OPTICAL PROBES

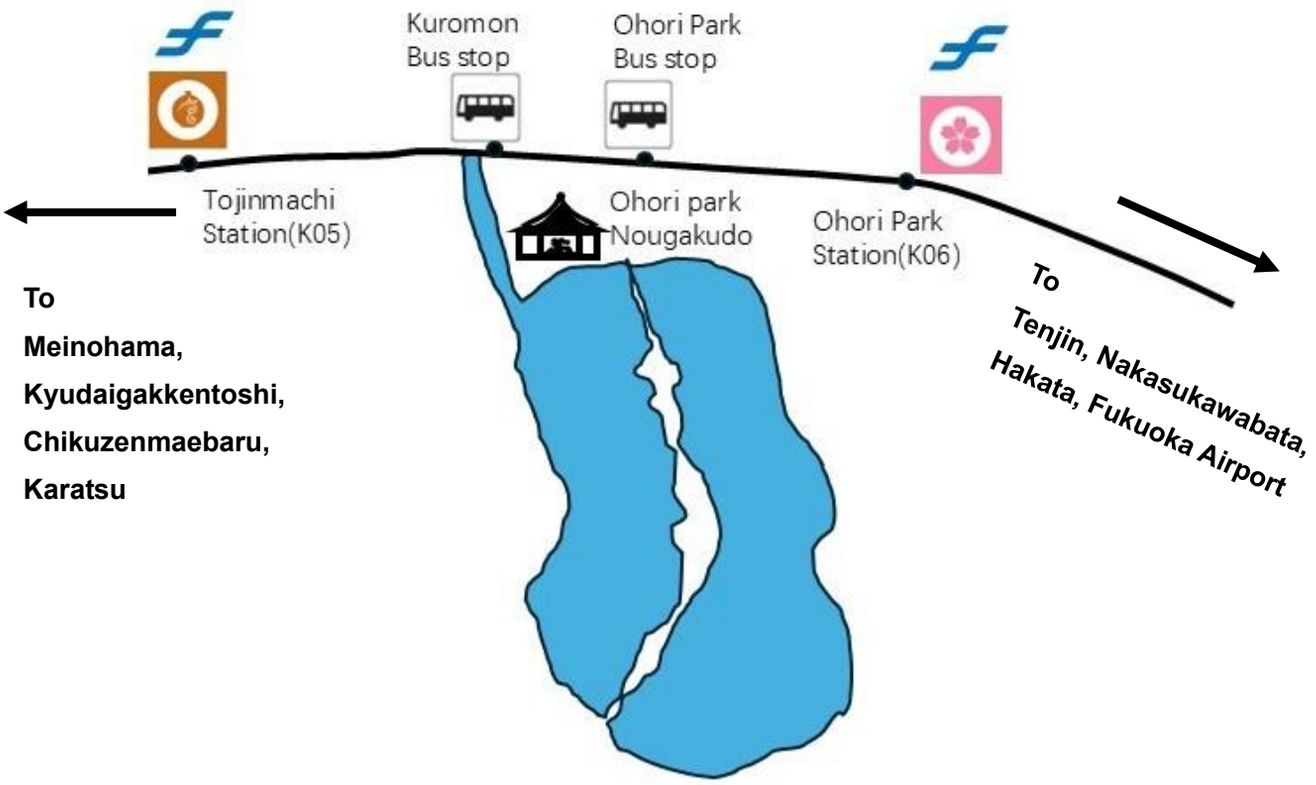
The 15th International Conference on Optical Probes of Organic and Hybrid Semiconductors

September 21-26, 2025

Venue: OHORI PARK NOH THEATRE（大濠公園能楽堂）, Fukuoka, Japan

Conference website: https://conks.jp/op2025/

OP2025 Access:



Wi-Fi information:

＜SSID ＞　OP2025

＜Password＞ OpticalProbes2025

Presentation time including discussion:

Keynote talk: 30 min.

Invited talk: 20 min.

Contributed talk: 15 min.

Timetable:

Sept 21st Sun	Sept 22nd Mon	Sept 23rd Tue	Sept 24th Wed	Sept 25th Thur	Sept 26th Fri
	8:50-9:00 Opening remarks				
	9:00-10:35 KN1: J. Clark IN1: S. Mazumdar OR1: M. Uji OR2: S. Raisys OR3: A. Ronchi	**9:00-10:45** KN2: X.-Y. Zhu IN9: Y. Kobori IN10: T. Miyamae IN11: T. Hosokai OR14: N. Fairbairn	**9:00-10:40** KN3: K. Tamada IN23: D. Comoretto OR18: A. Q. Ramirez OR19: Z. Hu IN24: Y. J. Lee	**9:00-10:50** KN4: D. Perepichka IN31: Y. Takeda OR35: C. Francener OR36: A. Maggiore OR37: R. Pollard OR38: A. Kuehne	**9:00-10:25** KN5: H. Yamada IN38: H. Yoshida OR42: Z. Qu IN40: A. Kirch
	Coffee break		Coffee break		Coffee break
	11:00-12:40 IN2: P. Coto OR4: K. Richards OR5: N. Davis OR6: G. Hedley OR7: Y. Sasaki IN3: J. Yuen-Zhou	Coffee break **11:10-12:35** IN12: H. Zhu IN13: K. Chen OR15: K. Miyata OR16: H. M. Salinas OR17: J. M. Kim	**11:05-12:30** IN25: A. Ishii OR20: C. Sissa OR21: A. P. Huu IN26: H. Lu OR22: M. Bedogni	Coffee break **11:15-12:30** IN32: A. Monkman IN33: T. Yasuda IN34: G. Lakhwani OR39: Y. Tsuchiya	**10:55-12:15** IN41: K. Albrecht OR43: L. Matasovic OR44: O. Christie OR45: A. Abdurahman OR46: F. D. Maiolo
	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
	13:35-15:25 IN4: N. Yanai IN5: J. Lupton OR8: S. Mann OR9: A. Putintsev IN6: E. W. Evans IN7: S. Richert	**13:40-15:20** IN14: C. Adachi IN15: T. Hatakeyama IN16: K. Onda IN17: I. D.W. Samuel IN18: E. Kazuma	**13:40-15:20** IN27: F. Nüesch IN28: A. Muraoka OR23: N. Shumilov OR24: D. Giavazzi OR25: R. Kabe OR26: I. Bhattacharjee	**13:40-15:10** IN35: K. Suzuki IN36: M. Gather IN37: K. S. Wong OR40: R. Salthouse OR41: A. Lanfranchi	**13:30-15:10** IN42: F. Fan OR47: J. R. Ribe OR48: T. Sato OR49: M. Pugliese OR50: L. Weatherill IN43: C. S. Acuña
	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
	15:50-17:10 IN8: R. Costa OR10: T. Bradbury OR11: G. Singh OR12: S. Hillebrandt OR13: T. Ishii	**15:45-17:05** IN19: S. Kéna-Cohen IN20: H. Hao IN21: F. Mathevet IN22: P. Baronas (LightConversion)	**15:45-17:05** IN29: K. Watanabe OR27: D. D. Fonzo OR28: J. Pidgeon OR29: A. Mischok OR30: N. Crivillers	**16:00-17:00** Social Event "NOH", a traditional Japanese performing art	**15:35-16:40** IN44: R. Pachaiyappan OR51: K. Bareikaite OR52: P. Pander OR53: Y. Chitose
			Coffee break	Conference Photo	Coffee break
17:00 Open Registration					**17:00-18:00** OR54: A. Danos OR55: K. Bergmann OR56: M. Etherington OR57: P. L. d. Santos
Welcome Reception	**17:30-19:00** Poster Session 1 (Odd number)	**17:30-19:00** Poster Session 2 (Even number)	**17:30-18:50** IN30: S. Kumar OR31: K. Koch OR32: R. Murali OR33: I. Villa OR34: C. Rothe (BeeOLED)	**19:30 ~** Social Dinner (another venue)	Closing remarks

* **KN: Keynote (30 min)**, **IN: Invited (20 min)**, **OR: Contributed (15 min)**

《 CAUTION 》 in Noh theatre

The Noh stage is made of cypress wood and is specially maintained to enhance its acoustic effects. Therefore, please refrain from touching it with bare hands or placing objects on it directly. To step onto the stage, it is necessary to wear cotton Japanese socks.

