

The 40th International Conference on Vacuum Ultraviolet and X-ray Physics

July 1-5, 2019

The Westin St. Francis Hotel, San Francisco, California USA

https://vuvx.lbl.gov

Welcome to the 40th International Conference on Vacuum Ultraviolet and X-ray Physics!

The 40th International Conference on Vacuum Ultraviolet and X-ray Physics in San Francisco, July 1-5, 2019 continues a series of meetings held every three years, most recently in Zurich, Switzerland (2016), Hefei, China (2013) and Vancouver, Canada (2010). In 2019, VUVX is hosted jointly by Berkeley Lab and SLAC National Accelerator Laboratory.

VUVX conferences cover research employing electromagnetic radiation in the spectral range from vacuum ultraviolet to hard X-ray radiation from synchrotron, laser, and plasma-based sources. Presentations cover recent progress in instrumentation, methods development, and novel applications in physics, material science, chemistry, biology, and technology.

The scientific program of VUVX19 consists of plenary sessions, parallel oral sessions with invited and contributed presentations, as well as poster sessions. Presenters were invited or selected based on their abstract submissions by the VUVX International Science Committee and the local organizing committee.

The **welcome reception** on Sunday, June 30th, in the Italian Room on the mezzanine level of the St. Francis Hotel is a first opportunity for conference participants to pick up the conference materials (badges, program booklet) and to network. Light refreshments are provided. The event starts at 4pm and concludes by 8pm.

A very important part of the conference are **vendor and industry exhibitions** during the first two days of the conference, July 1st and 2nd, concurrently with the poster sessions. The exhibitions provide participants with the opportunity to catch up on latest developments in commercially available instrumentation and services.

The **conference dinner** takes place on Wednesday, July 3rd, in the beautiful Golden Gate room on the 32nd floor of the St Francis hotel. Accessed by five glass elevators, the Golden Gate room has been deemed "the most spectacular special event venue in Northern California." It has floor-to-ceiling windows with skyline views of San Francisco, highlighting Coit Tower and both the Golden Gate and Bay Bridges. This is an exquisite venue for the VUVX conference dinner and will provide an additional important opportunity for participants for informal discussions and exchanges. Moreover, a dinner speaker will provide his insights into the *far-reaching* applicability of X-ray diffraction and X-ray spectroscopy.

We hope you enjoy VUVX19!

Elke Arenholz Cornell High Energy Synchrotron Source, CHESS

Hendrik Ohldag Advanced Light Source, ALS

Conference Co-Chairs

Email: VUVX@lbl.gov

Web site: https://vuvx.lbl.gov/



Conference Sponsors

Gold Sponsor



Silver Sponsors



























Schedule at a Glance

| Time | Sunday June 30th, 2019 | Monday July 1st, 2019 | day , 2019 | Tuesday July 2nd, 20 | Tuesday July 2nd, 2019 | Wednesday July 3rd, 2019 | esday 1, 2019 | Thursday July 4th, 20 | Thursday July 4th, 2019 | Friday July 5th, 2019 | ay , 2019 |
|----------------------|------------------------------|------------------------------------|------------------------|--------------------------|------------------------------------|--|---|---------------------------|----------------------------|--------------------------|------------------------|
| | | Grand Ballroom | Colonial Ballroom | Grand Ballroom | Colonial Ballroom | Grand Ballroom | Colonial Ballroom | Grand Ballroom | Colonial Ballroom | Grand Ballroom | Colonial Ballroom |
| 7:30 | | | | | | o de citeration d | 7.30cm | | | | |
| 8:00 | | | | | | registration opens at 7.30am | ens at 7:50am | | | | |
| 8:30 | | Plenary | | lesimons | | Δtomic | | | | | |
| 00:6 | | Opening Session | | Processes 2 | Theory 1 (90 min.) | Molecular | Material | Plenary | | Electronic | Instrumen- |
| 9:30 | | (90 min.) | | (90 min.) | , | Physics 3 | Science 4 (120 min.) | session (120 min.) | | (120 min.) | tation 4 (120 min.) |
| 10:00 | | | | | | (120 min.) | | | | | |
| 10:30 | | Poster Session 1 and Exhibition | sion 1 and ition | Poster Ses Exhib | Poster Session 3 and Exhibition | Break | ak | Bre | Break | Break | ak |
| 11:00 | | | | | | | | | | Atomic, | |
| 11:30 | | Electronic | Material | Electronic | Instrumen- | Chemical Processes 3 | Sources 1 | Electronic Structure 4 | Instrumen- tation 3 | Molecular and Optical | Material Science 7 |
| 12:00 | | Structure 1 (60 min.) | Science 1 (60 min.) | Structure 2 (60 min.) | tation 2 (60 min.) | (90 min.) | } | (90 min.) | (90 min.) | Physics 5 (90 min.) | (90 min.) |
| 12:30 | | | 4 | | 45 | - | 4 | | 4 | | 4 |
| 13:00 | | רחוכנו | | | Lunch | רמעכע | Icn | Lunch | ıcıı | Luncin | |
| 13:30 | | | | Atomic, | | | | Atomic, | Material | | |
| 14:00 | | Chemical Processes 1 | Instrumen- tation 1 | Molecular and Optical | Material Science 3 | Electronic Structure 3 | Theory 2 | Molecular and Optical | Science 5 | Chemical Processes 4 | Sources 2 |
| 14:30 | | (90 min.) | (90 min.) | Physics 2 (90 min.) | (90 min.) | (90 min.) | () | Physics 4 (90 min.) | (| (90 min.) | (|
| 15:00 | | | | | | Break | ak | Bre | Break | 74000 | |
| 15:30 | | Poster Session 2 and Exhibition | sion 2 and ition | Poster Ses Exhib | Poster Session 4 and Exhibition | | | Electronic | Material | Session and | |
| 16:00 | | | | | | | | Structure 5 (60 min.) | Science 6 (60 min.) | Closing | |
| 16:30 | Molcomo | Atomic, | | ā | | Awards | | ā | | | |
| 17:00 | Reception in | Molecular and Optical | Science 2 | Session | | | | Session | | | |
| 17:30 | Italian Room at the | Physics 1 (90 min.) | (90 min.) | (90 min.) | | | | (90 min.) | | | |
| 18:00 until 21:00 | Francis 16:00-20:00 | | | | | Conference Dinner in the Golden Gate Room at Westin St. Francis 18:00-21:00 | Vinner in the Room at Francis 21:00 | | | | |

Monday, July 1st, 2019 - Morning

| Time | Grand Ballroom |
|---------------|--|
| 8:30 - 10:10 | Plenary Session: Opening Session (90 min.) |
| 8:30 – 8:40 | Welcome |
| 8:40 – 9:25 | Beatrice Ruta, University Lyon and ESRF, France |
| | Slow dynamics in disordered materials studied by XPCS |
| 9:25 – 10:10 | Taisia Gorkhover, SLAC National Accelerator Laboratory, USA |
| | X-ray Fourier holography takes off |
| 10:10 – 11:30 | Poster Session 1 and Exhibition (80 min.) |
| 11:30 - 12:30 | Electronic Structure 1 (60 min.) |
| 11:30 - 12:00 | Jak Chakhalian, Rutgers University, USA (Invited) |
| | Emergent Quantum and Topological Phenomena in Artificial (111)-Oriented Spinels |
| | |
| 42.00 42.00 | |
| 12:00 – 12:30 | Hendrik Bentmann, Würzburg University, Germany (Invited) Imaging spin polarization and orbital symmetry in topological materials |
| | inaging spin polarization and orbital symmetry in topological materials |
| | |
| | |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Monday, July 1st, 2019 - Morning

| Time | Colonial Ballroom |
|---------------|---|
| 8:30 – 10:10 | Plenary Session in the Grand Ballroom |
| | |
| 10:10 - 11:30 | Poster Session 1 and Exhibition in the Grand Ball Room (80 min.) |
| 11:30 - 12:30 | Material Science 1: Order in Functional Spin Systems (60 min.) |
| 11:30 – 11:50 | Masaki Mizuguchi, Tohoku University, Japan |
| | Resonant X-ray fluorescence holography of Fe/MgO interface in magnetic tunnel junctions |
| 11:50 – 12:10 | Zhuyun Xiao, University of California, Los Angeles, USA |
| | Electric-field controlled exchange-coupled bilayer microstructures with tunable magnetoelastic effect |
| 12:10 – 12:30 | Hebatalla Elnaggar, Utrecht University, Netherlands |
| | Magnetic contrast at spin-flip excitations: An advanced X-ray tool to study magnetic ordering |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Monday, July 1st, 2019 - Afternoon

