

3rd Announcement

Co-located with

OPTICS & PHOTONICS International Exhibition

 **OPIE '24**

OPTICS & PHOTONICS International Congress **OPIC 2024**

22 – 26 April, 2024

Pacifico Yokohama, Japan

<https://opicon.jp/>

Online Program Available: 1 February 2024



Organized by



International Partners

SPIE.

PHOTONICS MEDIA

OPIC 2024 Technical Conferences

▶ALPS2024

The 13th Advanced Lasers and Photon Sources

Sponsored by: The Laser Society of Japan

Conference Chairs:



Hitoki Yoneda

The University of Electro-Communications, Japan



Ruxin Li

Shanghai Institute of Optics and Fine Mechanics, China

▶BFSS2024

Business and Finance in Sustainable Society 2024 –towards the expansion of photonics industry–

Sponsored by: The Graduate School for the Creation of New Photonics Industries

Conference Chair:



Rie H. Kang

The Graduate School for the Creation of New Photonics Industries, Japan

▶BISC2024

The 10th Biomedical Imaging and Sensing Conference

Sponsored by: SPIE

Conference Chairs:



Osamu Matoba

Kobe University, Japan



Yuan Luo

National Taiwan University



Yasuhiro Awatsuji

Kyoto Institute of Technology, Japan



Izumi Nishidate

Tokyo University of Agriculture and Technology, Japan

▶HEDS2024

International Conference on High Energy Density Science 2024

Sponsored by: Institute of Laser Engineering, Osaka University

Conference Chairs:



Ryosuke Kodama

Osaka University, Japan



Takayoshi Sano

Osaka University, Japan

▶ICNN2024

International Conference on Nano-photonics and Nano-optoelectronics 2024

Sponsored by: Institute for Nano Quantum Information Electronics, The University of Tokyo

Conference Chair:



Yasuhiko Arakawa

The University of Tokyo, Japan

▶IP2024

Information Photonics 2024

Sponsored by: The Optical Society of Japan

Conference Chairs:



Yoshio Hayasaki

Utsunomiya University, Japan



Stephan Reichelt

University of Stuttgart, Germany



Jae-Hyeung Park

Inha University, Korea

▶LDC2024

Laser Display and Lighting Conference 2024

Sponsored by: The Optical Society of Japan

Honorary Chair:



Kazuo Kuroda

The University of Tokyo, Japan

Conference Chairs:



Hiroshi Murata

Mie University, Japan



Fergal Shevlin

DYOPTYKA, Ireland

▶LEDIA2024

The 10th International Conference on Light-Emitting Devices and Their Industrial Applications

Conference Chair:



Hiroshi Amano

Nagoya University, Japan

►LSC2024

Conference on Laser and Synchrotron Radiation Combination Experiment 2024

Sponsored by: Institute of Laser Engineering, Osaka University

Conference Chair:



Toshihiko Shimizu
Osaka University, Japan

►LSSE2024

Laser Solution for Space and the Earth 2024

Sponsored by: The Executive Committee of Laser Solution for Space and the Earth

Conference Chair:



Satoshi Wada
RIKEN

►OMC2024

The 11th Optical Manipulation and Structured Materials Conference

Sponsored by: SPIE

Conference Chairs:



Takashige Omatsu
Chiba University, Japan



Kishan Dholakia
University of St. Andrews, UK



Sile Nic Chormaic
Okinawa Institute of Science and Technology Graduate University, Japan

►OPTM2024

Optical Technology and Measurement for Industrial Applications Conference 2024

Sponsored by: SPIE, Technical Committee for Mechano-Photonics, The Japan Society for Precision Engineering

Conference Chairs:



Takeshi Hatsuzawa
Tokyo Institute of Technology, Japan



Rainer Tutsch
Technische Universität Braunschweig, Germany



Toru Yoshizawa
NPO 3D Associates, Japan



Yukitoshi Otani
Utsunomiya University, Japan

►OWPT2024

Optical Wireless and Fiber Power Transmission Conference 2024

Sponsored by: The Laser Society of Japan Study Group of Optical Wireless Power Transmission

Conference Chairs:



Tomoyuki Miyamoto
Tokyo Institute of Technology, Japan



Motoharu Matsuura
The University of Electro-Communications, Japan

►SLPC2024

The 5th Smart Laser Processing Conference

Sponsored by: Japan Laser Processing Society

Conference Chair:



Masahiro Tsukamoto
Osaka University, Japan

►TILA-LIC2024

Tiny Integrated Laser and Laser Ignition Conference 2024

Sponsored by: Micro Solid-State Photonics Association

Conference Chair:



Takunori Taira
RIKEN

►XOPT2024

International Conference on X-ray Optics and Applications 2024

Sponsored by: RIKEN SPring-8 Center, Osaka University Research Center for Precision Engineering, Technical Committee for Ultraprecision Machining of The Japan Society for Precision Engineering

Conference Chairs:



Tetsuya Ishikawa
RIKEN



Kazuto Yamauchi
Osaka University, Japan

OPIC 2024 Plenary Speakers

Wednesday, 24 April 2024, 4:15 PM-6:45 PM | Pacifico Yokohama Conference Center, Room 501+502



Bernard Kress

Director, XR Engineering, Google LLC
2023 President, SPIE

Optics and Photonics as key enabling technologies for smart glasses



Fatima Bencheikh

CEO & CTO, KOALA Tech Inc.