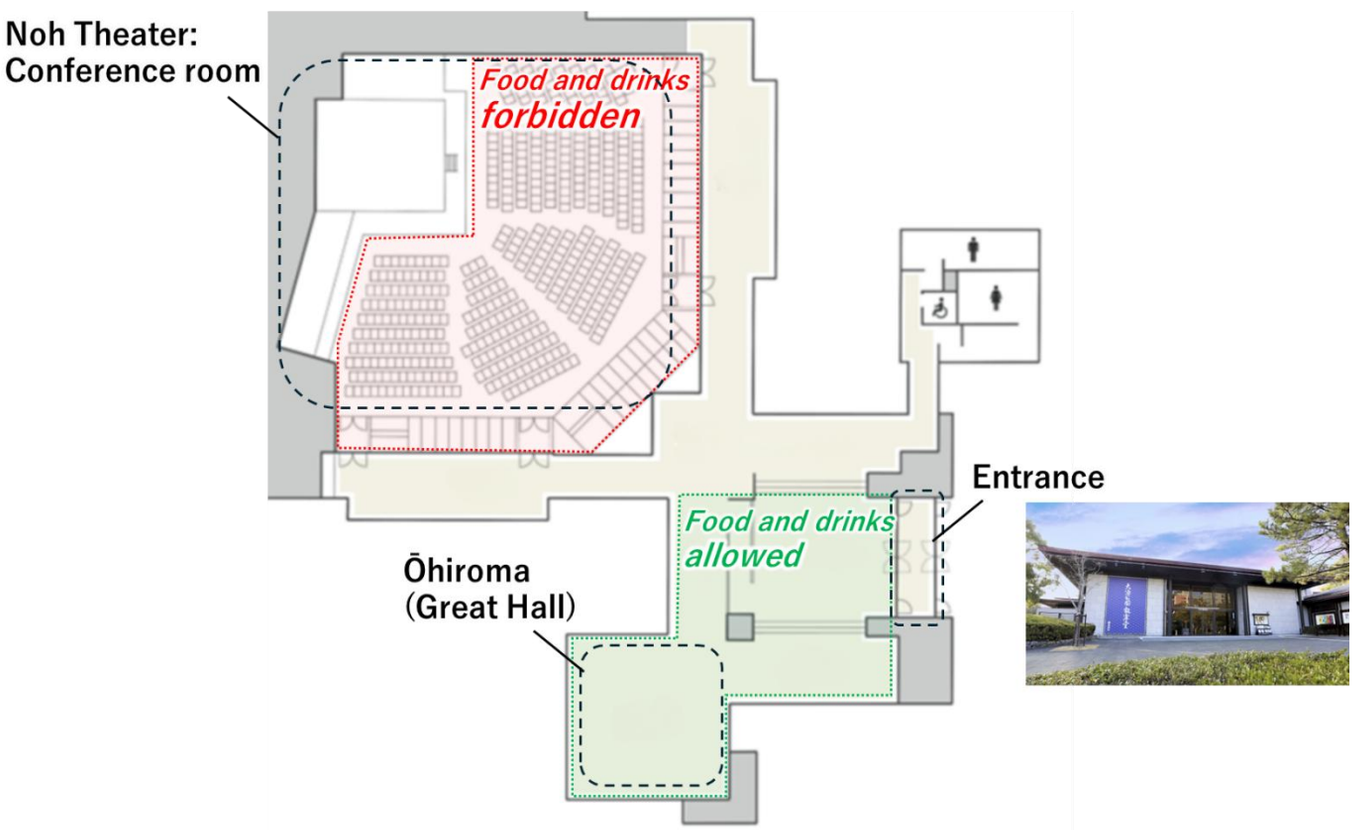
The Noh stage is considered a sacred area dedicated to performances. The white stone area, called *"Shirasu"*, marks the boundary between the sacred and the ordinary world.

The structure called *"Kizahashi"* on the *Shirasu* is not an ordinary staircase; that is for the Spirits. Therefore, please do not step on or sit on it.

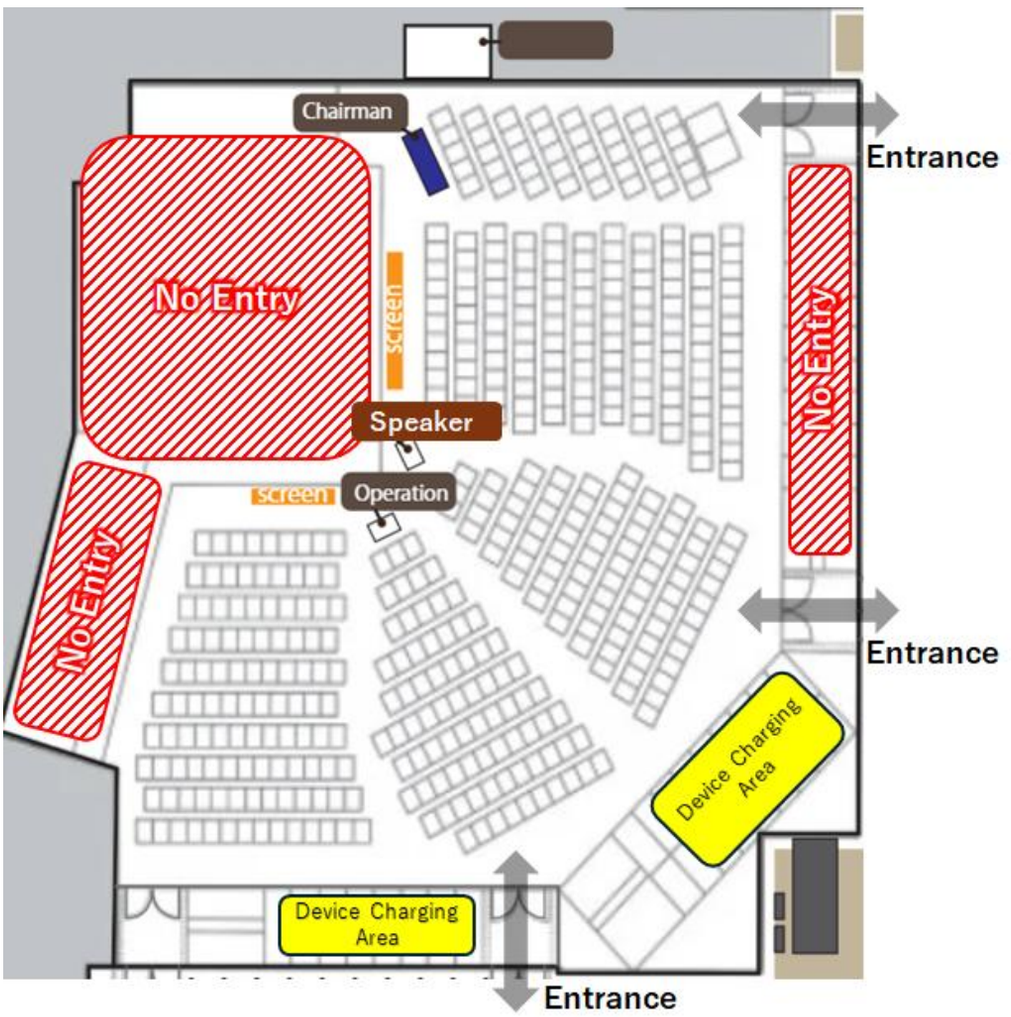
Do not bring foods or drinks into the Noh theatre.

Please consume them in the hall (outside the Noh theatre).

Map of the NOH THEATRE:



Map of the NOH THEATRE:



A Mobile Teahouse will be available!

Matcha & Gyokuro **at breaktime on 22, 23, and 25**

Special Event: NOH Performance Program

Sep. 25th (Thu) 16:00 @Ohori park Noh theatre

◆ NOH: A Traditional Japanese Performing Art

Noh is one of Japan's oldest forms of performing art, with a history of over 650 years. It combines elements of drama, dance, and music, performed on a stage made of cypress wood. The performance is highly symbolic, expressing profound emotions and spiritual themes through subtle movements and chant-like recitation. The stage itself is regarded as a sacred space, emphasizing the ritualistic nature of the art.