| Time | Grand Ballroom |
|---------------------------------------|--|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Chemical Processes 1: Ultrafast X-ray Studies of Molecular and Interfacial dynamics (90 min.) |
| 13:30 – 14:00 | Jan Kern, Berkeley Lab, Berkeley (Invited) Spectroscopic and Scattering Studies of Photosynthetic Systems Utilizing fs X-ray Pulses |
| 14:00 – 14:20 | Shashank Pathak, Kansas State University Investigating Ring-Opening Reactions by Time-Resolved Photoelectron Spectroscopy with a Free-Electron Laser |
| 14:20 – 14:40 | Mario Borgwardt, Berkeley Lab, Berkeley Monitoring photoinduced charge carrier dynamics in Au nanoparticle—sensitized TiO ₂ with time-resolved X-ray photoelectron spectroscopy |
| 14:40 – 15:00 | Kristjan Kunnus, Stanford University Coherent structural dynamics observed with femtosecond Fe K_{α} and K_{δ} X-ray emission spectroscopies during intramolecular electron transfer |
| 15:00 – 16:30 | Poster Session 2 and Exhibition (90 min.) |
| 16:30 – 17:40 16:30 – 17:00 | AMO 1: Mechanisms and Non-Equilibrium Dynamics (90 min.) Kiyoshi Ueda, Tohoku University, Japan (Invited) Ultrafast electronic and structural dynamics induced by XFEL pulses |
| 17:00 – 17:20 | Florian Trinter, DESY Hamburg / FHI Berlin, Germany A molecular movie of Interatomic Coulombic Decay in NeKr |
| 17:20 – 17:40 | Razib Obaid, University of Connecticut, USA Energy transfer and fragmentation mechanism in an endohedral fullerene photoionized in the soft x-ray regime |
| 17:40 – 18:00 | John Bozek, Synchrotron SOLEIL PLEIADES: A versatile beamline for dilute matter photoionization measurements at Synchrotron SOLEIL |

To access the abstracts please click on author or abstract title.

Monday, July 1st, 2019 - Afternoon

| Time | Colonial Ballroom |
|---------------------------------------|--|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Instrumentation 1 (90 min.) |
| 13:30 – 14:00 | Katerina Medjanik, Johannes Gutenberg-Universität Mainz, Germany (Invited) Electronic structure determination by means of the momentum microscope |
| 14:00 – 14:20 | Sergey Gorovikov, Canadian Light Source Inc., Canda Quantum Material Spectroscopy Center at the Canadian Light Source: First commissioning results |
| 14:20 – 14:40 | Takayuki Muro, Japan Synchrotron Radiation Research Institute (JASRI) Microbeam ARPES and high-resolution RFA: Soft x-ray photoemission stations developed at BL25SU of SPring-8 |
| 14:40 – 15:00 | Roland J. Koch, Berkeley Lab, USA Spatially resolved electronic structure at the MAESTRO beamline |
| 15:00 – 16:30 | Poster Session 2 and Exhibition in the Grand Ball Room (90 min.) |
| 16:30 – 18:00 16:30 – 17:00 | Material Science 2: Frontiers in X-ray Imaging (90 min.) Hanfei Yan, Brookhaven National laboratory, USA (Invited) X-ray imaging in 2D and 3D with single-digit-nanometer resolution |
| 17:00 – 17:20 | Rajesh Chopdekar, Berkeley Lab, USA Low energy vertices and ground state ordering in thermally active complex oxide- based artificial spin ice geometries |
| 17:20 – 17:40 | Tomohiro Matsushita, Japan Synchrotron Radiation Research Institute Dopant structure measurements using photoelectron holography and its analysis tools |
| 17:40 – 18:00 | Isvar Cordova, Berkeley Lab, USA Latent Imaging of Commercial Resists via Grazing Incidence Resonant X-ray Scattering |

To access the abstracts please click on author or abstract title.

Tuesday, July 2nd, 2019 - Morning

| Time | Grand Ballroom |
|---------------------------------------|---|
| 8:30 – 10:10 8:30 – 9:00 | Chemical Processes 2: Interfacial Chemistry (90 min.) Takuya Masuda, National Institute for Materials Science, Japan (Invited) Liquid Electrochemistry Explored by XPS and HAXPES |
| 9:00 – 9:20 | Jong Keun Jung, Seoul National University, South Korea Observation of charge back-donation states of CO Metal bonding on Pt-Sn alloy |
| 9:20 – 9:40 | Heath Kersell, Berkeley Lab, USA The nature of active sites for room temperature CO oxidation on CoO-Pt catalysts |
| 9:40 – 10:00 | Arnaldo Brito, UNICAMP, Bazil pH-dependent X-ray photoelectron chemical shifts and surface distribution of selected amino acids in aqueous solution |
| 10:00 – 11:30 | Poster Session 3 and Exhibition (90 min.) |
| 11:30 – 12:30 11:30 – 11:50 | Electronic Structure 2 (60 min.) Takahiro Ito, Nagoya University, Japan Spin- and angle-resolved photoemission study of MAX phase compound V2AIC |
| 11:50 – 12:10 | Oleg Kostko, Berkeley Lab, USA Determination of inelastic and elastic mean free paths from velocity map imaging X-ray photoelectron spectra |
| 12:10 – 12:30 | Giovanni Stefani, Universita Roma Tre, Italy, Unexpected values of electron correlations energy in transition metal magnetic films. |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Tuesday, July 2nd, 2019 - Morning

| Time | Colonial Ballroom |
|---------------|--|
| 8:30 - 10:10 | Theory 1 (90 min.) |
| 8:30 – 9:00 | Das Pemmaraju, SLAC National Accelerator Laboratory, USA (Invited) Real-time TDDFT simulations of laser-driven valence and core electron dynamics in solids |
| 9:00 – 9:20 | Keith Gilmore, Brookhaven National Laboratory, USA Computational characterization of the RIXS Raman-to-fluorescence crossover in BaFe ₂ As ₂ |
| 9:20 – 9:40 | John Vinson, National Institute of Standards and Technology, USA Predicting and Understanding Structure with Computational X-ray Spectroscopy |
| 9:40 – 10:00 | David Prendergast, Berkeley Lab, USA Capturing many-body effects in X-ray absorption spectra |
| 10:00 – 11:30 | Poster Session 3 and Exhibition in the Grand Ball Room (90 min.) |
| 11:30 – 12:30 | Instrumentation 2 (60 min.) |
| 11:30 – 11:50 | Conny Såthe, Max IV Laboratory, Sweden VERITAS - A high resolution soft X-ray RIXS beamline at Max IV |
| 11:50 – 12:10 | Tulio Rocha, Brazilian Synchrotron Light Laboratory, Brazil BRIXS: the Brazilian Resonant Inelastic Soft X-ray Scattering Endstation at Sirius |
| 12:10 – 12:30 | Georgi Dakovski, SLAC National Accelerator Laboratory, USA Photoelectron Spectrometry for Analysis of X-rays |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Tuesday, July 2nd, 2019 - Afternoon

| Time | Grand Ballroom |
|---------------------------------------|--|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 13:30 – 14:00 | AMO 2: Charge Transfer and Decays (90 min.) Rebecca Boll, European XFEL, Schenefeld, Germany (Invited) |
| 13.30 11.00 | Charge transfer in dissociating molecules upon multi-photon X-ray ionization |
| 14:00 – 14:20 | Markus Scholz, European XFEL, Germany Direct observation of molecular wave packet and charge transfer dynamics |
| 14.20 14.40 | |
| 14:20 – 14:40 | Daniel Rolles, Kansas State University, USA Channel-resolved molecular Auger spectroscopy |
| 14:40 – 15:00 | Pascal Lablanquie, LCP-MR, France |
| | Decay of Asymmetric Double Core Holes in Atoms |
| 15:00 – 16:30 | Poster Session 4 and Exhibition (90 min.) |
| 16:30 – 18:00 | Plenary Session (90 min.) |
| 16:30 – 17:15 | Shuyun Zhou, Tsinghua University, China Visualizing phase-separation by Micro-ARPES and Nano-ARPES |
| | Visualizing phase-separation by who oranges and want-angles |
| 17:15 – 18:00 | Fernando Martin, Autonomous University of Madrid, Spain |
| | Attosecond electron dynamics in molecules |

To access the abstracts please click on author or abstract title.

Tuesday, July 2nd, 2019 - Afternoon

| Time | Colonial Ballroom |
|---------------------------------------|--|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 13:30 – 14:00 | Material Science 3: Low-Dimensional and Opto-electronic Materials (90 min.) Giuseppina Conti, University of California Davis and Berkeley Lab, USA (Invited) Standing-Wave Hard X-ray Photoemission Spectroscopy study of free standing InAs quantum membranes |
| 14:00 – 14:20 | Hung Wei Shiu, National Synchrotron Radiation Research Center, Taiwan Microscopic interaction between vapor processed (PEA)2(MA)n-1Pbnl3n+1 Quasi-2D perovskite and mp-TiO2 substrate |
| 14:20 – 14:40 | Katharina Witte, Paul Scherrer Institute, Switzerland Domain Evolution in Annealed F8BT Thin Films: A Molecular Orientation Analysis |
| 14:40 – 15:00 | Karsten Kuepper, University of Osnabrück, Germany Optical, electronic and magnetic properties of highly Mn-doped 6-NaGdF4 and 6- NaEuF4 nanoparticles with narrow size distribution |
| 15:00 – 16:30 | Poster Session 4 and Exhibition in the Grand Ball Room (90 min.) |
| 16:30 – 18:00 | Plenary Session in Grand Ballroom (90 min.) |

To access the abstracts please click on author or abstract title.