Organic semiconductor laser diode: challenges and perspectives



Markus Roth

Chief Science Officer and Founder, Focused Energy Inc.

Proton Fast Ignition as a path to commercial fusion energy

OPIC 2024 Invited Speakers

ALPS 2024

Lucia Caspani, *University of Strathclyde, Italy*

Towards quantum-enhanced nonlinear imaging

Matteo Clerici, *University of Insubria, Italy*

Towards quantum-enhanced THz sensing

Martin Divoký, *HiLASE Centre, Institute of Physics, Czech Academy of Sciences, Czech Republic*

Faraday isolation and harmonic conversion (2ω , 3ω) on high energy kilowatt laser Bivoj

Domenico Doria, *ELI-NP, Italy*

The latest experimental results on laser-driven particle acceleration at ELI-NP

Takuya Hasegawa, *Tohoku University, Japan*

Layered lanthanide molybdate phosphors: Control of morphology, crystal phase, and luminescence properties

Takuya Inoue, *Kyoto University, Japan*

Short-pulse High-power Photonic-crystal Surface-emitting Lasers

Masahiko Ishino, *National Institutes for Quantum Science and Technology (QST), Japan*

Soft X-Ray Laser Ablation Toward to Nanometer-Scale Depth Surface Patterning

Jason Jones, *The University of Arizona, USA*

Dual-Comb Spectroscopy from the IR to the Deep Ultraviolet for Characterization of Laser Plasmas

Igor Jovanovic, *University of Michigan, USA*

The ZEUS Scientific User Facility at the University of Michigan

Jungwon Kim, *KAIST, Korea*

It's the perfect timing for optical frequency combs

Mathias Hedegaard Kristensen, *University of Bordeaux, Denmark*

Terahertz Optical Rectification and Second-Harmonic Generation at the Surface of Nonlinear Crystals

Hsiang-Chieh Lee, *National Taiwan University, Taiwan*

Long-range imaging using swept-source OCT based on HCG-VCSEL

Xiaoming Lu, *Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China*

Terawatt-level $2.4\text{-}\mu\text{m}$ pulses based on Cr:ZnS chirped-pulse amplification

Alireza Marandi, *California Institute of Technology, USA*

Ultrafast Quadratic Nonlinear Nanophotonics: From Superior Components to Advanced Circuits

Masashi Miyata, *NTT Corporation, Japan*

Dispersion-engineered Metasurfaces Enabling High-sensitivity Image Sensors

Shunsuke Murai, *Kyoto University, Japan*

Engineering Photoluminescence with Nanoantennas

Shilie Pan, *Xinjiang Technical Institute of Physics & Chemistry, Chinese Academy of Sciences, China*

Fluorooxoborates: Novel Candidates for Deep-UV Nonlinear Optical Materials

Gregory B Rieker, *University of Colorado, USA*

Practical Dual Comb Spectroscopy to Improve Energy Systems: Navigating the Interfaces Between Science, Engineering, and Industry

John Sheil, *Advanced Research Center for Nanolithography (ARCNL), Ireland*

Modelling of laser-driven EUV source plasmas for nanolithography

Bao-Sen Shi, *University of Science and Technology of China, China*

Rydberg atom-based sensors for radio-frequency electric field measurement

Safumi Suzuki, *Tokyo Institute of Technology, Japan*

Milliwatt-class terahertz signal sources using resonant tunneling diodes

Eiji J. Takahashi, *RIKEN, Japan*

Next generation ultrafast laser for attosecond science

Takashi Tanaka, *RIKEN Spring-8 Center, Japan*

New concept toward realization of attosecond FELs and its experimental demonstration

Kenji Tanaka, *National Institute for Fusion Science, Japan*

Laser phase contrast imaging for the visualization of plasma fluctuations

Yoshiaki Tsujimoto, *National Institute of Information and Communications Technology, Japan*

Quantum operation using nonlinear interaction between single photons

Yoshihisa Yamaoka, *Komatsu University, Japan*

Development of photoacoustic microscopy for biomedical applications

Yongguang Zhao, *Jiangsu Normal University, China*

Single crystal fibers for direct amplification of femtosecond optical vortices

BFSS 2024

Keisuke Goda, *The University of Tokyo, Japan*

Special Session 2: Hurdles for SDGs/Social Problem-Solving University-launched start-ups entrepreneurs

Takahiro Ikeda, *Pi Photonics, Inc., Japan*

Special Session 2: Hurdles for SDGs/Social Problem-Solving University-launched start-ups entrepreneurs

Akira Kato, *Tokyo University of Science, Japan*

Special Session 1: A new financial system to realize a sustainable society

Hirokazu Kitahara, *Archetype Ventures, Japan*

Special Session 2: Hurdles for SDGs/Social Problem-Solving University-launched start-ups entrepreneurs

Yumiko Miwa, *Meiji University, Japan*

Special Session 1: A new financial system to realize a sustainable society

Susumu Noda, *Kyoto University, Japan*

Special Session 1: A new financial system to realize a sustainable society

Sachiyo Nomura, *Soka University, Japan*

Special Session 2: Hurdles for SDGs/Social Problem-Solving University-launched start-ups entrepreneurs

