect of pressure**
Matthieu leTacon
- 11:00 Coffee break
Poster Prize Talks
- 11:20 Poster Talk 1
- 11:35 Poster Talk 2
- 11:50 Poster Talk 3
- 12:05 Poster Talk 4
- 12:20 Concluding remarks
- 13:10 End of Conference
- 14:40 Visit PETRA III (P64, P01)