Wednesday, July 3rd, 2019 - Morning

| Time | Grand Ballroom |
|--------------------|---|
| 8:30 - 10:40 | AMO 3: Ultrafast Electron Dynamics (120 min.) |
| 8:30 - 8:50 | Ruaridh Forbes, Stanford University, USA |
| | Time-Resolved Photoelectron Spectroscopy with a Tunable Femtosecond VUV source |
| 8:50 - 9:10 | Ludvig Kjellsson, Uppsala University, Sweden |
| 8.30 - 3.10 | Resonant Inelastic X-ray Scattering on Transient Hydroxyl Radicals in Liquid Water |
| | |
| 9:10 – 9:30 | Jordan O'Neal, SLAC and Stanford University, USA |
| | Electronic Population Transfer via Impulsive Stimulated X-ray Raman Scattering |
| 9:30 – 9:50 | Andrei Kamalov, SLAC National Accelerator Laboratory, USA |
| 3.30 3.30 | Observation of Inter-Channel Coupling in Photoionization Delays of Carbon Dioxide |
| | |
| 9:50 – 10:10 | Matjaž Žitnik, J. Stefan Institute, Slovenia |
| | Coupling of autoionizing states by a chirped laser pulse |
| 10:10 – 10:40 | Baptiste Fabre, CELIA, France (<i>Invited</i>) |
| 20.20 20.10 | Temporal aspect of chirality : a photoionisation study from the femtosecond to the |
| | attosecond scale |
| 10:40 - 11:00 | Break |
| 11:00 – 12:30 | Chemical Processes 3: Molecular Structure, Dynamics, and Interactions in liquids |
| 44.00 44.30 | (90 min.) |
| 11:00 – 11:30 | Ruth Signorell, ETH Zurich, Switzerland (Invited) Influence of electron scattering on the properties of the hydrated electron |
| | influence of electron scattering on the properties of the hydrated electron |
| 11:30 - 11:50 | Masanari Nagasaka, Institute for Molecular Science, Japan |
| | Intermolecular Interactions Revealed by Precise Energy Shift Analysis in Soft X-ray |
| 11:50 – 12:10 | Absorption Spectroscopy for Liquid Erik T. J. Nibbering, Max Born Institute, Germany |
| 11.30 – 12.10 | Soft X-Ray Spectroscopy of Hydrogen-Bonded Systems in Protic and Aprotic Solvents |
| | |
| 12:10 – 12:30 | Aaron LaForge, University of Connecticut, USA |
| | Intermolecular decay mechanisms in doped helium droplets induced by XUV radiation |
| 12:30 – 13:30 | Lunch |
| 12.50 15.50 | 23.101 |

To access the abstracts please click on author or abstract title.

Wednesday, July 3rd, 2019 - Morning

| Time | Colonial Ballroom |
|---------------|--|
| 8:30 - 10:30 | Material Science 4: Dynamic Properties of Materials (120 min.) |
| 8:30 – 8:50 | Kohei Yamamoto, University of Tokyo, Japan |
| | Ultrafast demagnetization in ferromagnetic FePt thin films probed by x-ray free electron laser |
| 8:50 – 9:10 | Erika Giangrisostomi, Helmholtz Zentrum Berlin, Germany |
| | Directional sub-fs charge transfer dynamics in 1T-TaS2 |
| 9:10 – 9:30 | Friedrich Roth, TU Bergakademie Freiberg |
| 3.10 3.30 | Direct observation of femtosecond charge transfer dynamics in organic |
| | heterojunctions using a Free-Electron Laser |
| 9:30 – 9:50 | Christoph Klewe, Berkeley Lab, USA Anisotropic spin precession and AC spin current transmission through |
| | antiferromagnetic CoO probed by X-ray ferromagnetic resonance |
| 9:50 – 10:10 | Jianheng Li, University of California, Davis, USA |
| | Orbital domain dynamics in Magnetite below the Verwey transition |
| 10:10 - 10:30 | Santa Pile, Johannes Kepler University Linz, Austria |
| 10.10 10.30 | Uniform and spin wave FMR modes in Ni80Fe20 micro stripes investigated by |
| | spatially and time-resolved X-ray detected ferromagnetic resonance |
| 10:30 - 11:00 | Break |
| 11:00 – 12:30 | Sources 1 (90 min.) |
| 11:00 – 11:30 | Zhentang Zhao, Shanghai Advanced Research Institute, China (Invited) |
| | Present and Future of Soft to Hard X-ray Free-electron Lasers |
| 11:30 – 11:50 | Sigi Li, SLAC National Accelerator Laboratory, USA |
| 11.30 - 11.30 | Generation and measurement of soft X-ray attosecond pulses from a free-electron |
| | laser |
| 11:50 – 12:10 | Sam Barber, Berkeley Lab, USA |
| | Recent progress on compact free electron lasers driven by laser plasma accelerators at the BELLA Center |
| 12:10 – 12:30 | Tatsuo Kaneyasu, SAGA Light Source |
| | Coherent control with wave packet pairs from a tandem undulator |
| 12:20 12:20 | Lucab |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Wednesday, July 3rd, 2019 - Afternoon

| Time | Grand Ballroom |
|---------------|---|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Electronic Structure 3 (90 min.) |
| 13:30 – 14:00 | Riccardo Comin, Massachusetts Institute of Technology, USA (Invited) |
| | Soft X-ray scattering and imaging of collective electronic orders in quantum solids |
| 14:00 – 14:20 | Kohei Yamagami, University of Tokyo, Japan |
| | Dispersionless Charge Excitations for La _{2-x} Sr _x NiO _{4+δ} probed by O K-edge Resonant Inelastic X-ray Scattering |
| 14:20 – 14:40 | Thorsten Schmitt, Paul Scherrer Institut, Switzerland |
| | Ultrafast dynamics of the short ranged antiferromagnetic correlations in CuGeO₃ studied by laser pump - RIXS probe |
| 14:40 - 15:00 | Sang Jun Lee, SLAC National Accelerator Laboratory |
| | Resonant soft X-ray scattering studies of charge density wave in high T_c cuprates using a transition-edge sensor at SSRL |
| 15:00 – 15:30 | Break |
| 15:30 – 18:00 | Awards Session 3 (120 min.) |
| 15:30 – 16:15 | VUVX Conference Award in Atomic, Molecular and Optical Physics |
| 16:15 – 16:35 | VUVX Student Award in Atomic, Molecular and Optical Physics |
| 16:35 – 16:55 | VUVX Student Award in Condensed Matter Physics |
| 16:55 – 17:40 | VUVX Conference Award in Condensed Matter Physics |
| 18:00 – 21:00 | Conference Dinner in the Golden Gate Room on the top floor of the St. Francis Hotel |
| | Speaker: Thomas Bristow, NASA Ames Research Center, Moffett Field, CA Dr. and |
| | Principal Investigator for the Chemistry and Mineralogy (CheMin) instrument on the |
| | Mars Science Laboratory rover Curiosity on "The First X-ray Diffraction Experiment on Another Planet". |

To access the abstracts please click on author or abstract title.

Wednesday, July 3rd, 2019 - Afternoon

| Time | Colonial Ballroom |
|---------------|--|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Theory 2 (90 min.) |
| 13:30 – 14:00 | Michael Schuurman, National Research Council Canada, Canada(Invited) Nonadiabatic Dynamics Probed via Time-Resolved X-ray Spectroscopy |
| 14:00 – 14:20 | Shota Tsuru, Technical University of Denmark, Denmark Analysis of nuclear wave packet dynamics reflected in time-resolved near-edge X-ray absorption fine structure |
| 14:20 – 14:40 | Ajith Kaduwela, UC Davis, USA Differential photoelectric cross sections for oriented atomic orbitals with soft- and hard- x-ray excitation |
| 14:40 – 15:00 | Han Wang, Berkeley Lab, USA Ultrafast transient XUV absorption spectroscopy study of UV induced photodissociation dynamics of CHBr ₃ |
| 15:00 – 15:30 | Break |
| 15:30 - 18:00 | Awards Session in Grand Ballroom (120 min.) |
| 18:00 – 21:00 | Conference Dinner in the Golden Gate Room on the top floor of the St. Francis Hotel |

To access the abstracts please click on author or abstract title.