Nobuyuki Ogata, *Hosei University, Japan*

Special Session 2: Hurdles for SDGs/Social Problem-Solving University-launched start-ups entrepreneurs

Masaki Suwa, *OMRON Corporation, Japan*

Special Session 1: A new financial system to realize a sustainable society

Mari Yoshitaka, *Mitsubishi UFJ Research and Consulting Co., Ltd, Japan*

Special Session 1: A new financial system to realize a sustainable society

BISC 2024

Takuro Ideguchi, *The University of Tokyo, Japan*

Mid-infrared photothermal quantitative phase microscopy for label-free live-cell imaging

Hsiao-Chun Amy Lin, *National Tsing Hua University, Taiwan*

Non-invasive in vivo assessment of healthy tendon functions via Multispectral Optoacoustic Tomography

Dalip Singh Mehta, *Indian Institute of Technology Delhi, India, India*

Quantitative Phase Microscopy with Partially Spatially Coherent Light: Ultra-high Spatial Phase Sensitivity and Large Space Bandwidth Product

Tomomi Nemoto, *National Institute for Physiological Sciences, Japan, Japan*

Multi-photon Microscopy Enhanced by Manipulation of Excitation Laser Beam and its Application to Cellular Physiology

Sheng-Hao Tseng, *National Cheng-Kung University, Taiwan*

Quantitative Diffuse Reflectance Spectroscopy for Noninvasive Retrieval of Human Total Hb and HbA1c Contents

Masahito Yamanaka, *Osaka University, Japan, Japan*

Time-deterministic cryogenic optical microscopy with on-stage rapid freezing

HEDS 2024

Félicie Albert, *LLNL, USA*

Laser-driven x-ray sources for high energy density science at the Jupiter Laser Facility

Artem Bohdan, *Max Planck Institute for Plasma Physics, Ukraine*

Electron acceleration at oblique supernova remnant shocks

Mark C. M. Cheung, *CSIRO Space & Astronomy, Australia*

Testing Plasma Physics with Multi-wavelength Observations & Radiative MHD Simulations of Solar Flares

Andrea Ciardi, *Sorbonne University, Italy*

Shocks and energetic particles in weakly collisional plasmas

Nicholas Dover, *Imperial College London, UK*

Investigating ion acceleration at radiation pressure driven shocks using mid-IR lasers

Federico Fiúza, *Physics at Instituto Superior Técnico, Portugal*

Evgeny A Gorbunov, *KU Leuven, Russia*

Magnetorotational Instability in electron-ion plasma: Shearing-box simulations

Anna Grassi, *LULI, France*

TDB

Gianluca Gregori, *University of Oxford, UK*

Evidence of suppressed beam-plasma instability in a laboratory analogue of astrophysical pair jets

Yoshiyuki Inoue, *Osaka University, Japan*

Cosmic-Ray Activities in the Coronae of Active Supermassive Black Holes

Tsuyoshi Inoue, *Konan University, Japan*

PeV Cosmic Ray Acceleration in the Supernova Blast Wave: Kinetic-magnetohydrodynamic Simulations

Masanori Iwamoto, *Kyoto University, Japan*

Particle Acceleration Upstream of Relativistic Collisionless Shocks

Natsumi Iwata, *Osaka University, Japan*

Theoretical modelling of ion acceleration by kJ petawatt lasers with long-pulse and large-spot effects

Hantao Ji, *Princeton University, USA*

Electron Acceleration and Ion Acoustic Waves during Low-Beta Magnetic Reconnection using Laser-Powered Capacitor Coils

Tatsuya Kobayashi, *NIFS, Japan*

Spontaneous Plasma Confinement Transition in Magnetically Confined Fusion Plasmas

Hye-Sook Park, *LLNL, USA*

Study of astrophysical collisionless shocks in the laboratory

Bin Qiao, *Peking University, China*

Turbulence mediated electron acceleration in laser produced collisionless shock

Kentaro Sakai, *National Institute for Fusion Science, Japan*

Experimental Investigation on Magnetic Reconnection in Electron-Magnetized Plasmas with High-Power Lasers

Lee Suttle, *Imperial College London, UK*

Laboratory experiments of magnetic reconnection and magnetized shocks using a pulsed-power driver

Arno Vanthieghem, *Sorbonne University, Belgium*

Electron heating in high Alfvén Mach number collisionless shocks

Ryo Yamazaki, *Aoyama Gakuin University, Japan*

High-power laser experiment forming supercritical magnetized collisionless shocks

Weipeng Yao, *Ecole Polytechnique, China*

Laboratory investigation on particle energization through magnetized shocks and associated instabilities

Vladimir Zhdankin, *University of Wisconsin-Madison, USA*

Relativistic particle acceleration from kinetic plasma turbulence and instabilities

Takao Aoki, *Waseda University, Japan*

Nanofiber Cavity Quantum Electrodynamics Systems for Distributed Quantum Computing

Lei Bi, *University of Electronic Science and Engineering of China, China*

Nonreciprocal metasurfaces based on sub-wavelength magneto-optical meta-atoms

Xu Fang, *University of Southampton, China*

Controlling the optical vortex beam emission from a photonic chip

Shun Fujii, *Keio University, Japan*

Nonlinear optics and soliton frequency combs in ultrahigh-Q microresonators

Yidong Huang, *Tsinghua University, China*

On-chip Perceptual Technology with New Physical Mechanisms

Miyabi Imai-Imada, *RIKEN, Japan*

Atomic-scale investigation of photoelectric energy conversion in a single molecule

