V

Workshops

UVSOR Symposium 2017

Date: October 28-29, 2017
Place: Okazaki Conference Center

October 28th (Sat.)

< Session 1, Chair: **M. Katoh** >

13:00 – 13:05 Opening remarks
M. Fujimoto (UVSOR)

13:05 – 13:25 Present Status of UVSOR and Oher Synchrotoron facilities in Japan and the World
N. Kosugi (UVSOR)

13:25 – 13:45 Optical Vortex from a Helical Undulator at UVSOR-III
M. Hosaka (Nagoya Univ.)

13:45 – 14:05 Development of Analytical Method of Extraterrestrial Organic Materials Using Synchrotron Radiation for Analysis of Hayabusa2 Returned Samples
M. Uesugi (JASRI)

14:05 – 14:25 Coffee Break

14:25 – 15:30 Poster Short Presentation

< Session 2, Chair: **K. Tanaka** >

15:30 – 15:50 Study on Band Structures of 3d-transition Metal Doped AlN Films for Highly Efficient Artificial Photosynthesis Devices
S. Imada (Kyoto Institute of Technology)

15:50 – 16:20 [invited] Observing Two-dimensional Materials Using Synchrotron Radiation: Crucial Role of Photoemission Spectroscopy in Silicene Research
Y. Yamada-Takamura (JAIST)

16:20 – 18:30 Poster Session

18:30 – 20:00 Banquet

October 29th (Sun.)

< Session 3, Chair: **H. Iwayama** >

9:00 – 9:20 Electronic Structure of Detwinned $Ba_{1-x}K_xFe_2As_2$ Using Angle-Resolved Photoemission Spectroscopy
S. Ideta (UVSOR)

9:20 – 9:40 Charge Transport in Organic Semiconductor Crystal: Impacts of Electron–phonon Coupling
S. Kera (IMS)

9:40 – 10:00 Electronic States of Topological Line-node Semimetals Studied by High Resolution ARPES
D. Takane (Tohoku Univ)

10:00 – 10:20 Coffee Break

< Session 4, Chair: **T. Ohigashi** >

10:20 – 10:40 Local Structure Observation of Aqueous Salt Solutions by Soft X-ray Absorption Spectroscopy
H. Yuzawa (IMS)

10:40 – 11:00 Mars Surface Conditions Deduced from Alteration Products in Martian Meteorites
M. Miyahara (Hiroshima Univ.)

11:00 – 12:00 Discussion and closing remarks

< Poster Presentation >

P01 Molecular Orientation of Schiff Base Ni(II), Cu(II), Zn(II) Binuclear Complexes in PVA Films by Optical Vortex UV Light Irradiation
T. Soejima (Tokyo Univ. of Science)

P02 Measurement of 2D Isotope Distribution by LCS Gamma-ray 2
H. Zen (IAE, Kyoto Univ.)

P03 Optical Activation of Amino Acids by Circularly Polarized Light Irradiation
K. Matsuo (HiSOR, Hiroshima Univ.)

P04 In-situ XAFS Measurements of Manganese Oxide Oxygen Evolution Catalysts
M. Yoshida (Keio Univ.)

P05 Elucidation of the Role of Phosphate and Borate Ions Adsorbing Onto Cobalt Oxygen Evolving Catalysts by in-situ Observations
H. Kurosu (Keio Univ.)

P06 Effect of the Addition of Organic Molecules to Cobalt Oxide Electrocatalyst for Oxygen Evolution and its Elucidation of the Function
T. Hiue (Keio Univ.)

P07 Local Structures of Aqueous Solutions Studied by Soft X-ray Absorption Spectroscopy
M. Nagasaka (IMS)

P08 Advanced Analyses in Scanning Transmission X- ray Microscopy at UVSOR- III Synchrotron
T. Ohigashi (UVSOR)

P09 Detail Investigation to Carbonaceous Materials in the Allende CV3 Meteorite Using Microscopic Methods Based on STXM
H. Suga (Hiroshima Univ.)