Thursday, July 4rd, 2019 - Morning

| Time Creed Bellineers | | |
|-----------------------|---|--|
| Time | Grand Ballroom | |
| 8:30 – 10:30 | Across Vacuum Ultraviolet and X-ray Physics – Student Plenary Presentation (120 min.) | |
| 8:30 – 8:45 | Kirk Larsen, University of California, Berkeley Angularly resolved non-resonant two-photon single ionization of Ar using 9.3eV photons produced via high harmonic generation | |
| 8:45 – 9:00 | Fridtjof Kielgast, University of Hamburg, Germany Spectroscopic evidence for non-collinear magnetic coupling in deposited VFe dimers | |
| 9:00 – 9:15 | Johannes Mahl, Berkeley Lab, USA Probing photo-induced charge carrier dynamics in a molecule-semiconductor system with picosecond time-resolved X-ray photoelectron spectroscopy | |
| 9:15 – 9:30 | Jiwon Jung, Caldes-IBS, South Korea K dosing induced stacking order change in the CDW layers of 1T-TaS2 observed by real-time ARPES | |
| 9:30 – 9:45 | Adrian Jonas, Technische Universität Berlin, Germany Optical pump soft X-ray probe NEXAFS spectroscopy using a laser produced plasma source | |
| 9:45 – 10:00 | Thilo vom Hoevel, University of Bonn, Germany Towards a Photon Bose-Einstein Condensate in the Vacuum-Ultraviolet Spectral Regime | |
| 10:00 – 10:15 | Spela Krusic, Jozef Stefan Institute, Slovenia Amplification of XUV fluorescence from the 3a 1Po doubly excited state in helium | |
| 10:30 – 11:00 | Break | |
| 11:00 – 12:30 | Electronic Structure 4 (90 min.) | |
| 11:00 – 11:30 | L. Andrew Wray, New York University, USA (Invited) Interpreting Hundness with X-ray spectroscopy: a missing piece of the many-body picture | |
| 11:30 – 11:50 | Yi Tseng, Paul Scherrer Institut, Switzerland Electronic and magnetic tuning of charge order and phonon anomaly in a cuprate spin ladder | |
| 11:50 – 12:10 | Naurang Saini, Sapienza University of Rome, Italy Local distortions, self-doping and electronic phase separation in BiS2-based superconductors | |
| 12:10 – 12:30 | Jonathan Denlinger, Berkeley Lab, USA Temperature dependent Ce 4f states for widely varying Kondo coupling | |
| 12:30 – 13:30 | Lunch | |

To access the abstracts please click on author or abstract title.

Thursday, July 4rd, 2019 - Morning

| Time | Colonial Ballroom |
|---------------------------------------|--|
| 8:30 – 10:30 | Plenary Presentation in Grand Ballroom (120 min.) |
| 10:30 – 11:00 | Break |
| 11:00 – 12:30 11:00 – 11:30 | Instrumentation 3 (90 min.) Anna Bergamaschi, Paul Scherrer Institut, Switzerland (Invited) Soft X-ray Detector Development at PSI |
| 11:30 – 11:50 | Guenter Brenner, DESY, Germany Normalized single-shot X-ray absorption spectroscopy at a free-electron laser |
| 11:50 – 12:10 | Florian Döring, Paul Scherrer Institut, Switzerland Combining imaging and spectroscopy with off-axis zone plates |
| 12:10 – 12:30 | Sujoy Roy, Berkeley Lab, USA Generation of soft X-ray Orbital angular momentum beams |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Thursday, July 4th, 2019 - Afternoon

| Time | Grand Ballroom |
|---------------|---|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | AMO 4: Ultrafast Structural Dynamics (90 min.) |
| 13:30 – 14:00 | Camila Bacellar, EPFL / PSI, Switzerland (Invited) Ultrafast Electronic and Structural Dynamics of Heme Proteins Unveiled by Time- resolved X-ray Spectroscopy at XFELs |
| 14:00 – 14:20 | Stephen Urquhart, University of Saskatchewan, Canada Sensitivity of NEXAFS to Conformation, Nuclear Motion and Intermolecular Interactions |
| 14:20 - 14:40 | Xiang Li, Kansas State University, USA |
| | Pulse parameter dependence of ultra-intense hard X-ray ionization and fragmentation of polyatomic molecules |
| 14:40 - 15:00 | Zhong Yin, ETH Zurich, Switzerland |
| | Probing Chemical Systems with Two-Color High-Harmonic and X-ray Spectroscopy |
| 15:00 – 15:30 | Break |
| 15:30 - 16:30 | Electronic Structure 5 (60 min.) |
| 15:30 – 15:50 | Slavomir Nemsak, Berkeley Lab Determination of the valence band character in dilute magnetic semiconductor using X-ray standing-wave photoemission |
| 15:50 – 16:10 | Wolfgang Eberhardt, DESY |
| | New insights into the mechanisms of the surface photovoltage effect on Si(100) |
| 16:10 – 16:30 | Lukasz Plucinski, Forschungzentrum Juelich, Germany |
| | Direct observation of the band gap transition in atomically thin ReS2 |
| 16:30 – 18:00 | Plenary Session (90 min.) |
| 16:30 – 17:15 | Hope Michelsen, Sandia National Laboratories, USA Using Vacuum Ultraviolet and X-Ray Tools to Solve the Mystery of Soot Formation |
| 17:15 – 18:00 | Margaret Murnane, University of Colorado at Boulder, USA Harnessing high harmonic sources for real-time functional imaging |

To access the abstracts please click on author or abstract title.

Thursday, July 4th, 2019 - Afternoon

| Time | Colonial Ballroom |
|---------------|---|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Material Science 5: Chiral Magnetic Textures (90 min.) |
| 13:30 – 14:00 | Hai Huang, SLAC National Accelerator Laboratory, USA (Invited) Resonant soft x-ray scattering study on relationship between ferromagnetism and robust 2D skyrmion in SrRuO3 film |
| 14:00 – 14:20 | Padraic Shafer, Berkeley Lab, USA Tunability of chiral spin textures explored by polarized x-ray characterizations |
| 14:20 – 14:40 | Yuichi Yokoyama, Japan Synchrotron Radiation Research Institute (JASRI) Sparse Phase Retrieval Algorithm for Observing Isolated Magnetic Skyrmions |
| 14:40 – 15:00 | Jeffrey Brock, University of California, San Diego, USA Chiral magnetism and skyrmion nucleation in Pt/Co/Ni thin film heterostructures |
| 15:00 – 15:30 | Break |
| 15:30 – 16:30 | Material Science 6: Interfacial Spin Structures (60 min.) |
| 15:30 – 15:50 | Alpha N'Diaye, Berkeley Lab, USA Engineering and monitoring Spin States: From antiferromagnetic thin films to spin- crossover molecules |
| 15:50 – 16:10 | Li-Chung Yu, National Synchrotron Radiation Research Center, Taiwan Spinterface and Magnetic Coupling of Tris(8-hydroxyquinoline)iron(III) on Cobalt Surface |
| 16:10 – 16:30 | Cheng-Tai Kuo, SLAC National Accelerator Laboratory, USA Depth-resolved resonant inelastic x-ray scattering at a superconductor/half-metallic ferromagnet interface through standing-wave excitation |
| 16:30 – 18:00 | Plenary Session in Grand Ballroom (90 min.) |
| | |
| | |

To access the abstracts please click on author or abstract title.

Friday, July 5th, 2019 - Morning

| Time | Grand Ballroom |
|---------------|---|
| 8:30 – 10:30 | Electronic Structure 6 (120 min.) |
| 8:30 - 8:50 | Hebatalla Elnaggar, Utrecht University, Netherlands |
| | Investigation of trimeron correlations above the Verwey temperature in Magnetite |
| 8:50 - 9:10 | Karol Hricovini LPMS, Université de Cergy-Pontoise, France |
| | Topological states at the InBi(100) surface |
| 9:10 – 9:30 | Shiv Kumar, Hiroshima University, Japan |
| | Laser-based ARPES and pressure dependent magneto-transport studies of BiSbTe3 topological insulator |
| 9:30 – 9:50 | Ivana Vobornik, CNR-IOM, TASC Laboratory, Italy |
| | Electronic band structure and spin polarized states in NiTe2 transition metal dichalcogenide |
| 9:50 – 10:10 | Giovanni Zamborlini, TU Dortmund, Germany |
| | Functionalized Nickel Porphyrins on copper: electronic properties and adsorption configuration |
| 10:10 - 10:30 | Mingu Kang, Massachusetts Institute of Technology, USA |
| | Realization of Dirac fermions and flat bands in ideal kagome metal FeSn |
| 10:30 – 11:00 | Break |
| 11:00 - 12:30 | AMO 5: Core Ionization and Scattering Processes (90 min) |
| 11:00 – 11:30 | Markus Schöffler, Goethe-University, Frankfurt, Germany (Invited) |
| | New perspectives in photo ionization - from VUV to X-ray |
| 11:30 – 11:50 | Alexander Perry-Sassmannshausen, Universität Gießen, Germany |
| | New resonances in multiple inner-shell photodetachment of C- ions |
| 11:50 – 12:10 | Lothar Weinhardt, Karlsruhe Institute of Technology, Germany |
| | Local electronic structure of the peptide bond probed by resonant inelastic soft x-ray scattering |
| 12:10 – 12:30 | Bruno Langbehn, TU Berlin, Germany |
| | Diffraction imaging of anisotropic dynamics in helium nanodroplets |
| | |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Friday, July 5th, 2019 - Morning