Kentaro Iwami, *Tokyo University of Agriculture and Technology, Japan*

All-dielectric metasurface for highly efficient wavefront manipulation

Yuichiro Kato, *RIKEN, Japan*

Van der Waals hybrid photonic devices

Rai Kou, *National Institute of Advanced Industrial Science and Technology, Japan*

Integration of heterogeneous photonic chiplets by μ -transfer printing

Otto L Muskens, *University of Southampton, Netherlands*

Development of the ultralow-loss phase change material $\text{Sb}_{2-\text{Se}_3}$ for non-volatile programming of nanophotonic devices

Stephan Reitzenstein, *Technische Universität Berlin, Germany*

Single quantum dot devices for photonic quantum technologies: Design, Deterministic Nanofabrication, and Application Perspectives

Winnie N. Ye, *Carleton University, Canada*

Silicon-based metamaterial antennas and optical phased arrays

IP 2024

David Blinder Blinder, *Vrije Universiteit Brussel, imec, Chiba University, Belgium*

Numerical models for ultrafast diffraction in light-in-flight holography

Hideaki Furukawa, *National Institute of Information and Communications Technology, Japan, Japan*

High-capacity Optical Networks Based on Spatial-Division Multiplexing Technologies

Boaz Jessie Jackin, *Kyoto Institute of Technology, India*

Polarization multiplexed holograms recorded on azo copolymer films for optical information processing

Genaro Saavedra, *Universitat de Valencia, Spain*

Novel architectures in structured illumination microscopy: 3D imaging improvement by cleverer irradiation

Chung-Hao Tien, *National Yang Ming Chiao Tung University, Taiwan*

Artificial Neural Network in Lensless Computational Imaging

Yeh-Wei Yu Yu, *National Central University/Department of Optics and Photonics, Taiwan*

Improving the optical efficiency of volume-holographic-optical-element based exit-pupil-expansion

Chao Zhang, *Shimane University, Japan*

Exploring the Potential of Light Detection and Ranging for Society 5.0

Chao Zuo, *Nanjing University of Science and Technology, China*

High-speed 3D imaging and metrology: from classical fringe projection to deep learning approaches

Kouichi Akahane, *NICT, Japan*

High-performance quantum dot lasers for optical fiber systems

Louise Bradley, *Trinity College Dublin, Japan*

Metasurfaces for reprogrammable beam-steering and light-matter interaction

Daniil Chepenko, *SpatialChat, Russia*

The effect of the online collaboration method in social presence

Brian Corbett, *Tyndall National Institute, University College Cork, Ireland*

MicroLEDs & Heterogeneous Integration: Enabling next-generation applications

Yasuaki Hirano, *Sharp Fukuyama Laser Co., Ltd, Japan*

Development of high power GaN laser diode and its applications

Hirokazu Ishii, *Exploratory Research Center on Life and Living Systems (ExCELLS), Japan*

All-pulsed two-photon STED microscopy for nanoscale tissue imaging

Keisuke Isobe, *RIKEN Center for Advanced Photonics, Japan*

Simultaneous multi-plane two-photon imaging and 4D optical manipulation

Terumasa Ito, *Tokyo University of Agriculture and Technology, Japan*

High-contrast Raman imaging using temporal filtering

Motoaki Iwaya, *Meijo University, Japan*

Fabrication of Stacked RGB Monolithic GaInN-based μ LED Arrays with Tunnel Junctions and Challenges for display Applications

Jinsoo Jeong, *Korea Electronics Technology Institute, Korea*

Holographic Technology for Augmented Reality Near-eye Display

Ryo Kato, *Tokushima University, Japan*

Mid-infrared chemical imaging using mid-infrared and visible lasers for biochemical analysis

Kiyoshi Kiyokawa, *NAIST, Japan*

Smart AR Glasses for Social Inclusion

Sunao Kurimura, *NIMS, Japan*

Quantum photon source for laser sensing and imaging

Nathan Christopher Palmquist, *University of California, Santa Barbara, USA*

Continuous-wave operation of long cavity III-nitride vertical-cavity surface-emitting lasers utilizing a top-side dielectric curved mirror

Jae-Hyeung Park, *Inha University, Korea*

Next generation MR 3D near eye display

Martin Pfennigbauer, *RIEGL Research Forschungsgesellschaft mbH, Austria*

Latest developments on Airborne LiDAR Bathymetry - technology and applications

Christoph Peter Josef Schmid, *ams-OSRAM International GmbH, Germany*

FMCW LiDAR system analysis - modeling & experiment

Yoshihisa Takayama, *Tokai University, Japan*

Research activities on free-space and underwater optical communications

Kenta Temma, *Osaka university, Japan*

Super-resolution microscopy for volumetric samples using nonlinear fluorescence responses via stepwise excitation

Naru Usukura, *Sharp Display Technology Corporation, Japan*

Novel highly efficient pancake optics for HMD named "Double path"