P10 Feasibility Study of Sulfur Speciation High-spatial Resolution Mapping in Extraterrestrial Organics by STXM-XANES
M. Ito (Kochi Inst. for Core Sample Res., JAMSTEC)

P11 Electronic Structure of a Bi Atomic Chain on Low Symmetric InAs (110) Surface
T. Nakamura (Osaka Univ.)

P12 Experimental Observation of Electronic Structure of SmO Thin Film Studied by Photoemission Spectroscopy
Y. Sakai (Nagoya Institute of Technology)

P13 Band Dispersion of Bi_2Te_3 with Mn and Te Deposition and its Temperature Dependence
K. Yokoyama (Tokyo Institute of Technology)

P14 Observation of Four-fold Rotational Symmetry Breaking in a Pseudogap Phase of the Cuprate Superconductor Bi2212 Using ARPES
S. Nakata (Univ. of Tokyo)

P15 Site-specigic Production of H_3^+ by Core Ionization of CH_3Cl
H. Fujise (UVSOR, The Graduate Univ. for Advanced Studies)

P16 Molecular Orientation and Electronic States of Thin Film of Phenanthro-dithiophene Derivatives on Au(110)
S. Ouchi (Chiba Univ.)

P17 The Evolution of Aggregation Structure and Electronic State Depending on Annealing Time and Temperature of $SnCl_2Pc$
C. Numata (Chiba Univ.)

P18 Electronic Structure and Magnetic Properties of a Topological Insulator/magnetic Insulator Ultrathin Film Heterostructure
Y. Okuyama (Tokyo Institute of Technology)

P19 Observation of Dirac Cone in $NiTe_2$ by Angle Resolved Photoelectron Spectroscopy
M. Nishino (Osaka Univ.)

P20 Electronic Structure of $Sr_{1-x}Ca_xFe_2(As_{1-y}P_y)_2$ (x = 0.08, y = 0.25) Revealed by Angle Resolved Photoemission Spectroscopy
T. Adachi (Osaka Univ)

P21 Resonant Scattering Phenomena of an Electron Excited from the Graphite Surface Affected by the Organic Monolayer
T. Yamaguchi (IMS, The Graduate Univ. for Advanced Studies)

P22 Systematic Angle-resolved Photoemission Study of the Phase Transition in the Electronic Structure of $(TMTTF)_2X$
T. Ito (SRRC, Nagoya Univ.)

P23 The Bandgap Energy and Optical Properties of Ce-doped $(Gd, La, Y)_2Si_2O_7$ Scintillator
T. Horiai (IMR, Tohoku Univ.)

P24 XMCD Study of Ferro Orbital Ordered System: FeV_2O_4
J. Okabayashi (Univ. of Tokyo)

P25 Vacuum Ultra-Violet Absorption Spectra of Amorphous Compound Semiconductors
K. Hayashi (Gifu Univ.)

P26 Anisotropic Metal-to-Insulator Transition of RuAs Probed by Polarized Infrared Spectroscopy
Y. Nakajima (Osaka Univ.)

P27 Establishment of Infrared Microscopic Imaging Method by Concentration of Aspartic Acid
J. Hibi (Osaka Univ.)

P28 Infrared Absorption of Trapped Electron Centers in $Ce:Gd_XLu_{3-X}Al_2Ga_3O_{12}$ Crystals
T. Yagihashi (Yamagata Univ.)

P29 Visualizing Hidden Electron Trap Levels in GAGG:Ce Crystals
M. Kitaura (Yamagata Univ.)

P30 Study on Band Structures of 3d-transition Metal Doped AlN Films for Highly Efficient Artificial Photosynthesis Devices
N. Tatemizo (Kyoto Institute of Technology)

Beam Physics 2017 and Young Researchers Meeting
IMS Workshop "New Applications of Quantum Beam to Material and Life Science"

Date: November 16-18, 2017

Place: Okazaki Conference Center

November 16th (Thu.)