| Time | Colonial Ballroom |
|--------------------|---|
| 8:30 - 10:30 | Instrumentation 4 (120 min.) |
| 8:30 - 8:50 | Anna Zymaková, ELI Beamlines, Czechia |
| | Ultrafast X-ray experiments for an international user community at the European |
| 8:50 - 9:10 | laser center ELI-beamlines Gerd Schneider, Helmholtz Zentrum Berlin, Germany |
| 8.30 - 3.10 | Nanoscale spectroscopy and 3-D imaging at BESSY II: Current status and future |
| | directions with ultimate storage rings |
| 9:10 – 9:30 | Stephen Urquhart, University of Saskatchewan, Canada |
| | Variable temperature soft X-ray spectroscopy, microscopy and tomography of polymer and biological samples |
| 9:30 – 9:50 | Joakim Laksman, European XFEL, Germany |
| | A photoelectron spectrometer for soft X-ray photon diagnostics at European XFEL |
| 9:50 – 10:10 | Katharina Witte, Paul Scherrer Institute, Switzerland |
| | From 2D STXM to 3D Imaging: Soft X-ray Computed Laminography at PolLux |
| 10:10 - 10:30 | Bernd Schütte, Max-Born-Institut, Germany |
| 10.10 - 10.30 | Extreme-ultraviolet refractive optics |
| | |
| 10:30 – 11:00 | Break |
| 11:00 – 12:30 | Material Science 7: Crystal and Electronic Structure (90 min) |
| 11:00 – 11:30 | Yasuhisa Tezuka, Hirosaki University, Japan (Invited) |
| | Temperature dependent crystal and electronic structures of CaCu₃Ti₄O₁₂ |
| 11:30 – 11:50 | Abhinav Parakh, Stanford University, USA |
| | Defect formation in 4 nm Au nanocrystals under high pressure |
| 11:50 – 12:10 | Partha Paul, SLAC National Linear Accelerator Center, USA |
| | Multiscale Analysis of Battery Degradation During Extreme Fast Charging of Li-Ion Batteries |
| 12:10 – 12:30 | Tetsuroh Shirasawa, National Institute of Advanced Industrial Science and |
| | Technology, Japan |
| | Atomic-scale structure analysis for designing low-resistance interfaces of solid-state battery |
| 12:30 – 13:30 | Lunch |

To access the abstracts please click on author or abstract title.

Friday, July 5th, 2019 - Afternoon

| Time | Grand Ballroom |
|---------------|---|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Chemical Processes 4 (90 min.) |
| 13:30 – 14:00 | Florian Meirer, Utrecht University, the Netherlands (Invited) |
| | Spatial and temporal explorations of heterogeneous catalysts using X-ray microscopy |
| 14:00 – 14:20 | Gregory Su, Berkeley Lab, USA |
| | Understanding morphology and transport in phase-separated proton conducting |
| | polymers with tender X-ray scattering and spectroscopy |
| 14:20 – 14:40 | Shin-ichi Wada, Hiroshima University, Japan |
| | Evaluation of molecular conductivity of organic monolayers utilizing core-excitation dynamics |
| 14:40 - 15:00 | Yijin Liu, SLAC National Accelerator Laboratory, USA |
| | Thermally-driven oxygen evolution in anion-active battery cathode revealed by TES |
| | RIXS |
| 15:00 – 15:30 | Break |
| 15:30 – 16:30 | Plenary Session (90 min.) |
| 15:30 – 16:15 | J.J. Rehr, University of Washington, USA |
| | Theories of X-ray spectra in Extreme conditions: Real time and Finite-temperature |
| 16:15 – 16:30 | Closing Pomarks |
| 10.13 – 10.30 | Closing Remarks |
| | |

To access the abstracts please click on author or abstract title.

Friday, July 5th, 2019 - Afternoon

| Time | Colonial Ballroom |
|---------------|---|
| 12:30 – 13:30 | Lunch |
| 13:30 – 15:00 | Sources 2 (90 min.) |
| 13:30 – 14:00 | Stephen Streiffer, Argonne National Laboratory, USA (Invited) |
| | Science and Accelerators for Next Generation Storage Ring X-ray Sources: The Advanced Photon Source Upgrade at Argonne National Laboratory |
| 14:00 – 14:20 | Antti Kivimäki, University of Oulu, Finland |
| 11.00 11.20 | The FinEstBeAMS beamline and its end stations: status at the beginning of user operation |
| 14:20 – 14:40 | Victoria Mazalova, DESY, Germany |
| | A novel hard x-ray source for attosecond imaging and spectroscopy (AXSIS) |
| 14:40 – 15:00 | Riccardo Cucini, Istituto Officina dei Materiali (IOM) – CNR, Italy A novel beamline for advanced photoelectron spectroscopy with narrow-band extreme ultraviolet high harmonics at variable high repetition rate |
| 15:00 – 15:30 | Break |
| 15:30 – 16:30 | Plenary session in the Grand Ballroom (90 min.) |
| 15:30 – 16:15 | |
| | |
| 16:15 – 16:30 | |

To access the abstracts please click on author or abstract title.

Poster Sessions

Poster Sessions take place in the Grand Ball Room concurrently with the vendor exhibitions on Monday, July 1st, and Tuesday, July 2nd. Posters are 4 feet wide and 3 feet high (48"x36").

The poster boards are labeled with numbers 1-40 and the presenters are asked to attach their posters on the boards according to the tables give below.

For the morning posters sessions: Presenters can put up their posters in the morning and are asked to kindly take down their posters before lunch, i.e. by 12:30.

For the afternoon posters sessions: Presenters can put up their posters during the lunch break, i.e. starting at 12:30 and are asked to kindly take down their posters before the meeting concludes for the day, i.e. by 18:00.

Acronyms:

AMO = Atomic, Molecular and Optical Physics

Chem. Proc. = Chemical Processes

Electr. Str. = Electronic Structure

Instr. = Instrumentation

Mater. Sci. = Material Science

Sources = New Sources and Source Developments Theory = Theory of X-ray Interaction with Matter

Poster Session 1: Monday, July 1st, 2019 - 10:10 - 11:30

| Poster | Presenter, Affiliation | Tourin |
|--------|---|--------|
| ID | Title | Topic |
| 1 | Florian Trinter, DESY Hamburg / FHI Berlin | AMO |
| | Resonant interatomic Coulombic decay in HeNe: Electron angular emission | |
| | distributions | |
| 2 | Pascal Lablanquie, LCP-MR | AMO |
| | Auger decays of 3d holes in Rubidium atoms | |
| 3 | Pascal Quinet, University of Mons, Belgium | AMO |
| | Calculation of radiative transition parameters for emission lines of Xe9+ and Xe10+ | |
| | ions in the EUV spectral range | |
| 4 | Ludvig Kjellsson, Department of Physics and Astronomy, Uppsala University, Sweden | AMO |
| | The Soft X-ray Absorption Spectrum of N2+ | |
| 5 | Sophie Walther, University of Hamburg | AMO |
| | Towards time resolved coincidence measurements of interatomic Coulombic decay | |
| 6 | David Kilcoyne, Advanced Light Source, LBNL | AMO |
| | Photoionization and Photofragmentation of Singly Charged Positive and Negative | |
| | Sc3N@C80 Endohedral Fullerene Ions | |
| 7 | Aaron LaForge, University of Connecticut | Chem. |
| | Real-time dynamics of the formation of hydrated electrons upon irradiation of water | Proc. |
| | clusters with XUV light | |
| 8 | Chen-Lin Liu, National Synchrotron Radiation Research Center | Chem. |
| | NEXAFS spectra and specific dissociation of oligo-peptide models | Pro. |