Qiong-Hua Wang, *Beihang University, China*

Holographic 3D display system with wide viewing angle and large size

Okudaira Yoshihiro, *VenusLaser inc., Japan*

New developments of laser beam application equipment From laser show content to bird prevention

LEDIA 2024

- Shigefusa F Chichibu, *Tohoku University, Japan*
Short-term degradation mechanisms of 275-nm-band AlGaIn quantum well deep-ultraviolet light emitting diodes fabricated on a sapphire substrate
- Koichi Goshono, *Toyoda Gosei, Japan*
Demonstration of stacked InGaIn full color monolithic micro LED display
- Shuhei Ichikawa, *Osaka University, Japan*
Combinational integration of Eu-doped GaIn and InGaIn LEDs and their prospects for miniaturization
- Ryousuke Ishikawa, *Tokyo city University, Japan*
Perovskite solar cells: Candidates as photoreceivers for optical wireless power transmission
- Kumiko Oguma, *The University of Tokyo, Japan*
Disinfection of Water using UV-LED
- Yoshiaki Saito, *Toyoda Gosei Co., LTD., Japan*
Technology development for long life and high efficiency DUV LEDs

LSC 2024

- Kosuke Fujiwara, *National Institutes for Quantum Science and Technology, Japan*
Applied Research using Synchrotron Mössbauer Source on BL11XU at SPring-8
- Ryo Fukaya, *Institute of Materials Structure Science, KEK, Japan*
Photoinduced non-equilibrium dynamics of magnetic orders in multiferroic manganites studied by time-resolved resonant soft X-ray scattering
- Masaki Hada, *University of Tsukuba, Japan*
Ultrafast time-resolved electron diffraction measurements revealing energy transfer at the interface of one-dimensional heterostructures
- Kenta Hagiwara, *Institute for Molecular Science, Japan*
Momentum microscopy with unique synchrotron radiation for spin and orbital characterization
- Shohei Imai, *University of Tokyo, Japan*
Theoretical proposal for Fourier-limited attosecond pulse generation from electrons in solids
- Nobuhisa Ishii, *National Institutes for Quantum Science and Technology, Japan*
Soft X-Ray High Harmonic Generation Using a High-Repetition-Rate, Intense, Few-Cycle Long-Wavelength Light Source
- Yuta Ishii, *Tohoku University, Japan*
Time- and space-resolved soft X-ray measurement for magnetization dynamics
- Hideaki Iwasawa, *National Institutes for Quantum Science and Technology, Japan*
Spin- and angle-resolved photoemission spectroscopy on Bi-based high-temperature cuprate superconductors
- Takeshi Kondo, *ISSP, University of Tokyo, Japan*
Fermi surface nesting driving the RKKY interaction in centrosymmetric skyrmion magnets.
- Fumitoshi Kumaki, *Institute of Materials Structure Science, KEK, Japan*
Observation of the photoreaction in the iron complex solution by time-resolved soft X-ray absorption spectroscopy in KEK-PF
- Kenta Kuroda, *Hiroshima University, Japan*
Visualization of optical polarization transfer to photoelectron spin vector emitted from a spin-orbit coupled surface state
- Shunsuke Kurosawa, *Tohoku University, Osaka University, Japan*
Comprehensive Study on Pyrosilicate Scintillators with Synchrotron Beam
- Satoshi Kusaba, *Yokohama National University, Japan*
Sum-frequency Excitation of Excitons and Phonons in van-der-Waals Semiconductor
- Takuya Matsubara, *Institute for Molecular Science, Japan*
High Density Rydberg Gas Produced by Picosecond Laser Pulses Toward Ultrafast Quantum Simulation

Hiroshi Mizuseki, *Korea Institute of Science and Technology, Japan*

- Ordered Structures in Group-III Nitrides: A First-principles Study**
- Kazutaka Nakamura, *Tokyo Institute of Technology, Japan*
Electronic coherence time in n-type gallium arsenide
- Shunsuke Nozawa, *Institute of Materials Structure Science, KEK, Japan*
Ultrafast Study of photocarrier dynamics in water splitting process by time resolved XAFS
- Jun Okamoto, *National Synchrotron Radiation Research Center, Taiwan, Japan*
O K-edge RIXS study of Os Electronic Structures in 5d 2⁺ Double Perovskite Ba₂CaOsO₆
- Marilou Cadatal Raduban, *Massey University, New Zealand, New Zealand*
Band structure modification through high pressure application for tunable luminescence in fluoride crystals
- Norimasa Sasabe, *Kumamoto University, Japan*
X-ray Magnetic Circular Dichroism for Antiferromagnets
- Goro Shibata, *Japan Atomic Energy Agency, Japan*
Scanning Transmission X-ray Microscope System at SPring-8 BL23SU RI Laboratory
- Takeshi Suzuki, *ISSP, University of Tokyo, Japan*
Ultrafast lattice dynamics of quantum materials studied by time-resolved X-ray diffraction measurements using X-ray free electron laser
- Clemens von Korff Schmising, *Max Born Institut, Berlin, Germany*
Ultrafast and ultrasmall: all-optical switching of magnetization
- Naotaka Yohikawa, *University of Tokyo, Japan*
Nonthermal melting of charge density wave in 3R-Ta₂S₂Se₂ induced by intense terahertz pulse excitation
- Yuichi Yokoyama, *Japan Synchrotron Radiation Research Institute, Japan*
Advancement of data analysis at SPring-8 by Synchrotron Radiation Data-driven-science Group
- Xi Yu, *Tokyo University of Science, China*
Terahertz components fabricated by femtosecond laser processing