◆ Schedule

16:00 – Maibayashi 舞囃子"Funabenkei (船弁慶)" (10 min)

A dance with musical ensemble featuring the vengeful spirit of Taira no Tomomori.
This short performance highlights the power and intensity of Noh's musical and dramatic expression.

16:10 – Hayashi Workshop (10 min) by Noh instructor Tetsuro Morimoto

Introduction to the four Noh instruments. Participants will experience the distinct rhythms and sounds that shape the atmosphere of Noh.

- **Flute (Fue)**
- **Small Hand Drum (Kotsuzumi)**
- **Large Hand Drum (Otsuzumi)**
- **Stick Taiko Drum (Taiko)**

16:20 – Introduction & Movement Experience (20 min)

Explanation of the symbolism of Noh, followed by an interactive session where participants can try simple Noh movements under the guidance of Noh instructor Tetsuro Morimoto.

16:40 – Noh Play 能 "Hagoromo (羽衣)" (20 min)

A celestial maiden (Tennin) descends to Miho no Matsubara. When a fisherman takes her feather mantle, she cannot return to heaven. He agrees to return it in exchange for her sacred dance. The maiden's dance embodies the harmony between the human and divine realms.

17:00 – Q&A Session (10 min)

17:10 – Group Photograph

◆ Notes for the Audience

- **The Noh stage is made of cypress wood and is carefully maintained. Please do not touch or place objects on it.**
- **To step onto the stage, special cotton Japanese socks (tabi) must be worn.**
- **The white stone area (Shirasu) marks the boundary between sacred and ordinary worlds.**
- **The staircase-like structure (Kizahashi) is reserved for the Spirits. Please do not step or touch it.**

Social Dinner: Sep. 25th 19:30 @ Tomyoden

Time: Sep.25th (Thu)19:30 start

Place: Tomyoden (灯明殿)

10 min. walk from Subway Nakasukawabata Station(K09)

Along the way, you can enjoy the nostalgic atmosphere of Kawabata Shopping Arcade, a traditional Japanese shopping street

Address: 1-35 Kamikawabatamachi, Hakata-ku, Fukuoka-shi, Fukuoka

https://www.tomyoden.com/access/ (Japanese site)

- Subway information:

Ohori park(K06) →	Akasaka(K07) →	Tenjin(K08) →	Nakasukawabata(K09)
18:42	18:44	18:46	18:48
18:46	18:48	18:51	18:52
18:49	18:51	18:53	18:54
18:52	18:54	18:56	18:59
18:56	18:58	19:00	19:02

- Route from Nakasukawabata to Tomyoden:

Sponsors:

OP2025

Program of Oral Presentation in OP2025

Sep. 22nd

-- Opening remarks --

Session Mon-A, 9:00—10:35 Chair: Nobuhiro Yanai (The University of Tokyo)

KN1 9:00—9:30 **Jenny Clark** (University of Sheffield)
Strong Light-Matter Coupling and Spin Statistics: Spectroscopy of Singlet Fission and Triplet-Triplet Annihilation

IN1 9:30—9:50 **Sumitendra Mazumdar** (University of Arizona)
Systematic Theoretical Investigation of the Triplet-Triplet Intermediates in Intramolecular Singlet Fission Chromophores

OR1 9:50—10:05 **Masanori Uji** (The University of Tokyo)
Triplet–Triplet Annihilation Photon Upconversion toward UVC energy Generation Using TIPS-Benzene and a Heptazine Derivative

OR2 10:05—10:20 **Steponas Raisys** (Vilnius University)
Towards consistent singlet exciton formation yield evaluation in TTA photon upconversion

OR3 10:20—10:35 **Alessandra Ronchi** (University of Milano-Bicocca)
Bis(phenylethynyl)benzenes enable stable visible-to-ultraviolet sensitized triplet-triplet annihilation upconversion

-- Break --

Session Mon-B, 11:00—12:40 Chair: Sumitendra Mazumdar (University of Arizona)

IN2 11:00—11:20 **Pedro Coto** (Spanish National Research Council (CSIC))
Intramolecular Singlet Fission: Insights from Quantum Dynamical Simulations

OR4 11:20—11:35 **Kieran Richards** (Swansea University)
Open- and closed-shell roles of sensitiser and annihilator in photochemical upconversion

OR5 11:35—11:50 **Nathaniel Davis** (Victoria University of Wellington)
Applications of Singlet Fission: Increased Photoluminescent Quantum Efficiencies and Singlet Fission Enhanced 2D Perovskite Solar Cells

OR6 11:50—12:05 **Gordon Hedley** (University of Glasgow)
Highly efficient exciton-exciton annihilation in single conjugated polymer chains

OR7 12:05—12:20 **Yoichi Sasaki** (Kyushu University)
Low threshold, efficient solid-state photon upconversion with alkyl extension in the out of pi-plane direction

IN3 12:20—12:40 **Joel Yuen Zhou** (University of California-San Diego)
Organic molecules as spin-optical interfaces: from sensing to photoredox catalysis

-- Lunch Break--

Session Mon-C, 13:35—15:25 Chair: Joel Yuen-Zhou (University of California-San Diego)

IN4 13:35—13:55 **Nobuhiro Yanai** (The University of Tokyo)
Optical spin hyperpolarization for quantum sensing

IN5 13:55—14:15 **John Lupton** (University of Regensburg)
Spin quantum beats in single-molecule fluorescence

OR8 14:15—14:30 **Sarah Mann** (University of Glasgow)
Chemically Tunable Room-temperature Optically Detected Coherent Spin Control for Quantum Sensing

OR9 14:30—14:45 **Anton Putintsev** (Skolkovo Institute of Science and Technology)
Ultrafast All-Optical Logic and Switching in Organic Polariton Microcavities

IN6 14:45—15:05 **Emrys W. Evans** (Swansea University)
Spin-Optical Design and Opportunities with Radical Materials

IN7 15:05—15:25 **Sabine Richert** (Goethe University Frankfurt)
Supramolecular approaches in light-induced spin communication

-- Break –

Session Mon-D, 15:50—17:10 Chair: Emrys W. Evans (Swansea University)

IN8 15:50—16:10 **Ruben Costa** (Technical University of Munich)
Protein-based materials for energy conversion

OR10 16:10—16:25 **Thomas Bradbury** (University of Sheffield)
High-level reverse intersystem crossing in fluorescent proteins – can it beat the triplet problem in microscopy and beyond?

OR11 16:25—16:40 **Gurlal Singh** (Sant Baba Bhag Singh University) 【cancelled】
Green Nanoparticles for High-Performance Piezoelectric Biosensors

OR12 16:40—16:55 **Sabina Hillebrandt** (University of Cologne)
OLEDs: A Cornerstone for Next-Generation Neural Interfaces

OR13 16:55—17:10 **Tomohiro Ishii** (Polytechnique Montreal)
Planar Microcavities can Suppress Exciplex Formation and Increase the PLQY of Organic Semiconductors

-- Break –

-- Poster Session 1 -- (17:30—19:00)

Sep. 23rd

Joint symposium with JSPS International Leading Research
"Creation of quantum molecular electronics by fusion of advanced materials chemistry and quantum solid-state physics"

Session Tue-A, 9:00—10:45 Chair: Kazuya Watanabe (Kyoto University)

KN2 9:00—9:30 **Xiaoyang Zhu** (Columbia University)
Exciton Sensing of Correlated Electrons, Spins, and Dipoles

IN9 9:30—9:50 **Yasuhiro Kobori** (Kobe University)
Optical Probe of Vibronic Effect in Triplet-Pairs for Quantum Sensing

IN10 9:50—10:10 **Takayuki Miyamae** (Chiba University)
Direct Probing of the Electric Field inside OLEDs under Operation using Electric-Field-Induced Electronic Sum-Frequency Generation Spectroscopy

IN11 10:10—10:30 **Takuya Hosokai** (National Institute of Advanced Industrial Science and Technology (AIST))
High-Throughput Time-Resolved Photoluminescence Spectrometers Toward Data-Driven Design of Luminescent Materials