| Poster ID | Presenter, affiliation Title | Topic |
|--------------|---|---------|
| 9 | Yoshiyuki Ohtsubo, Osaka University | Electr. |
| | Temperature-driven topological phase transition proposed from surface electronic | Str. |
| | structure of bismuth, a topological border material | |
| 10 | Maxim Tchaplyguine, MAX IV Laboratry Lund University | Electr. |
| | Alkali-silver workfunction revisited: a study using free potassium-doped silver | Str. |
| | nanoparticles | |
| 11 | Jin-Ming Chen, National Synchrotron Radiation Research Center | Electr. |
| | Valence state and spin states and spin state transition of Co in LaCo0.5Rh0.5O3 | Str. |
| 12 | Masahito Niibe, University of Hyogo | Electr. |
| | Electron structure of rare-earth aluminum/chromium boride R(Al0.95Cr0.05)B4 | Str. |
| | studied by B-K soft X-ray emission and absorption spectroscopy | |
| 13 | Goro Shibata, Department of Physics, The University of Tokyo | Electr. |
| | Magnetic and Orbital Anisotropies in La\$_{1-x}Sr\$_{x}\$MnO\$_{3}\$ Thin Films Studied | Str. |
| | by Angle-dependent X-ray Magnetic Circular and Linear Dichroism | |
| 14 | Shih-Chieh Lin, UC Davis | Electr. |
| | Interface properties of LaAlO3/SrTiO3 superlattices studied by standing-wave excited | Str. |
| | photoemission and resonant inelastic x-ray scattering | |
| 15 | Ryohei Shimokasa, Graduate School of Engineering, Osaka Prefecture University | Electr. |
| | Electronic structure of the valence transition system $Eu(Rh1-xTx)2Si2$ (T = Co, Ir) | Str. |
| | studied by high-energy resolution fluorescence detection x-ray absorption | |
| | spectroscopy | |
| 16 | Aamod Shanker, KLA Tencor | Instr. |
| | Speckle metrology for optical lithography | |
| 17 | Takuji Ohigashi, UVSOR Synchrotron, Institute for Molecular Science | Instr. |
| | Scanning Transmission X-ray Microscopy for Low-Z element Analysis | |
| 18 | Der-Hsin Wei, National Synchrotron Radiation Research Center | Instr. |
| | How the cathode lens electron microscope reads energetic photoelectron from buried | |
| | objects | |
| 19 | Daisuke Wakabayashi, Photon Factory, Institute of Materials Structure Science, High | Instr. |
| | Energy Accelerator Research Organization (KEK) | |
| | Construction of a new beamline for STXM at Photon Factory | |
| 20 | Matthew Marcus, ALS | Instr. |
| | Recent Science from the New Scanning Transmission X-ray Microscope ALS Beamline | |
| | 5.3.2.2 | |
| 21 | Shaul Barkan, Hitachi High-Technologies Science America, Inc. | Instr. |
| | Seven element SDD array for synhrotron applications | |
| 22 | Victoria Mazalova, DESY, Germany | Mater. |
| | Influence of anchoring ligands on magnetic properties of 3d-4f heterobimetallic | Sci. |
| | omplexes after deposition on a solid surface substrate | |
| 23 | Jinwoong Hwang, Advanced Light Source | Mater. |
| 24 | Emergence of Kondo Resonance in Graphene Intercalated with Cerium | Sci. |
| 24 | Akane Agui, National Institutes for Quantum and Radiological Science and Technology | Mater. |
| | Investigation of microscopic magnetization process of Tb-Co films by magnetic | Sci. |
| 25 | Compton scattering | |
| 25 | Yi-Sheng Liu, Advanced Light Source | Mater. |
| | RIXS and In-situ/operando XAS of interfacial processes in energy materials | Sci. |
| 26 | Deng-Sung Lin, Department of Physics, National Tsing Hua University | Mater. |
| | Controlling the Polarity of the MBE Grown In-Bi Atomic Film on the Si(111) Surface | Sci. |

| Poster | Presenter, Affiliation | Tonic |
|--------|---|---------|
| ID | Title | Topic |
| 27 | Shohei Yamashita, Photon Factory, Institute of Materials Structure Science, High | Mater. |
| | Energy Accelerator Research Organization (KEK), Japan | Sci. |
| | In situ and spectromicroscopy observation of heterogeneous nickel catalysts | |
| 28 | Yasuji Muramatsu, University of Hyogo | Mater. |
| | X-ray absorption spectra of ultra-thin graphite films measured with the transmission and total-electron-yield modes | Sci. |
| 29 | Cheng Wang, Lawrence Berkeley National Lab | Mater. |
| | Resonant Soft X-ray Scattering for Soft Materials | Sci. |
| 30 | Shambhavi Pratap, ALS, TUM | Mater. |
| | Probing the in-situ dynamics of structure-property evolution in hybrid perovskite thin | Sci. |
| | films spincoated from complex fluids by a custom designed, beamline compatible | |
| | multimodal measurement chamber | |
| 31 | Fridtjof Kielgast, University of Hamburg | Mater. |
| | Colder than space: ultra-low temperature soft X-Ray XAS and XMCD | Sci. |
| 32 | Maria Ekimova, Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy | Sources |
| | Soft X-ray Absorption Spectroscopy of Molecules in Solution with a Table-top | |
| | Femtosecond High Harmonic Source | |
| 33 | Brennan Peterson, KM Labs | Sources |
| | A One-Box MHz rep-rate VUV Laser Source for Surface and Chemical Dynamics Studies | |
| 34 | Antje Vollmer, Helmholtz Zentrum Berlin fuer Materialien und Energie | Sources |
| | Science Diplomacy – the need for international cooperation and the role of large scale | |
| | infrastructures | |
| 35 | Andrei Kochur, Rostov State Transport University | Theory |
| | Effect of cascade explosions on the energy absorbed by iron-doped water under | |
| | photon irradiation above Fe1s-threshold | |

Poster Session 2: Monday, July 1st, 2019 – 15:00 – 16:30

| Poster | Presenter, Affiliation | Tonic |
|--------|---|-------|
| ID | Title | Topic |
| 1 | Benjamin W. Toulson, Lawrence Berkeley National Laboratory | AMO |
| | Probing the UV Photodissociation Dynamics of Bromoform with Femtosecond Inner- | |
| | Shell Transient Absorption Spectroscopy | |
| 2 | Michael Meyer, European XFEL | AMO |
| | X-ray spectroscopy on ultrafast-decaying core-excited atomic ions | |
| 3 | Pascal Quinet, University of Mons, Belgium | AMO |
| | Radiative and non-radiative processes involving K-vacancy states of iron ions | |
| | embedded in high-density astrophysical plasmas | |
| 4 | David Kilcoyne, Advanced Light Source, LBNL | AMO |
| | Photoionization of Au+, Au2+ and Au3+ ions and Perspectives on the Synthesis of the | |
| | Metallofullerene Au@C60 | |
| 5 | Evanthia Chatzigeorgiou, Uppsala University, Uppsala, Sweden | AMO |
| | Resonant Inelastic X-ray Scattering on Mesoporous Magnesium Carbonate | |
| 6 | Seyyed Javad Robatjazi, Kansas State University, USA | AMO |
| | Photoion-photoelectron coincidence measurement on atoms and molecules driven by | |
| | XUV pump and NIR probe pulses | |

| Poster ID | Presenter, Affiliation Title | Topic |
|--------------|--|---------|
| 7 | Zachary Arthur, Canadian Light Source | Chem. |
| | Probing physicochemical battery phenomena with soft X-rays | Proc. |
| 8 | Kueih-Tzu Lu, National Synchrotron Radiation Research Center | Chem. |
| | In-situ XANES investigation of three-dimensional transition metal oxide electrodes | Proc. |
| 9 | Kota Takaoka, Ritsumeikan Univ. | Chem. |
| | Chemical state analysis of oxidizing graphene on porous alumina | Proc. |
| 10 | Ismael Graff, Department of Physics, Federal University of Paraná, Curitiba, Brazil | Electr. |
| | Polarization-dependent X-ray standing wave angle-resolved photoemission study of | Str. |
| | SrTiO3/GdTiO3 superlattices | |
| 11 | Shih-Wen Huang, MAXIV Laboratory | Electr. |
| | Doping dependence of inter-atomic Coulomb interactions revealed in dd excitations of | Str. |
| | superconductor YBa2Cu3O7-x | |
| 12 | Debora Pierucci, ALBA Synchrotron | Electr. |
| | The LOREA ARPES beamline at the ALBA synchrotron | Str. |
| | | |
| 13 | Jau-Wern Chiou, Department of Applied Physics, National University of Kaohsiung | Electr. |
| | Investigate the generation of free radicals on the surface of GO-ZnO-Si composites | Str. |
| | studied by x-ray spectroscopy | |
| 14 | Yunlong Li, Shanghai Jiao Tong University, Shanghai 200240, China | Electr. |
| | Electronic structure of Ba(Zn0.875Mn0.125)2As2 | Str. |
| 15 | Ryo Ihara, Faculty of Science and Engineering, Ritsumeikan University | Electr. |
| | Electronic state analysis of Li metal by synchrotron radiation photoelectron | Str. |
| | spectroscopy | |
| 16 | Manuel Langer, Paul Scherrer Institut, Villigen PSI 5232, Switzerland | Instr. |
| | Development and Applications of a New Soft X-ray Ptychography Microscope at the | |
| | Swiss Light Source (SLS) | |
| 17 | Wei Lu, European XFEL GmbH | Instr. |
| | Diamond X-ray optics for the hard X-ray Split and Delay Line at the MID station of the | |
| | European XFEL | |
| 18 | M. Koike, National Institutes for Quantum and Radiological Science and Technology | Instr. |
| | Design of soft X-ray high diffraction efficiency diffraction gratings with hybrid | |
| | multilayer coatings in an energy range of 200–900 eV | |
| 19 | Matthias Neeb, Helmholtz-Zentrum-Berlin (BESSY II) | Instr. |
| | A 10-mabr differential pumping unit for soft X-ray photoemission catalysis | |
| | experiments | |
| 20 | Ying Liu, University of Science and Technology of China | Instr. |
| | Development of soft X-ray varied-line-spacing grating with high frequency and groove | |
| | density distribution precision | |
| 21 | Isvar Cordova, Berkeley Lab - ALS & CXRO | Mater. |
| | Operando Pattern-Enhanced Resonant Scattering for Sub-nm Interfacial | Sci. |
| | "Spectromicroscopy" of Energy Materials | |
| 22 | Matthias Neeb, Helmholtz-Zentrum-Berlin (BESSY II) | Mater. |
| | Ag-nanoparticles on free-standing graphene as investigated by X-ray photoelectron | Sci. |
| | spectroscopy | |
| 23 | Hangil Lee, Sookmyung Women's University | Mater. |
| | Surface spectroscopic analysis of photocatalytic activities of Fe doped TiO2 | Sci. |
| | nanoparticles in different pH conditions. | |