LSSE 2024

- Hyojung Bae, *Photonics Energy Materials Research Center/Korea Photonics Technology Institute, Korea*
Solar to Hydrogen Conversion using 2D-g-C₃N₄/Cu₂O Nanowires Heterojunction Photocathode
- Munkhbat Batsaikhan, *Japan Atomic Energy Agency, Mongolia*
Fiber-coupled acoustic wave-assisted microchip LIBS system for elemental composition and surface imaging of nuclear fuel debris
- Thomas J Colvin, *NASA Office of Technology, Policy, and Strategy, USA*
Cost and Benefit Analysis of Orbital Debris Remediation
- Ayako Hada, *Shikoku Research Institute INC., Japan*
"iR Fresh TM", a technology for maintaining freshness of fruits and vegetables after harvest by irradiating with Near-Infrared Light
- Noboru Hasegawa, *QST Kansai, Japan*
Development and social implementations of laser hammering inspection for infrastructures
- Seigo Ito, *University of Hyogo, Japan*
Fabrication of Cot-Effective Carbon-Based Multiporous-Layered-Electrode Perovskite Solar Cells
- Kazuki Matsuo, *EX-Fusion Inc., Japan*
Contribution of Nanosecond Pulse Laser Development for the Capture and Removal of Space Debris
- Hiroshi Matsutaka, *RIKEN, Japan*
Porous Carbons using Metal-Organic Frameworks (MOFs) as Precursors for High Surface Area
- Tomoki Matsuyama, *RIKEN Center for Advanced Photonics, Japan*
Characterization of plant mutants using photonics technologies.

Hirokazu Mori, *WARPSpace CSO, Japan*

Free Space OptComm as a Solution for Further Growth of the Earth Observation Industry

Koichi Mori, *Osaka Metropolitan University, Japan*

Space Propulsion by Laser / Light Ablation for Space Debris Cleaning

Yuko Motizuki, *RIKEN Nishina Center, Japan*

First application of laser melting method to ice core sampling to study climate change

Tessui Nakagawa, *University of the Ryukyus, Japan*

Multiple options for energy storage by hydrogen storage material

Khanh Le Nguyen, *Faculty for Agricultural Technology, VNU University of Engineering and Technology, Viet Nam*

IMPACTS OF VARIED LED SPECTRA ON GROWTH AND BIOACTIVE COMPOUNDS SYNTHESIS IN SPINACH (*Spinacia oleacea* L.) DURING HYDROPONIC CULTIVATION IN A PLANT FACTORY.

Akihiko Nishimura, *Japan Atomic Energy Agency, Japan*

Research and Development of Heat Resistant FBG Sensors for Reactor Decommission and its Related Applications - version 2024

Satorori Nozawa, *Institute for Space-Earth Environmental Research, Nagoya University, Japan*

A study of the upper Mesosphere and lower Thermosphere with EISCAT_3D radar and sodium LIDAR

Hironori Ohba, *Japan Atomic Energy Agency, Japan*

Metal recovery from liquid wastes by pulsed laser-irradiation

Takafumi Sassa, *RIKEN, Japan*

Toward an elucidation of human judgment process in tunnel inspection for mechanization

Sakae Shibusawa, *Tokyo University of Agriculture, Japan*

Who Manage a Future of Agriculture?

Satoshi Tomoto, *CTI Engineering Co., Ltd., Japan*

Evaluation of damage level of concrete delamination or internal defects using wave energy of impactelastic waves observed by the laser remote sensing system

Morio Toyoshima, *National Institute of Information and Communications Technology, Japan*

Recent trends of space laser communications and the future for Beyond 5G/6G

Takuo T. Tsuda, *University of Electro-Communications, Japan*

A self-build FPGA-based system for optimizing Tromsø sodium lidar observations

Zhichuan J. Xu, *Nanyang Technological University, Singapore*

The origin of magnetization-caused increment in water oxidation

Taka-aki Yano, *Tokushima University, Japan*

Strong light-matter interactions at a nanometric metal tip for molecular sensing and control

Boon Siang Jason Yeo, *National University of Singapore, Singapore*

Operando Raman Spectroscopy of Electrochemical Processes

Takuo T. Tsuda, *University of Electro-Communications, Japan*

A self-build FPGA-based system for optimizing Tromsø sodium lidar observations

Zhichuan J. Xu, *Nanyang Technological University, Singapore*

The origin of magnetization-caused increment in water oxidation

Taka-aki Yano, *Tokushima University, Japan*

Strong light-matter interactions at a nanometric metal tip for molecular sensing and control

Boon Siang Jason Yeo, *National University of Singapore, Singapore*

Operando Raman Spectroscopy of Electrochemical Processes

OMC 2024

Peter Barker, *UCL London UK, UK*

Levitodynamic spectroscopy for single nanoparticle characterisation

Malcolm kadodwala Kadodwala, *University of Glasgow, UK*

Optical Orbital Angular Momentum Enables Dynamic Spatial Control of 2D Nanomaterial Properties