OR14 10:30—10:45 **Nicola Fairbairn** (The University of Electro-Communications)
Time and Frequency-Resolved Measurements of Entangled Photons toward 2D Quantum Fluorescence Spectroscopy of Organic Semiconductors

-- Break --

Session Tue-B, 11:10—12:35 Chair: Yasuhiro Kobori (Kobe University)

IN12 11:10—11:30 **Haiming Zhu** (Zhejiang University)
Dynamic Exciton Polaron in 2D Metal Halide Semiconductors

IN13 11:30—11:50 **Kai Chen** (Victoria University of Wellington)
Advanced Ultrafast Photoluminescence Spectroscopy for Investigating Photoexcitation Dynamics in Metal Halide Perovskite Materials

OR15 11:50—12:05 **Kiyoshi Miyata** (Kyushu University)
Chemiluminescence as a Spatiotemporal Optical Probe for Submillisecond Mixing

OR16 12:05—12:20 **Hector Miranda Salinas** (Durham University)
Singlets, Triplets, and Degradation? Emission Mechanisms in Difluoroboron Gain Materials

OR17 12:20—12:35 **Jae Min Kim** (Chung-Ang University)
OLED Device AI: The Key to AI-centric Inverse Design

-- Lunch Break--

Session Tue-C, 13:40—15:20 Chair: Fabrice Mathevet (Sorbonne Univ., Kyushu Univ.)

IN14 13:40—14:00 **Chihaya Adachi** (Kyushu University)
Organic thermoelectric device utilizing CT interface

IN15 14:00—14:20 **Takuji Hatakeyama** (Kyoto University)
Recent Advances in Boron-based Multi-Resonance Thermally Activated Delayed Fluorescence Materials

IN16 14:20—14:40 **Ken Onda** (Kyushu University)
Sub-Nanosecond Intersystem Crossing Accompanied by Structural Change in Single-Crystalline 4CzIPN

IN17 14:40—15:00 **Ifor D.W. Samuel** (University of St Andrews)
Probing Singlets, Triplets and Efficiency Roll-Off in TADF OLEDs

IN18 15:00—15:20 **Emiko Kazuma** (The University of Tokyo)
Real-space study of single-molecule reactions in the optical near-field

-- Break--

Session Tue-D, 15:45—17:05 Chair: Ifor D.W. Samuel (University of St Andrews)

IN19 15:45—16:05 **Stéphane Kéna-Cohen** (Polytechnique Montreal)
Centrosymmetry breaking in thermally evaporated organic thin films

IN20 16:05—16:25 **Han Hao** (University of Toronto)
Accelerated Discovery of Organic Lasers with Self-Driving Labs

IN21 16:25—16:45 **Fabrice Mathevet** (Université Paris-Sorbonne)
Molecular and macromolecular materials based on through-space donor-acceptor interactions

IN22 16:45—17:05 **Paulius Baronas** (Light Conversion)
Fast and Easy Ultrafast Spectroscopy: Enabling More Time for Research

-- Break--

-- Poster Session 2-- (17:30—19:00)

Sep. 24th

Session Wed-A, 9:00—10:40 Chair: Takuya Hosokai (AIST)

KN3 9:00—9:30 **Kaoru Tamada** (Kyushu University)
Self-Assembly of Nanomaterials for Device Application

IN23 9:30—9:50 **Davide Comoretto** (Università di Genova)
Polymer photonic crystals: a playground to deal with spectroscopy and sustainability

OR18 9:50—10:05 **Arianna Quesada Ramirez** (Institute of Materials Science of Barcelona (ICMAB-CSIC))
Resolving intra- vs. intermolecular interactions via microcavity enhanced resonant Raman scattering

OR19 10:05—10:20 **Ziyi Hu** (Suzhou Institute of Nano-tech and Nano-bionics)
Characterization on the excitonic property of zigzag selenium chain-filled small-diameter single-walled carbon nanotubes in non-polar solvents for nonlinear optical applications

IN24 10:20—10:40 **Ya Ju Lee** (National Cheng Kung University)
Perovskite Quantum Dots for Multifunctional Optoelectronics: Toward Versatile Device Architectures

-- Break--

Session Wed-B, 11:05—12:30 Chair: Davide Comoretto (Università di Genova)

IN25 11:05—11:25 **Ayumi Ishii** (Waseda University)
Spin-selective Photodetection and Bulk Photovoltaic Effect in One-dimensional Helical Perovskites

OR20 11:25—11:40 **Cristina Sissa** (University of Parma)
Interpreting Supramolecular Chirality through Exciton Models: From Self-Assembled Dicyanostilbenes to Cyanine Bundles

OR21 11:40—11:55 **Andrea Phan Huu** (University of Parma)
Chirality-induced spin selectivity in photoinduced electron transfer: many-body models and chiral molecular vibrations

IN26 11:55—12:15 **Haipeng Lu** (The Hong Kong University of Science and Technology)
Twisting photons with chiral metal-halide semiconductors

OR22 12:15—12:30 **Matteo Bedogni** (University of Parma)
Accelerating Discovery of Organic Chromophores: An Efficient PPP-RASCI Screening Protocol

-- Lunch Break--

Session Wed-C, 13:40—15:20 Chair: Haiming Zhu (Zhejiang University)

IN27 13:40—14:00 **Frank Nuesch** (Empa - Swiss Federal Laboratories for Materials Science and Technology)
Intrinsic Charge Generation in Organic Optoelectronic Materials

IN28 14:00—14:20 **Azusa Muraoka** (Japan Women's University)
Exploration of Organic Solar Cell Materials via Machine Learning and Vibronic Interaction of Charge Separation Dynamics

OR23 14:20—14:35 **Nikita Shumilov** (Victoria University of Wellington)
Controlling the optoelectronic properties of a non-fullerene acceptor via p-doping

OR24 14:35—14:50 **Davide Giavazzi** (Università di Parma)
Photoinduced charge separation in single-component squaraine thin films: the key role of electrostatic disorder

OR25 14:50—15:05 **Ryota Kabe** (OIST)
Photoinduced Charge Accumulation and Recombination Dynamics in Organic Materials

OR26 15:05—15:20 **Indranil Bhattacharjee** (IMDEA Nanoscience)
Interplay between intra vs. intermolecular charge-transfer process in donor-acceptor based distyrylbenzene

-- Break –

Session Wed-D, 15:45—17:05 Chair: Tomohiro Ishii (Polytechnique Montreal)

IN29 15:45—16:05 **Kazuya Watanabe** (Kyoto University)
Exploring Plexciton Formation in the Ultraviolet Region

OR27 16:05—16:20 **Daniela Di Fonzo** (University of Genoa)
Exciton-Photon Coupling in All-Polymer Microcavities Doped with J-aggregates

OR28 16:20—16:35 **James Pidgeon** (University of Sheffield)
The effect of strong-coupling on singlet-singlet annihilation in rubrene microcavities

OR29 16:35—16:50 **Andreas Mischok** (University of Cologne)
Strong light matter coupling for tunable, narrowband, angle-stable and highly efficient organic light emitting diodes from blue to near infrared

OR30 16:50—17:05 **Nuria Crivillers** (Institute of Materials Science of Barcelona (ICMAB-CSIC))
Fluorescent switchable surfaces based on quantum dots modified with redox-active molecules

-- Break--

Session Wed-E, 17:30—18:50 Chair: Ayumi Ishii (Waseda University)

IN30 17:30—17:50 **Santosh Kumar** (Indian Institute of Technology Hyderabad)
Hot Carrier Dynamics in defect-engineered $CsPbBr_3$ Nanocrystals

OR31 17:50—18:05 **Katherine Koch** (Wake Forest University)
Spectroscopic signatures of biexcitons: A case study in Ruddlesden-Popper lead-halides

OR32 18:05—18:20 **Rahul Murali** (IIT Hyderabad)
Accelerated Biexciton Auger Recombination in Perovskites via Zn-Alloying for Quantum Emitter Applications

OR33 18:20—18:35 **Irene Villa** (University of Milano-Bicocca)
Ultrafast bimolecular processes in engineered scintillating metal organic frameworks

OR34 18:35—18:50 **Carsten Rothe** (BeeOLED)
Europium for deep blue OLED emitters

Sep. 25th

Session Thu-A, 9:00—10:50 Chair: Ryota Kabe (OIST)

KN4 9:00—9:30 **Dmytro Perepichka** (McGill University)
Crystal Engineering of Organic Room Temperature Phosphorescence

IN31 9:30—9:50 **Youhei Takeda** (The University of Osaka)
Dual-State Modulation of Photophysics of a U-Shaped Dipyridophenazine-Cored Donor–π–Acceptor–π–Donor System via Bifurcated Hydrogen Bonding

OR35 9:50—10:05 **Carolina Francener** (Durham University)
The Neglected Photophysics of Benzophenone: A New Vision of Aromatic Ketones

OR36 10:05—10:20 **Antonio Maggiore** (CNR NANOTEC)
Tunable TADF-to-RTP Switching and Singlet Oxygen Generation in Donor–Acceptor Molecules Embedded in Transparent Wood: Color-Switchable Emission for Optical Sensing

OR37 10:20—10:35 **Ruth Pollard** (Northumbria University)
Long-lived photoluminescence of unnatural quinine analogues.