| Poster | Presenter, Affiliation | Tonic |
|--------|---|---------|
| ID | Title | Topic |
| 24 | Thomas Chasse, University of Tuebingen, Germany | Mater. |
| | Spin State in Perfluorinated FePc Films on Cu(111) and Ag(111) in Dependence on | Sci. |
| | Film Thickness | |
| 25 | Daisuke Asakura, AIST | Mater. |
| | Operando photoelectron spectromicroscopy of single crystalline active materials in all- | Sci. |
| | solid-state Li-ion battery | |
| 26 | Dominik Stemer, University of California, Los Angeles | Mater. |
| | Ultraviolet Photoelectron Spectroscopy as a Probe for Spin-Selective Ionization of | Sci. |
| | Chiral Molecules: Observing the Heavy Metal Effect in Metallized DNA | |
| 27 | Andrew Shum, Tufts University | Mater. |
| | Using Machine Learning to Study Phase-Change-Induced Flow in Polymer-Electrolyte | Sci. |
| | Fuel Cells | |
| 28 | Armela Keqi, Lawrence Berkeley National Laboratory | Mater. |
| | Electronic structure of the dilute magnetic semiconductor Ga1–xMnxP from hard x-ray | Sci. |
| | photoelectron spectroscopy and angle-resolved photoemission | |
| 29 | Christopher Corder, Stony Brook University | Sources |
| | Time-resolved ARPES at 88 MHz repetition rate with full 2π electron collection | |
| 30 | Frithjof Nolting, Paul Scherrer Institut | Sources |
| | SLS 2.0 – design and scientific applications | |
| 31 | Andrei Kochur, Rostov State Transport University | Theory |
| | Energy absorption in solid neon under irradiation with photons in the 4 - 800 Ry range | |

Poster Session 3: Tuesday, July 2nd, 2019 - 10:00 - 11:30

| Poster | Presenter, Affiliation | Topic |
|--------|--|-------|
| ID | Title | |
| 1 | Ishita Kemeny, SLAC, Stanford University | AMO |
| | Ultrafast Dynamics of Molecular Uracil Investigated by Time-Resolved Photoelectron | |
| | Spectroscopy using extreme ultraviolet photons | |
| 2 | John Bozek, Synchrotron SOLEIL | AMO |
| | PLEIADES: A versatile beamline for dilute matter photoionization measurements at | |
| | Synchrotron SOLEIL | |
| 3 | Pascal Quinet, University of Mons, Belgium | AMO |
| | A new set of transition probabilities and oscillator strengths for VUV spectral lines in | |
| | moderately charged copper ions from Cu3+ to Cu6+ | |
| 4 | Spela Krusic, Jozef Stefan Institute | AMO |
| | Collective effects in the radiative decay of the 2 1P state in helium | |
| 5 | Razib Obaid, University of Connecticut | AMO |
| | Ionization dynamics of metallo-endohedral fullerene using hard x-rays from the SACLA | |
| | Free-electron Laser | |
| 6 | Andreas Wituschek, Institute of Physics, University of Freiburg | AMO |
| | Tracking the Coherent Evolution of Electronic Wave Packets with Phase-Modulated | |
| | Extreme Ultraviolet Pulse Trains | |
| 7 | Ganesh Surbamanian, Arizona State University | Chem. |
| | Photoresponse of (bio)inorganic cobalt complexes: Ultrafast reaction intermediates | Pro. |
| | probed by Tr-XANES at synchrotrons and XFELs – femtoseconds to microseconds. | |

| Poster | Presenter, Affiliation | Topic |
|-----------|---|------------|
| ID | Title Deok-Yong Cho, Chonbuk National University | Chem. |
| 0 | Interfacial reactions at annealed sulfide-TiN heterostructure films studied by X-ray | Pro. |
| | absorption spectroscopy | 110. |
| 9 | Kathryn Ledbetter, Stanford University | Chem. |
| | Time-Resolved X-ray Diffuse Scattering as a Probe of Site-Specific Solvation | Pro. |
| 10 | Kohei Yamagami, Institute for Solid State Physics, University of Tokyo | Elect. St. |
| | Local 3d electronic states of trinuclear Ni-Rh complexes probed by X-ray absorption | |
| | spectroscopy | |
| 11 | Cheng-Tai Kuo, SLAC National Accelerator Laboratory | Elect. St. |
| | Determination of atomic-layer-resolved composition and electronic structure of quasi- | |
| | two-dimensional quantum materials using standing wave-excited photoemission | |
| 12 | Way-Faung Pong, Tamkang University | Elect. St. |
| | Strain effect on orbital and magnetic structures of Mn ions in epitaxial | |
| | Nd0.35Sr0.65MnO3/SrTiO3 films using X-ray diffraction and absorption | |
| 13 | Cheng-Maw Cheng, National Synchrotron Radiation Research Center | Elect. St. |
| | The Electronic Structure of Hybrid-nanostructure Comprised of 2D group V elements | |
| | and Topological Insulators | FI . C. |
| 14 | Daisuke Shiga, Tohoku University | Elect. St. |
| 15 | Emergence of Metallic Monoclinic States of VO2 Films Induced by K Deposition | |
| 15 | Takuto Nakamura, Osaka University Spin-polarized quasi-one-dimensional metallic surface electronic state of | Elect. St. |
| | Bi/GaSb(110)-(2×1) | |
| 16 | Egecan Cogulu, New York University | Elect. St. |
| 10 | Antiferromagnetic Domains in Thin Nickel Oxide Films and the Effect of Spin-Orbit | Licet. St. |
| | Torques | |
| 17 | David Kilcoyne, Advanced Light Source, LBNL | Instr. |
| | A New Scanning Transmission X-ray Microscope at Bending Magnet Beamline 5.3.2.2 | |
| | at the Advanced Light Source | |
| 18 | Justin Cooper, Andor Technology | Instr. |
| | Custom High Sensitivity CCD and sCMOS Detectors for High Harmonic Generation, X- | |
| | Ray Absorption Spectroscopy and Soft X-Ray Microsopy/Tomography | |
| 19 | Hendrik Ohldag, Lawrence Berkeley National Laboratory | Instr. |
| | The BL 11.0.2 STXM at the Advanced Light Source – Status and future Developments | |
| 20 | Venera Weinhardt, Centre of Organismal Studies, University of Heidelberg, Germany | Instr. |
| | Multi scale resolution for soft x-ray tomography of single cells | |
| 21 | Simone Finizio, Paul Scherrer Institut | Mater. |
| | Sub-100 ps time-resolved imaging at the PolLux endstation of the Swiss Light Source | Sci. |
| 22 | Mungo Frost, SLAC National Accelerator Laboratory | Mater. |
| | X-ray Diffraction on High Pressure – High Temperature Lithium | Sci. |
| 23 | Thomas Chasse, University of Tuebingen, Germany | Mater. |
| | Beyond pentacene — Hexacene films on Au(110) and Cu(111)-p(2x1)O | Sci. |
| 24 | Dah-An Luh, Department of Physics, National Central University, Taiwan | Mater. |
| | Investigating the surface evolution of the ex-situ grown Cu/mica films with heat | Sci. |
| | treatment | |