12:50 – 13:00 Opening remarks
M. Katoh (UVSOR)

< General session 1, Chair: **M. Katoh** (UVSOR) >

13:00 – 13:30 Electron Orbit Analysis in Standing-wave Cavity at Low Energy Region
T. Miyajima (KEK)

13:30 – 14:00 Investigation of Multibeam Operation with CW Superconducting Linear Accelerator
M. Shimada (KEK)

14:00 – 14:30 Numerical Analysis of Interaction between Electron Bunches and Double RF System Using Macro Particle Method and Semi-analytical Method
N. Yamamoto (KEK)

14:30 – 15:00 Optimization of Beam Shape by Emittance Exchange
M. Kuriki (Hiroshima Univ.)

15:00 – 15:15 Coffee Break

< Special session 1, Chair: **S. Miyamoto** (Univ. of Hyogo) >

15:15 – 16:00 [invited] New Development of Muon Science
Y. Miyake (KEK)

16:00 – 16:30 Recent Status of STXM in UVSOR
T. Ohigashi (UVSOR)

16:30 – 16:45 Coffee Break

< Special session 2, Chair: **Y. Takashima** (Nagoya Univ.) >

16:45 – 17:30 [invited] Slow Positron Generation and Application at Slow Positron Facility of KEK
T. Hyodo (KEK)

17:30 – 18:15 [invited] One-shot Imaging Cryo Electron Microscope Realized with Electron Beam Innovation by GaN Semiconductor
T. Nishitani (Nagoya Univ.)

18:30 – 20:30 Banquet

November 17th (Fri.)

< Special session 3, Chair: **S. Kashiwagi** (Tohoku Univ.) >

9:00 – 9:30 Generation of Optical Vortex by Synchrotron Radiation
M. Hosaka (Nagoya Univ.)

9:30 – 10:15 [invited] New Development of Electron Beam Carrying Orbital Angular Momentum
A. Saitoh (Nagoya Univ.)

10:15 – 10:30 Coffee Break

< Special session 4, Chair: **T. Miyajima** (KEK) >

10:30 – 11:00 Pinpoint Damage Method of Organelle with Small Generator of Ion Microbeam Using Glass Capillary
T. Ikeda (RIKEN)

11:00 – 11:30 New Development of Material Science by Infrared Free Electron Laser
A. Irizawa (Osaka Univ.)

11:30 – 12:00 Demonstration of Isotope CT Imaging by Measurement of Nuclear Resonance Fluorescence Absorption of Quasi-monochromatic Gamma-ray
H. Zen (Kyoto Univ.)

12:00 – 13:00 Lunch

< General session 2, Chair: **M. Kuriki** (Hiroshima Univ.) >

13:00 – 13:30 Laser Stripping Injection for the Next Generation High-intensity Proton Accelerator
H. Harada (J-PARC)

13:30 – 14:00 Development of Neutron Beam Source for Plasma Heating in NIFS
M. Kisaki (NIFS)

14:00 – 14:30 Realization of Muon RF Linear Acceleration
M. Otani (KEK)

14:30 – 15:00 Laser-driven Ion Acceleration
Y. Sakaki (QST)

15:00 – 15:15 Coffee break

< General session 3, Chair: **M. Hosaka** (Nagoya Univ.) >

15:15 – 15:45 LUCX Pre-bunched e-beam Generation and Its Application to THz Experimental Studies
A. Alexander (KEK)

15:45 – 16:15 Generation of CEP-stabilized Several Cycle Optical Pulse in FEL Cavity
R. Hajima (QST)

16:15 – 16:45 Science of Small SR Ring and Next Light Source at HiSOR
K. Kawase (Hiroshi Univ.)

16:45 – 17:30 [Invited] Introduction of the Newly Established Tabletop Synchrotron Radiation Center and Research on Active Hydrogen Water
H. Yamada (Ritsumeikan Univ.)