Yuan Luo, *National Taiwan University, Taiwan*

Advanced Optical Systems through Flat Optics for Biomedical Applications

Tyler W. Neely, *University of Queensland, Australia*

Customizing superfluid turbulence with vortex tweezers

Mary Jacqueline Romero, *University of Queensland, Australia*

Towards qudit quantum information processing on-chip using transverse modes

Min-Kyo Seo, *KAIST, Korea*

Utilizing optical anti-reflection and electromagnetic vacuum field interference in two-dimensional space

Quan Sheng, *Tianjian University China, China*

Laguerre-Gaussian mode laser generated directly from laser cavity with spherical aberration

Ken-ichi Yuyama, *Osaka Metropolitan University, Japan*

Single droplet formation with a focused near-infrared laser beam in the temperature responsive ionic liquid

OPTM 2024

Akiko Hirai, *National Metrology Institute of Japan (NMIJ) / Advanced Industrial Science and Technology (AIST), Japan*

Double-sided interferometer for precise thickness measurements

Mikio Kurita, *Graduate School of Science, Kyoto University, Japan*

A manufacturing system of large free-form optics

Jessica Onaka, *CORE, Utsunomiya University, Brazil*

Ultrasonically controlled liquid crystal lens evaluation through optical measurements

Atsushi Ono, *Shizuoka University, Japan*

Active plasmonics for dynamic color tuning

Tatsuki Otsubo, *Nagasaki University, Japan*

Development of a Triangulation-Based Laser Displacement Meter for On-machine Measurement

Zhang Song, *Purdue University, USA*

TBD

Shin Usuki, *Research Institute of Electronics, Shizuoka University, Japan*

Light field microscopy with improved resolution in 3D

OWPT 2024

John F. Geisz, *National Renewable Energy Laboratory, USA*

High-irradiance photoconversion using multijunction photovoltaic devices

Karin Hinzer, *University of Ottawa, Canada*

C-band Multi-Junction Photonic Power Converters: AI Techniques for Optimized Designs and Role of Luminescent Coupling

Paul Jaffe, *U.S. Naval Research Laboratory, USA*

The First Demonstration of Laser Power Beaming in Orbit

Takeo Maruyama, *Kanazawa University, Japan*

Optical Wireless Power Transmission for Moving Object using Image Recognition

Makoto Miyoshi, *Nagoya Institute of Technology, Japan*

Near-UV photoelectric transducers for OWPT systems based on GaInN multiple quantum-well structures

Joao Batista Rosolem, *CPQD - Research and Development Center in Telecommunications, Brazil*

Power-over-Fiber Applied for In-Flight Entertainment System

Arismar Cerqueira Sodré Junior, *National Institute of Telecommunications (Inatel), Brazil*

Wireless and Optical Convergent Access Towards 6G

Carmen Vázquez, *Universidad Carlos III de Madrid, Spain*

Power over Fiber as enabler in 6G optical fronthaul

Masaki Wada, *NTT Corporation, Japan*

Self-Power-Feeding Bi-directional Data Transmission using 125-µm Cladding Diameter 4-core Fiber

SLPC 2024

OlaL. A. Harrysson, *North Carolina State University, USA, Sweden*

Comparison of Different Laser Powder Bed Fusion Processes; Microstructure and Mechanical Properties

Markus Kogel-Hollacher, *Precitec GmbH & Co. KG, Germany*

Successful determination of the physical properties of a weld seam - how much information is buried in the sensor signals of a laser welding process?

Sergei A. Kulinich, *Tokai University, Canada*

Laser-Generated Nanomaterials for Gas Sensing

Takahiro Kunimine, *Kanazawa University, Japan*

Laser Cladding of WC-CrMnFeCoNi HEA Cemented Carbides

Alexander Laskin, *AdlOptica Optical Systems GmbH, Russia*

Spatter reduction by laser welding with multi-spot optics

Norikazu Mizuochi, *Institute for Chemical Research, Kyoto University, Japan*

Creation of NV centers by ultrashort laser irradiation

Daisuke Nakamura, *Kyushu University, Japan*

Laser welding of copper by high-power visible laser

Beat Neuenschwander, *Institute for Applied Laser, Photonics and Surface technologies ALPS, Bern University of Applied Sciences, Switzerland, Switzerland*

Ultra-Short Pulsed Laser Ablation of Metals with Burst Pulses: Concepts, Opportunities and Misconceptions

Susumu Noda, *Kyoto University, Japan*

Recent Progress of PCSELS for Laser Processing

Sukeharu Nomoto, *National Institute for Materials Science, Japan*

Numerical Microstructure Evolution for Laser Powder Bed Fusion Process by Lattice Boltzmann and Multi-Phase Field Methods

Andreas Ostendorf, *Ruhr University Bochum, Germany, Germany*

Ultrashort Pulsed Laser Processing in Liquids

Masaaki Sakakura, *Microsoft Research Cambridge, Japan*

Optical data recording in silica for the sustainable archival cloud storage

Steve Schmid, *The University of North Carolina at Charlotte, USA, USA*

TBD

Keisuke Takenaka, *Joining and welding research institute, Osaka university, Japan*

Formation of periodic nanostructures on medical polymer surface with femtosecond laser irradiation

Hiroyuki Wada, *Tokyo Institute of Technology, Japan*

Preparation of Functional Nanoparticles by Laser Processing in Liquid for Biomedical Application