OR38 10:35—10:50 **Alexander Kuehne** (Ulm University)
Hot Excitons versus Hot Exciplexes – bridging exciplexes for fast and bright emission

-- Break --

Session Thu-B, 11:15—12:30 Chair: Youhei Takeda (The University of Osaka)

IN32 11:15—11:35 **Andrew Monkman** (Durham University)
Excited state conjugation breaking in rigid, planar molecules leading to charge-transfer states and thermally activated delayed fluorescence.

IN33 11:35—11:55 **Takuma Yasuda** (Kyushu University)
Emerging Organic Luminescent Materials with Fast Spin Conversion and Narrowband Emission

IN34 11:55—12:15 **Girish Lakhwani** (The University of Sydney)
Triplet dynamics in donor-acceptor and multi-resonant thermally activated delayed fluorescence emitters

OR39 12:15—12:30 **Youichi Tsuchiya** (Kyushu University)
Dynamic Excitonic Model: A Promising Method for Estimating ΔE_{ST} in Thermally Activated Delayed Fluorescence Materials

-- Lunch Break --

Session Thu-C, 13:40—15:10 Chair: Andrew P. Monkman (Durham University)

IN35 13:40—14:00 **Katsuaki Suzuki** (Kyoto University)
Quantitative conformational analysis of TADF emitter in amorphous aggregates using solid-state NMR

IN36 14:00—14:20 **Malte Gather** (University of Cologne)
Electrochemically induced hyperfluorescence based on the formation of charge-transfer excimers

IN37 14:20—14:40 **Kam Sing Wong** (The Hong Kong University of Science and Technology)
Self-trapped Excitons in Low Dimensional Copper Halides

OR40 14:40—14:55 **Rebecca Salthouse** (Universitat Politècnica de Catalunya)
Tuning Photoluminescence and Molecular Solar Thermal (MOST) Energy Storage in Multistate Norbornadiene Derivatives

OR41 14:55—15:10 **Andrea Lanfranchi** (University of Genova)
Upcycling of Drug Blisters Waste for Radiative Cooling

-- Break--

-- Social Event "NOH"--

Sep. 26th

Session Fri-A, 9:00—10:25 Chair: Takuma Yasuda (Kyushu University)

KN5 9:00—9:30 **Hiroko Yamada** (Kyoto University)
Tetrabenzoporphyrins as Organic Semiconductors for High-Performance Organic Field-Effect Transistors: A Structure-Property Perspective

IN38 9:30—9:50 **Hiroyuki Yoshida** (Chiba University)
Direct Observation of Conduction Band Structures in Organic Semiconductors: Toward Higher Electron Mobility

OR42 9:50—10:05 **Zhengkang Qu** (University of Cambridge)
Understanding Charge Transport in Organic Polymers Through Infrared Dielectric Function

IN40 10:05—10:25 **Anton Kirch** (Umeå University)
Ion dynamics in light-emitting electrochemical cells (LECs): What we can learn from perovskite-based devices

-- Break --

Session Fri-B, 10:55—12:15 Chair: Hiroyuki Yoshida (Chiba University)

IN41 10:55—11:15 **Ken Albrecht** (Kyushu University)
Luminescent radicals attached to carbazole donors

OR43 11:15—11:30 **Lujo Matasovic** (University of Cambridge)
Quartet-Derived Luminescence in Open-shell Organic Materials

OR44 11:30—11:45 **Oliver Christie** (Swansea University)
Spin-polarized organic radicals and magneto-optical effects

OR45 11:45—12:00 **Alim Abdurahman** (Jilin University)
Design, Synthesis and Application of Stable Luminescent Diradicals

OR46 12:00-12:15 **Francesco Di Maiolo** (University of Parma)
Organic Diradicals Bridged by Inverted Singlet–Triplet Units for Optical-Spin Interfaces

-- Lunch Break --

Session Fri-C, 13:30—15:10 Chair: Ken Albrecht (Kyushu University)

IN42 13:30—13:50 **Fengjia Fan** (University of Science and Technology of China)
Exotic long-lived hot electrons (>300 ns) observed from electrically excited transient absorption spectroscopy

OR47 13:50—14:05 **Joan Rafols Ribe** (Umeå University)
Pinpointing the dynamic p-i-n junction

OR48 14:05—14:20 **Tohru Sato** (Kyoto University)
Nonradiative Transition Theory Based on Crude Adiabatic Representation

OR49 14:20—14:35 **Marco Pugliese** (Institute of Nanotechnology CNR NANOTEC - Lecce)
Multifunctional Thermo-Electrochromic Devices Based on 2D Perovskite Gels

OR50 14:35—14:50 **Lucy Weatherill** (Durham University)
Separating recombination from emission in an OLED: energy transfer from a TSBPA:PO-T2T exciplex to rubrene

IN43 14:50—15:10 **Carlos Silva Acuña** (Université de Montréal)
TBA

-- Break --

Session Fri-D, 15:35—16:40 Chair: Yoichi Sasaki (Kyushu University)

IN44 15:35—15:55 **Rajamalli Pachaiyappan** (Indian Institute of Science Bangalore)
Improving the external quantum efficiency and minimizing the efficiency roll-off in OLEDs: A study on the optimization of donor linkage and acceptor nitrogen atom positions in TADF emitters

OR51 15:55—16:10 **Kamile Bareikaite** (Durham University)
Improved Hyperfluorescent OLEDs using a DMAC-TRZ Analogue

OR52 16:10—16:25 **Piotr Pander** (Silesian University of Technology)
Exploring TADF in Iridium(III) Complexes

OR53 16:25—16:40 **Youhei Chitose** (Kyushu University)
Unlocking Dual Functionality in Triazine-Based Emitters: Synergistic Enhancement of Two-Photon Absorption and TADF-OLED Performance with Electron-Withdrawing Substituents

-- Break --

Session Fri-E, 17:00—18:00 Chair: Rajamalli Pachaiyappan (Indian Institute of Science Bangalore)

OR54 17:00—17:15 **Andrew Danos** (Queen Mary Univeristy of London)
Can Hyperfluorescence Solve the Host Problem for Blue TADF OLEDs?