17:30 – 17:40 Closing remarks
R. Hajima (QST.)

18:00 – 21:00 Banquet

[Opening Ceremony of Young Researchers Meeting & Laboratory Introduction]

Chair: **K. Sakagami** (Waseda Univ.)

November 18th (Sat.)

< Young session 1, Chair: **N. Yamamoto** (KEK) >

9:00 – 9:15 Research on High Durability NEA-GaAs Cathode
K. Masaki (Waseda Univ.)

9:15 – 9:30 Design Study of Electron-driven ILC Positron Source
H. Nagoshi (Hiroshima Univ.)

9:30 – 9:45 Development of Fresnel-type Pinpoint Laser Sighting Method for Cell Irradiation by Glass Capillary
K. Sato (Toho University)

9:45 – 10:00 Development of Laser Microbeam Pinpoint Irradiation Method with Glass Capillary Optics: Mesurement of Beam Power Density Distribution
H. Hirose (Toho Univ.)

10:00 – 10:15 Study of THz-wave Generation Target by Coherent Cherenkov Radiation
T. Yuichi (Waseda Univ.)

10:15 – 10:30 Sub-picosecond Bunch Length Measurement Using Cherenkov Radiation from Low Refractive Silica Aerogel Thin Film
Y. Saito (Tohoku Univ.)

10:30 – 10:45 Coffee break

< Young session 2, Chair: **H. Zen** (Kyoto Univ.) >

10:45 – 11:00 Irradiation Effect Evaluation of PαMS Short Pulse Electron Beam Pulse Radiolysis
T. Uchida (Waseda Univ.)

11:00 – 11:15 Development of Laser System for Crab Crossing Laser-Compton Scattering
R. Morita (Waseda Univ.)

11:15 – 11:30 Measurement of Photonuclear Reaction Neutron by LCS Gamma-ray
Y. Morimoto (Univ. of Hyogo)

11:30 – 11:45 Generation of Laser Compton Scattering Gamma-ray and Material Research Using Pair Production Positron
K. Sugita (Univ. of Hyogo)

11:45 – 12:00 Experimental Study on Beam Kinematics in Harmonic Cavity of UVSOR
J. Hasegawa (Nagoya Univ.)

12:00 – 12:15 Development of Laser Driven Ion Beam Diagnostic System with Photostimulable Phosphor detector - Aiming for Ion Estimation by Machine Learning Method
T. Miyahara (Kyushu Univ.)

12:15 – 13:00 Lunch

< Young session 3, Chair: **S. Matsuba** (Hiroshima Univ.) >

13:00 – 13:15 Evaluation of Wakefield Influence on Beam Dynamics in Bunch Compressor of Particle Accelerator
D. Tomita (Muroran Institute of Technology.)

13:15 – 13:30 Simulation Modeling of three-dimensional electromagnetic Field in cERL Injector Cavitiy
T. Hotei (SOKENDAI,)

13:30 – 13:45	Research on Nondestructive Beam Monitor for Longitudinal Measurement of Next Generation High-intensity Beam **K. Moriya** (J-PARC)
13:45 – 14:00	Investigation of Beam-intensity Dependence of Closed Orbit Distortion (COD) at J-PARC MR **A. Kobayashi** (J-PARC,)
14:00 – 14:15	Study on Endohedral Fullerene Production Using Laser Ablation Method **Y. Fujiwara** (NIFS)
14:15 – 14:30	Development of Stable High QE CsK_2Sb Cathode **L. Guo** (UVSOR)
14:30 – 14:45	Wavefront Observation of Vortex Radiation from Herical Undulator **M. Fujimoto** (UVSOR)
14:45 – 15:00	Study on Polarization-variable Coherent THz Radiation Generation from Crossed Undulator **H. Saito** (Tohoku Univ.)
15:00 – 15:10	Coffee break
15:10 – 15:20	Closing remarks of Young Reserchers Meeting
15:20 – 16:20	Facility tour

The 1st Research Meeting of Natural Vortex Photon Science

Date: May 26-27, 2017

Place: Okazaki Conference Center

May 26th (Fri.)