TILA-LIC 2024

Mariastefania DE VIDO, *STFC Rutherford Appleton Laboratory, UK, Italy*

Development of in high energy DPSSL amplifier technology at the CLF and demonstration of stable, long-term operation of a DPSSL operating at 10 J, 100 Hz

Young Uk JEONG, *Korea Atomic Energy Research Institute-KAERI, South Korea, Korea*

Development and prospect of compact terahertz free electron lasers

Thomas J Kane, *Independent optical engineer, USA*

The Nonplanar Ring Oscillator at Forty

Franz KÄRTNER, *University of Hamburg, DESY, Hamburg, Germany, Germany*

TBD

Gerhard KROUPA, *Silicon Austria Labs (SAL) High Tech Campus Villach Europastraße 12 9524 Villach Austria, Austria*

Recent applications of the miniaturized HiPoLas ignition system

Ju Han LEE, *University of Seoul, South Korea, Korea*

Modeling of an Erbium-doped ZBLAN fiber laser including ion clustering

Qiang LI, *Beijing University of Technology, China, China*

Large core diameter crystal waveguide - a new device for high brightness solid-state lasers

Xavier MATEOS, *Universitat Rovira i Virgili, Spain*

Materials for Waveguide Lasers in the Visible

Fabian Rotermund, *KAIST, South Korea, Germany*

Ultrafast 1- μ m waveguide lasers and their phase noise and timing jitter characteristics

Tadatomo SUGA, *Meisei University, Japan*

Surface Activated Bonding for 3D and Heterogenous Integration at Room Temperature

Anna Suzuki, *Ruhr University Bochum, Germany, Japan*

Development of high-power ultrafast laser sources at 2.1 μ m wavelength

Takunori TAIRA, *RIKEN SPring-8 Center, Japan*

TBD

Ikuo WAKAIDA, *Japan Atomic Energy Agency, Japan*

"TILA" application in severe environments as a powerful tool for in-situ remote analysis of fuel debris in decommissioning of Fukushima Daiichi Nuclear Power Station

Jinwei Zhang, *Huazhong University of Science & Technology, China, China*

High power mode-locked thin-disk laser oscillator

Laurent FIMMER, *CNRS and CentraleSupélec and Université Paris Saclay, France*

Laser induced ignition and plasma spectroscopy using 10 kHz Nd:YAG lasers on spray facilities

XOPT 2024

Yong Song Chu, *National Synchrotron Light source II, USA*

Current and Near-Future Nanoscale X-ray Imaging Capabilities at NSLS-II

Zirui Gao, *National Synchrotron Light Source II, China*

High-throughput nanoscale ptychographic tomography achieved with rapid scanning microscopy instrument at HXN beamline

Manuel Guizar-Sicairos, *Paul Scherrer Institut, Switzerland*

Maik Kahnt, MAX IV Laboratory, Germany ptychography at MAX IV studying samples, beams and optics

Josep Nicolas, *ALBA Synchrotron Light Source, Spain*

Removal of systematic errors in metrology for ultra-accurate x-ray mirrors

Taito Osaka, *RIKEN SPring-8 Center, Japan*

Novel X-ray optics for SPring-8-II

Andrej Singer, *Cornell University, Germany*

Picosecond Volume Expansion in a nano-textured Mott Insulator

Yukio Takahashi, *Tohoku University, Japan*

X-ray Spectroscopic Ptychography: Current Status and Future Perspectives

Jingyi Tang, *SLAC National Accelerator Laboratory, China*

Active Q-switched X-Ray Regenerative Amplifier Free-Electron Laser

Kelin Tasca, *European XFEL, Brazil*

Overcoming challenges in the hard X-ray regime under high-heat load at EuXFEL: a diamond channel-cut monochromator as an alternative

Patrik Vagovic, *Deutsches Elektronen-Synchrotron, Slovakia*

MHz X-ray Multi-Projection Imaging

Jin Wang, *Advanced Photon Source, USA*

Manipulating Synchrotron X-ray Pulses with Picosecond Resolution

Meeting Schedule

Mon. 22, April	Tue. 23, April	Wed. 24, April	Thu. 25, April	Fri. 26, April
		Registration		
		ALPS		
		BFSS		
		BISC		
		HEDS		
		ICNN		
		IP		
		LDC		
		LEDIA		
		LSC		
		LSSE		
		OMC		
		OPTM		
		OWPT		
		SLPC		
		TILA-LIC		
		XOPT		
		Poster Session		
		OPIE '24		
		SPIE. FST		

Registration Fees

Registration Type		On/Before 8 April 2024	After 9 April 2024
General	Member	JPY 56,000	JPY 61,000
	Non-Member	JPY 66,000	JPY 71,000
Student / Retiree	Member	JPY 19,000	JPY 22,000
	Non-Member	JPY 22,000	JPY 24,000

Location of Congress Site

Pacifico Yokohama

1-1-1 Minato Mirai, Nishi-ku, Yokohama

220-0012, Japan

<https://www.pacifico.co.jp/english>

From Narita Airport: 110 minutes by bus
100 minutes by train

From Haneda Airport: 20 minutes by taxi
40 minutes by bus
30 minutes by train

OPIC2024 Congress Management

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