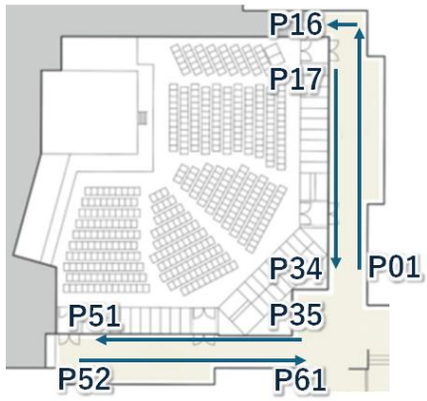
OR55 17:15—17:30 **Katrina Bergmann** (University of British Columbia)
Impurities in Arylboron Compounds Induce Ultra-long Room Temperature Phosphorescence

OR56 17:30—17:45 **Marc Etherington** (Northumbria University)
Tuning the chromophore of an N-aryl scaffold for thermally activated delayed fluorescence

OR57 17:45—18:00 **Paloma Lays dos Santos** (University of Sheffield)
How Multiple RISC Pathways Shape Efficiency and Roll-off in TADF OLEDs

-- Closing --

Program of Poster Presentation



Odd: Sep 22nd 17:30-19:00

Even: Sep 23rd 17:30-19:00

P01* **Madhusudan Dutta** (Indian Institute of Science Education and Research Pune) “Steric Engineering of Multi-Carbazole System for Efficient Thermally Activated Delayed Fluorescence”

P02 **Asta Dabuliene** (Kaunas University of Technology) “Investigation of Fluorene-Based Star-Shaped Emitters Exhibiting Efficient Short-Lived Fluorescence”

P03* **Wataru Ishii** (The University of Tokyo) “Macrocyclic Parallel Rubrene Dimers as Room-temperature Optically Addressable Quintet Qubits”

P04 **Yuki Akanuma** (Kyushu University) “PEGylated carbazole dendrimers for light-emitting electrochemical cells”

P05 **Ranush Durgaryan** (Uppsala university) “High performance perovskite solar cells enabled by selective contact self-assembled molecules”

P06* **Joseph Young** (Swansea university) “Magnetic field effects on singlet-triplet radical ion-pair spin dynamics and controlling exciplex emission”

P07* **Kosuke Anraku** (Kyushu University) “Solvent polarity insensitive luminescence of trimethoxy benzene substituted red emissive trityl radicals”

P08* **Challa Rajendra Kumar** (Indian Institute of Technology Hyderabad) “Impact of Laser Beam Profiles on the Optical and Structural Properties of WS2”

P09 **Oleksandr Bezvikonnyi** (University of Latvia) “Derivatives of cyanopyridine exhibiting thermally activated delayed fluorescence for efficient organic light emitting diodes”

P10 **Andrea Lanfranchi** (Università degli Studi di Genova) “Nanostructured Hybrid Liquid Crystalline Networks for Photons and Pollutants Concentration and Photocatalysis”

P11* **Ami Takada** (Kyushu University) “Investigation of photophysical property in carbazole-triphenyltriazine frameworks”

P12 **Ming Lee Tang** (University of Utah) “Photogenerated excitons for spin-polarized QD-molecular nanostructures”

P13* **Cheng Sun** (Zhejiang University) “Ultrafast Photo-induced Electron Dynamics at 2D semiconductor Van der Waals Interface”

P14* **Nutnicha Boonmong** (Kyushu University) “Sterically shielded π-electron systems for efficient photon upconversion in solution”

P15 **Ruttapol Malatong** (Okinawa Institute of Science and Technology Graduate University (OIST)) “Achieving Circularly Polarized Long-Persistent Luminescence Through Förster Resonance Energy Transfer and Upconversion Strategies”

P16* **Zihao Zhu** (Jilin University) “Dual Channel Emissions of Kasha and Anti-Kasha from a Single Radical Molecule”

P17 **Xun Tang** (Kyushu University) “Frontier molecular orbital alignment toward stable blue OLEDs”

P18 **Debashish Barman** (Kyushu University) “Investigation of Novel TADF Emitters for High-Efficiency Blue OLED”

P19* **Adit Batra** (Victoria University of Wellington) “Enhancing Perovskite Solar Cells with Singlet Fission Materials: A Path to Higher Efficiency and Stability”

P20* **Lesia Volyniuk** (Kaunas University of Technology) “Development and investigation of 3,5-dicyanopyridine derivatives with different donors for single-emitter based down-converting white light-emitting diodes”

P21* **Kaito Segawa** (Kyushu University) “Mixed Crystals of Platinum(II) and Palladium(II) Complexes Exhibiting Thermally Enhanced Strong Emission”

P22* **Mateja Smitran** (The University of Sheffield) “Modelling Singlet Fission and Triplet-Triplet annihilation via the Magnetic Field Effect approach: From Photosynthesis to Quantum Technologies”

P23 **Rasa Keruckiene** (Kaunas University of Technology) “Impact of Donor on Triplet State Dynamics of Organic Oxygen Sensing Probes”

P24 **Kevin Mall Haidaraly** (Kyushu University) “Self-Assembled Organic Emitting Materials: A Route to Efficient Gain Media for Organic Laser Applications”

P25 **Tharindu P.B. Rajakaruna** (Kyushu University) “Exciplex Exciton Dynamics Across Donor-Spacer-Acceptor Layers: Insights into Long-Range Interactions”

P26* **Dmitry Kovalevskiy** (Okinawa Institute of Science and Technology Graduate University) “Persistent Charge Storage in Organic Photostimulated Luminescence Systems”

P27 **Wataru Ota** (Kyoto University) “Two-Photon Absorption of an Atomically Precise Gold Cluster Coordinated by Naphthalenethiol Ligands”

P28 **Jurate Simokaitiene** (Kaunas University of Technology) “Quinoxaline Based Efficient Organic RTP Emitters for Optoelectronic, Sensing and other Applications”

P29* **Matteo Bedogni** (University of Parma) “Chirality Induced Spin Selectivity: The Role of Two-electron Spin-orbit Coupling”

P30* **Yanmei Hu** (Kyushu University) “Azasiline-based Host Materials for Thermally Activated Delayed Fluorescent Organic Light-Emitting Diodes”

P31* **Shoma Sasaki** (Kyushu University) “Experimental Analysis of the Exciton Dynamics of a Thermally Activated Delayed Fluorescence Material Exhibiting Mono-Exponential Transient PL Decay with Sub-Microsecond Lifetime in Solution”

P32* **Shengjie Wang** (Jilin university) “Spin-State Manipulation in a Luminescent Diradical Polymer”

P33 **Dmytro Volyniuk** (Kaunas University of Technology) “Investigation of fluorene and benzothiadiazole derivatives as hole-transporting fluorescent emitters for red and warm-white organic light-emitting diodes”

P34* **Masahito Oura** (Kyushu University) “Picosecond Photoluminescence Dynamics in Thermally Activated Delayed Fluorescence Molecules”

P35* **Jo Takagi** (Kyushu University) “Optical analysis of inhomogeneous organic thin films with spatial disorder using of interferometry”

P36* **Domantas Berenis** (Vilnius University) “Modified Carbazole-Biphenyl Hosts for Stable Blue TADF OLEDs”

P37* **Andrada Cocea** (University of Sheffield) “Luminescent materials for Organic LEDs: a study of a TTM-based radical emitter”

P38* **Kenshiro Matsuda** (Kyushu University) “Regulation of donor-acceptor dihedral angle in tris(2,4,6-trichlorophenyl)methyl radical-carbazole dyad”

P39* **Seja Elgadi** (University of British Columbia) “External Heavy Atom Effect in Glassy Organic Dots”

P40 **Bo Li** (University of Science and Technology of China) “Exploring operational mechanisms of LEDs by electrically excited transient absorption spectroscopy”

P41 **Kunie Ishioka** (National Institute for Materials Science) “Transient absorption of a layered organic conductor TED”

P42* **Miwa Kaneko** (Kyushu University) “Anti-Stokes Photoluminescence in Thin Films Based on TADF Molecules”

P43* **Yusei Kaya** (Kyushu University) “Development of Shortest-Wavelength UV Organic Solid-State DFB Laser”

P44* **Arianna Quesada-Ramirez** (Institute of Materials Science of Barcelona (ICMAB-CSIC)) “Unlocking the potential of spectroscopic ellipsometry for the characterization of organic semiconductor materials for photovoltaic applications”

P45 **Keiki Fukumoto** (High Energy Accelerator Research Organization (KEK)) “Imaging holes in organic transistors by operando photoemission electron microscopy”

P46* **Daniel Crane** (Durham University) “Dual-Chromophore Isolation Strategies for Efficient Upconversion in TADF Emitters via Rigid, Covalent Bridges”

P47 **Viktorija Andruleviciene** (Kaunas University of Technology) “Molecular Engineering of Phenanthroimidazoles Exhibiting Efficient Short-Lived Singlet Emission”

P48* **Aoi Haraguchi** (Kyushu University) “Concentration dependence of intramolecular triplet-triplet annihilation upconversion by double sensitization”

P49* **Yuto Nagasaki** (Kyushu University) “Deuteration effect on exciplex emission in OLED”