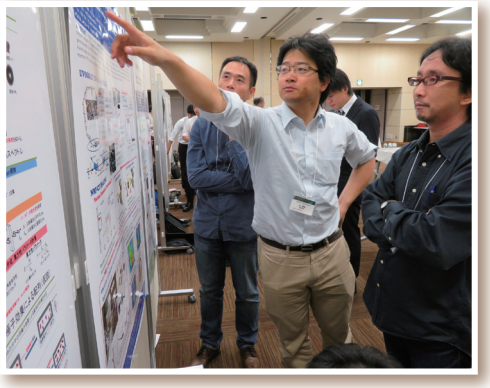
13:00 – 13:05	Opening Remarks **S. Tanaka** (Osaka Pref. Univ.)
13:05 – 13:35	Outline of New Natural Science Project Developed by Optical Vortex, Vortex Radiation Damping and Time Symmetry Violation **S. Tanaka** (Osaka Pref. Univ.)
13:35 – 14:05	Theory of Spontaneous Emission by Complex Eigenvalue Problem **K. Kamiyoshi** (Osaka Pref. University)
14:05 – 14:35	Vortex Photons from Electrons in Circular Motion **M. Katoh** (UVSOR)
14:35 – 14:50	Coffee break
14:50 – 15:20	Calculation of Angular Momentum of Field Using Multipole Expansion of Radiation Field from Relativistic Charged Particle **H. Kawaguchi** (Muroran Institute of Technology)
15:20 – 15:50	Wavefront Geometry from Maxwell Equation **D. Tarama** (Ritsumeikan Univ.)
15:50 – 16:20	Simulation of Optical Vortex Generated from Helical Undulator **M. Hosaka** (Nagoya Univ.)
16:20 – 16:35	Coffee break
16:35 – 17:05	Verification of Vorticity of Cyclotron Radiation and Enhancement of Intensity **S. Kubo** (NIFS)
17:00 – 17:35	Gamma-ray Vortex in Space Nuclear Physics **T. Hayakawa** (QST)
17:35 – 18:05	Compton Scattering by Gamma-ray Vortex **T. Maruyama** (Nihon Univ.)
18:05 – 18:35	Possibility and Problem of Nonlinear Compton Scattering Experiment at Kansai Photon Science Institute of QST **M. Kando** (QST)
19:00 – 21:00	Banquet

May 27th (Sat.)

9:00 – 9:30	Resonance Impurity State in Quantum Wire **H. Nakamura** (NIFS)

9:30 – 10:00	Research on EUV Vortex Interaction with Atom and Molecule **T. Kaneyasu** (SAGA-LS)
10:00 – 10:30	Flow Measurement by Doppler Absorption Spectroscopy Using Vortex Laser **S. Yoshimura** (NIFS)
10:30 – 11:00	Frequency Shift of Lamb Dip in Saturated Absorption Spectroscopy and Measurement of Beam-crossing Gas Flow **M. Aramaki** (Nihon Univ.)
11:00 – 11:15	Coffee break
11:15 – 11:45	Generation and Measurement of Asymmetric Structure with Optical Vortex and Circular Polarization as Excitation Light Source **M. Fujiki** (NAIST)
11:45 – 12:15	Azimuthal Structure Formation of Polymer by Vortex Synchrotron Radiation Irradiation **D. Tadokoro** (Kyoto Univ.)
12:15 – 12:45	Study on Biomolecule Structure with Synchrotron Radiation Circular Dichroism Spectroscopy and Expectation for Optical Vortex Source K. Matsuo (**HiSOR**)
12:45 – 12:50	Closing remarks **S. Kubo** (NIFS)
13:00 – 14:00	Facility tour

UVSOR Symposium 2017



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