| Poster | Presenter, Affiliation | Tonic |
|--------|---|---------|
| ID | Title | Topic |
| 25 | Daisuke Asakura, AIST | Mater. |
| | Operando soft X-ray absorption spectroscopy of Li-ion-battery electrode materials using an all-solid-state cell | Sci. |
| 25 | Shibo Xi, Institute Of Chemical And Engineering Sciences, A*STAR | Mater. |
| | Insertion of Atomic Zn inside the MWW Structure as Revealed by a Combined XAFS and DFT Study | Sci. |
| 26 | Tsun-Kong (T.K.) Sham, Western University | Mater. |
| | Ti K-edge XAFS, RIXS and RXES studies of a micro crystal of TiS3 with a micro beam | Sci. |
| 27 | Matteo Jugovac, Forschungszentrum Julich, PGI-6 | Mater. |
| | Carbon dissolution and recondensation drives graphene epitaxial alignment on cobalt | Sci. |
| 28 | Yu-Ling Lai, National Synchrotron Radiation Research Center | Mater. |
| | Doping Effect of Lead(II) Thiocyanate (Pb(SCN)2) in Mixed Cation FA0.9Cs0.1PbI3 Perovskite Solar Cells | Sci. |
| 29 | Kennosuke Tanaka, Ritsumeikan University | Mater. |
| | Molecular orientation analysis of C8-BTBT Thin Film by X-ray absorption spectroscopy | Sci. |
| 30 | Amélie Ferré, LP3 university Aix Marseille | Sources |
| | Phase contrast imaging with laser-produced hard X ray source in relativistic intensity | |
| | regime at 100Hz | |
| 31 | Wataru Utsumi, National Institutes for Quantum and Radiological Science and | Sources |
| | Technology, Japan | |
| | A new plan for 3 GeV synchrotron radiation facility in Japan | |
| 32 | Angelika Chassé, Martin Luther University Halle-Wittenberg | Theory |
| | X-ray Absorption Spectroscopy and XMCD of Spinel/Perovskite Heterostructures | |

Poster Session 4: Tuesday, July 2ndst, 2019 – 15:00 – 16:30

| Poster | Presenter, Affiliation | Tonic |
|--------|--|-------|
| ID | Title | Topic |
| 1 | Mewael Giday Sertsu, Helmholtz Zentrum Berlin (HZB) | AMO |
| | High performance Beryllium-containing multilayers for EUV and soft X-ray applications | |
| 2 | Toru Tsujibayashi, Department of Physics, Osaka Dental University | AMO |
| | Photoelectron spectroscopic study of photo-induced valence change of sulfur in L- | |
| | cysteine thin films on silver surfaces grown in saliva-emulated aqueous solution | |
| 3 | Alexander Perry-Sassmannshausen, Justus-Liebig-Universität Gießen | AMO |
| | Near-K-edge double and triple detachment of the F- negative ion: observation of direct | |
| | 1s + 2p two-electron ejection by a single photon | |
| 4 | Abdul Rahman Abid, University of Oulu, Finland | AMO |
| | Photoelectron - photoion coincidence study of Avobenzone | |
| 5 | Katharina Majer, ETH Zuerich, Switzerland | AMO |
| | Valence Photoionization of Thymine: Threshold Photoelectron Spectrum and | |
| | Dissociative Photoionization studied with Photoelectron Photoion Coincidence | |
| | (PEPICO) Spectroscopy | |
| 6 | Christin Buechner, LBNL | Chem. |
| | Reactivity at the solid/liquid interface of a desalination model system | Proc. |
| 7 | Bo-Hong Liu, Lawrence Berkeley National Lab | Chem. |
| | Copper Corrosion Inhibition Investigated on the Molecular Scale Using APXPS | Proc. |

| Poster | Presenter, Affiliation | Topic |
|--------|--|---------|
| 8 8 | Title Voi Mitsubara Ditsumoikan University | Chem. |
| 0 | Kei Mitsuhara, Ritsumeikan University Electronic state modification of Cu nanoparticles on rutile TiO2(110) by oxygen | Proc. |
| | exposure | FIUC. |
| 9 | Friedrich Roth, TU Bergakademie Freiberg | Electr. |
| 9 | Direct observation of femtosecond charge transfer dynamics in organic | Str. |
| | heterojunctions using a Free-Electron Laser | 301. |
| 10 | Kaan Atak, Deutsches Elektronen-Synchrotron DESY, Germany | Electr. |
| 10 | Electronic Structure of Aqueous Co[bpy3]2+/3+ Complexes | Str. |
| 11 | Toyohiko Kinoshita, Japan Synchrotron Radiation Research Institute (JASRI) | Electr. |
| | Quantitative analysis of energy loss process for the core level intensities in Hard X-ray | Str. |
| | Photoemission | 0 |
| 12 | Ki-jeong Kim, Pohang Accelerator Laboratory | Electr. |
| | Mechanistic and Enhanced Catalytic Activity Study of Hexagonal Graphene Onion | Str. |
| | Rings Grown on an SiC(0001) | |
| 13 | Sang Wan Cho, Yonsei University | Electr. |
| | The origin of metal-insulator transition of WO3 thin film depending on growth | Str. |
| | conditions | |
| 14 | Jun Fujii, CNR-IOM Trieste | Electr. |
| | Oxygen-induced surface states on Cu(110) | Str. |
| 15 | Miho Kitamura, KEK-IMSS-PF | Electr. |
| | Mechanism of charge transfer phenomena in perovskite-oxide interfaces | Str. |
| 16 | Shih-Chieh Lin, UC Davis | Electr. |
| | Interface properties and built-in potential profile of a LaCrO3/SrTiO3 superlattice | Str. |
| | determined by standing-wave excited photoemission spectroscopy | |
| 17 | Yoshinori Shibagaki, Graduate School of Engineering, Osaka Prefecture University | Electr. |
| | Fe electronic structure of Cr2O3 thin film/cold-rolled steel investigated by resonant | Str. |
| | hard x-ray photoemission spectroscopy | |
| 18 | Osman Karslioglu, Fritz-Haber-Institut, Berlin | Instr. |
| | Recent developments in standing-wave ambient-pressure photoemission: efficient | |
| | structure optimization | |
| 19 | Jun Miyawaki, Institute for Solid State Physics, the University of Tokyo | Instr. |
| | Design Concept of Single-meV Resolution Soft X-ray RIXS Spectrometer | |
| 20 | Htoshi Osawa, JASRI@spring8 | Instr. |
| | Development x-ray chopper systems for time-resolved experiments | |
| 21 | Jaeyoung Kim, Institute for basic science | Instr. |
| | The performance of new Spin-ARPES beamline for CALDES at PLS | |
| 22 | Marten Patt, Scienta Omicron GmbH, Germany | Instr. |
| | NanoESCA III: Recent Progress and Momentum Microscopy Applications | |
| 23 | David Kilcoyne, Advanced Light Source, LBNL | Instr. |
| | A Compact Resonant Soft X-ray Spectroscopy (C-RSoXS) Instrument for In-situ/In- | |
| | operando Studies at the ALS | |
| 24 | Yu-Cheng Shao, Advanced Light Source, Lawrence Berkeley National Laboratory | Mater. |
| | Understanding the emergence of long-range spin order in Mn-doped Ruthenate | Sci. |
| | Sr3(Ru,Mn)2O7 using momentum-resolved RIXS spectroscopy | |
| 25 | Jinpeng Wu, Advanced Light Source, Lawrence Berkeley National Lab | Mater. |
| | Anionic Redox in Batteries Studied by Full-Energy-Range mapping of RIXS | Sci. |

| Poster | Presenter, Affiliation | Tonic |
|--------|---|---------|
| ID | Title | Topic |
| 26 | Noritake Isomura, Toyota Central R&D Laboratories, Inc. | Mater. |
| | Differential electron yield EXAFS: A method for the local structure analysis of low-Z elements | Sci. |
| 27 | Koji Horiba, KEK-IMSS-PF | Mater. |
| | Transmission soft x-ray absorption spectroscopy on Li-ion-battery materials | Sci. |
| 28 | Young-Sang Yu, Advanced Light Source, Lawrence Berkeley National Lab | Mater. |
| | Vector imaging of magnetic structures with soft X-ray spectro-ptychography | Sci. |
| 29 | Roman Adam, Research Centre Jülich | Mater. |
| | Exploring mechanisms behind optically induced magnetization reversal in [Co/Pt]N multilayers | Sci. |
| 30 | Catherine Conlon, University of California, Davis | Mater. |
| | Hard x-ray standing-wave photoemission insights into the structure of an epitaxial Fe/MgO multilayer magnetic tunnel junction | Sci. |
| 31 | Kennosuke Tanaka, Ritsumeikan University | Mater. |
| | Molecular orientation analysis of C8-BTBT Thin Film by X-ray absorption spectroscopy | Sci. |
| 32 | Kenneth Ainslie, University of California, Davis, CA | Mater. |
| | Controlling shape memory effects in NiTi thin films grown on Ru seed layer | Sci. |
| 34 | Shigemi Sasaki, Advanced Photon Source, Argonne National Laboratory | Sources |
| 25 | Design and Expected Performance of xLEAP-II Wiggler for LCLS-II | • |
| 35 | Antje Vollmer, Helmholtz Zentrum Berlin fuer Materialien und Energie HZB BESSY II – Germany's dedicated soft X-ray user facility today and in the future | Sources |