P50 **Tetiana Bulavinets** (Lviv Polytechnic National University) “Plasmonic enhanced OLED based on Ag nanoparticles integration into the hole injection layer”

P51* **Andrea Szloboda** (University of Sheffield) “Near-infrared TADF material spectroscopy”

P52 **Israel Ferreira Costa** (Durham University) “Time-Resolved Photophysical Studies of Gadolinium(III) Complexes”

P53 **Iryna Yaremchuk** (Lviv Polytechnic National University) “Numerical modelling of the controlled plasmonic properties of spherical and ellipsoidal silver nanoparticles in an organic semiconductor matrix”

P54* **Teruyuki Honda** (Kyushu University) “Synthesis and Ultrafast Excited-State Dynamics of Luminescent Isocyanide Iron(II) Complexes”

P55* **Koswatta Nilakshi Peshala** (Kyushu University) “Enhanced heavy metal-free room temperature phosphorescence from carbon quantum dots (CQDs) doped into SiO2 matrices”

P56* **Lujo Matasovic** (University of Cambridge) “Porphyrin-Based Polymers for Tuneable Molecular Spintronics”

P57 **Hassan Ali Qureshi** (University of Turku) “Solution-processed polariton microcavities: A novel platform to study organic optoelectronics through strong light-matter coupling”

P58* **Keigo Ishii** (Kyushu University) “Reduction of ASE Threshold by Suppressing Concentration Quenching of Organic Semiconductor Laser Materials”

P59* **Toshiharu Ide** (Kyushu University) “Development of Intermolecular Exciplex Achieving High-Efficiency Emission”

P60* **Ryota Zenke** (Kyushu University) “Investigation of Photophysical Properties of Triazine Derivatives Bearing Two-Photon Absorption and TADF Characters”

P61* **Jung Hyunje** (Kyushu University) “Investigation on Photophysical Properties of $HzTFEX_2$”

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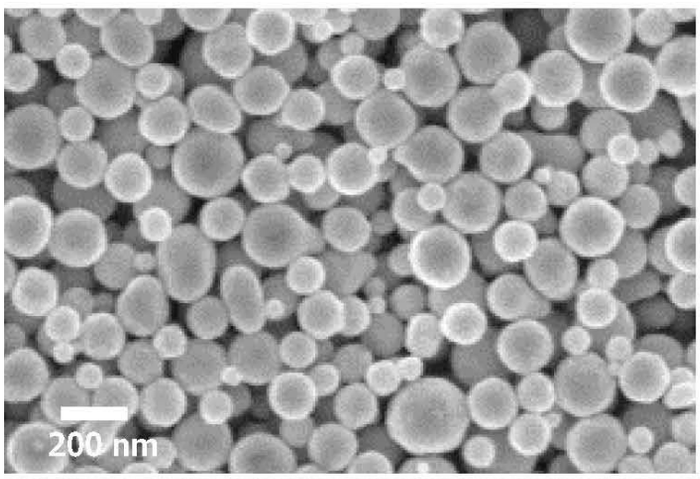

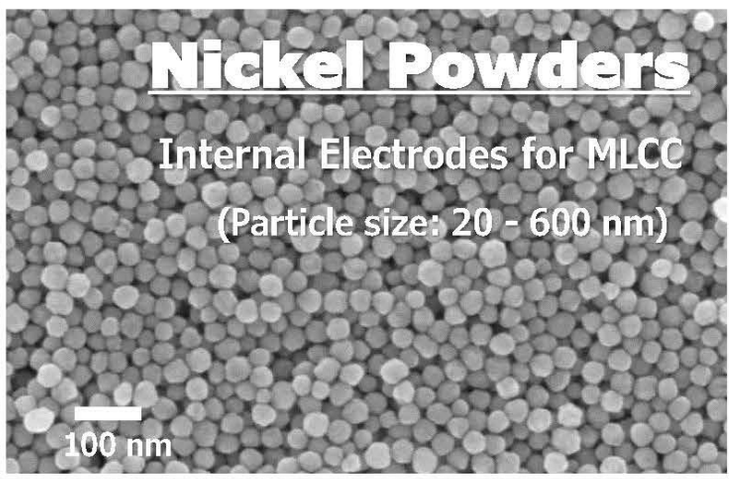

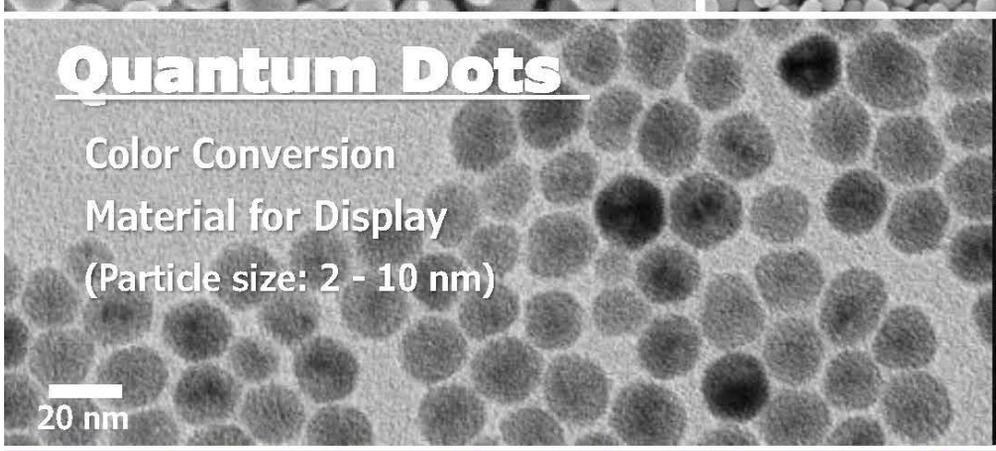

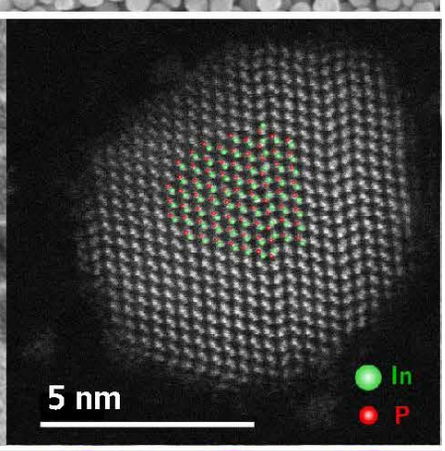

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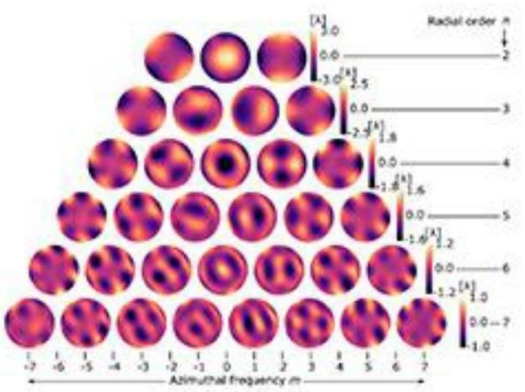

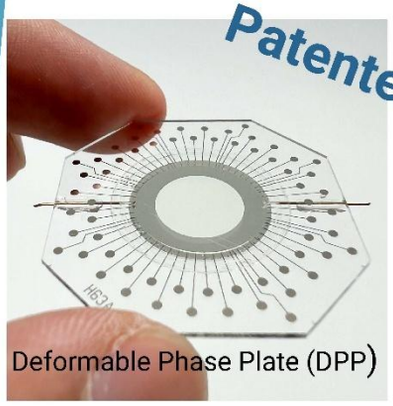

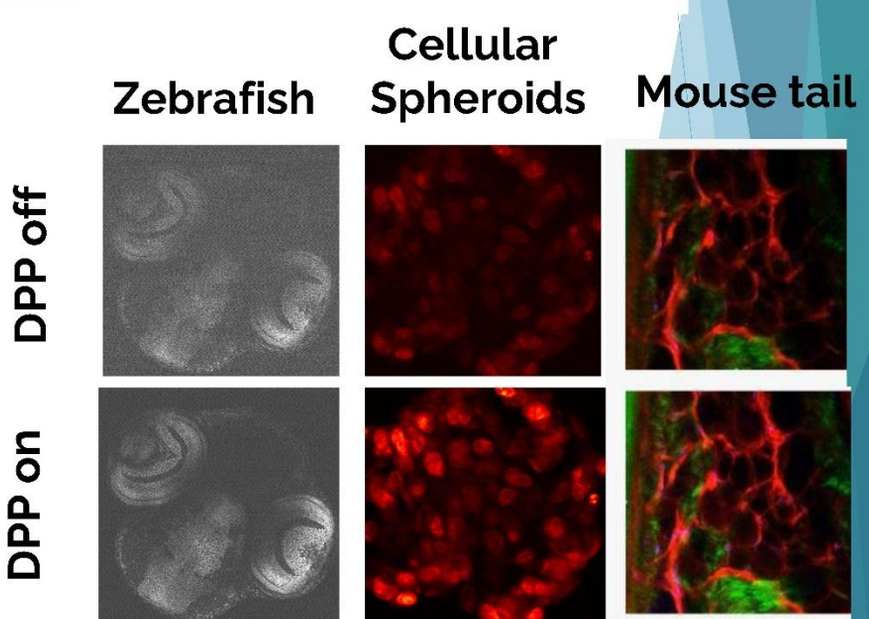

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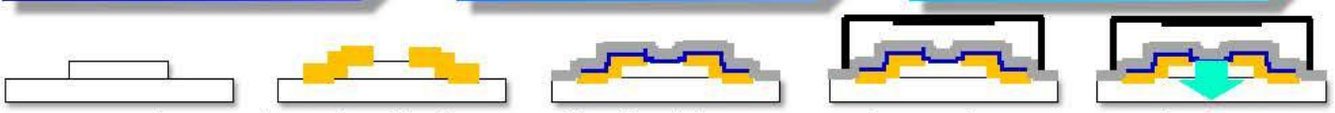
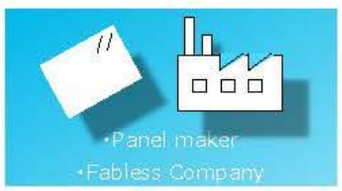


①Transparent conductive oxide ②PDL (bank) ③Org/Metal deposition ④Encapsulation − ⑤Evaluation +



Evaluation Request

Report

Marketing Screening

Material vendor
- OLED mater. •Encap/barrier
- Outcoupling •High index
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Evaluation request

Report

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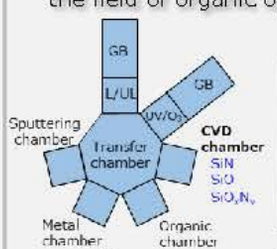
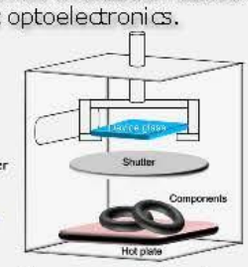


CVD film encap (SiN, SiON, SiO)



Killer impurity identification with an exposure chamber

Further information are available on our website
- Killer impurities/device lifetime
- Barrier technologies for OLEDs
- Top emission device fabrication
- Displacement current measure (DCM)
- Vacuum-controlled differential thermal analysis (TG-DTA)
- Quantum dot (QD) evaluation
- 3D optical interference microscope
- Organic Photo diode (OPD)

For Details

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i3-opera@ist.or.jp
http://www.i3-opera.ist.or.jp/

What is Noh?

Noh was perfected approximately 650 years ago during the Muromachi period by the father-and-son duo Kan'ami and Zeami. Thanks to the substantial patronage of the shogun Ashikaga Yoshimitsu, Noh continued to be supported by the ruling class through the Edo period. The Tokugawa shogunate in particular designated Noh as the official ceremonial art of the samurai class, ensuring the preservation of its refined and dignified style through generations of careful transmission and refinement.

Noh is a form of musical drama quite different from modern musicals. It features singing and spoken word accompanied by flute, small hand drum, large hand drum, and taiko drum, along with stylized dance and movements performed in traditional costumes and Noh masks.


"Tsuchigumo"


"Hanabusa Hikosan"

Noh originated in the Muromachi period, approximately 650 years ago, but the main characters in many Noh plays are ghosts of famous warriors or women who died more than a century before that time. Other protagonists include non-human beings such as gods, demons, and celestial maidens. The plays are typically set in the Muromachi period, which serves as the "present day" of the Noh universe. The waki, or supporting role, is usually a human being, often a traveling monk, who encounters the ghost or spiritual being.

The five-colored curtain hanging at the edge of the Noh stage marks the boundary between two realms. If the main character is a ghost, the other side of the curtain represents the spirit world. If a god appears, it is the realm of the divine; if a demon, it represents hell; and if a celestial maiden, it is the world of the moon. A bridge-like walkway connects this otherworldly realm to the Muromachi-period "present." You can think of it as a symbolic bridge between different dimensions.

"Takasago"
The protagonist is
the Shinto deity Sumiyoshi Myojin.

"Tsunemasa"
The protagonist is
the warrior Taira no Tsunemasa.

"Hagoromo"
The protagonist is
a celestial maiden.

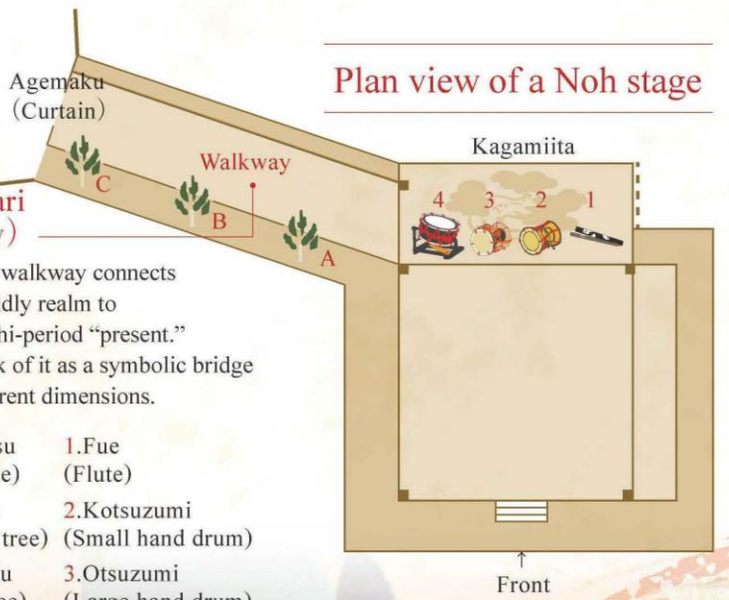
Noh Stage

In Noh, there is no curtain separating the stage from the audience. As a result, there are no elaborate stage sets depicting mountains, rivers, the sea, or houses; only the most minimal of props are used. Even if detailed sets were to be placed on the small stage, they would not appear realistic. Instead, the audience is invited to imagine the scene.

The Noh stage is entirely flat. If a celestial maiden is to appear from the moon, the walkway could be imagined as a bridge extending from the moon to earth. If a demon is to emerge from hell, the same bridge could be envisioned as rising from deep underground. In this way, a sort of spatial imagination adds depth to the Noh experience. Of course, you're also welcome to picture the world of the play as if reading a flat illustration in a book.

We invite you to enjoy the world of Noh, where each person's experience is shaped by their own interpretation.

Plan view of a Noh stage



Hashigakari (Walkway)

A bridge-like walkway connects this otherworldly realm to the Muromachi-period "present." You can think of it as a symbolic bridge between different dimensions.

A.Ichinomatsu (first pine tree)
B.Ninomatsu (second pine tree)
C.Sannomatsu (third pine tree)

1.Fue (Flute)
2.Kotsuzumi (Small hand drum)
3.Otsuzumi (Large hand drum)
4. Taiko (Taiko drum)

"Hyakuman"
The protagonist is a woman.

"Adachigahara"
The protagonist is a mythical spirit.

Local organizing committee of Optical Probes 2025:

Ken Onda (Chair), Kyushu University

Chihaya Adachi, Kyushu University
Takuji Hatakeyama, Kyoto University
Kaoru Tamada, Kyushu University
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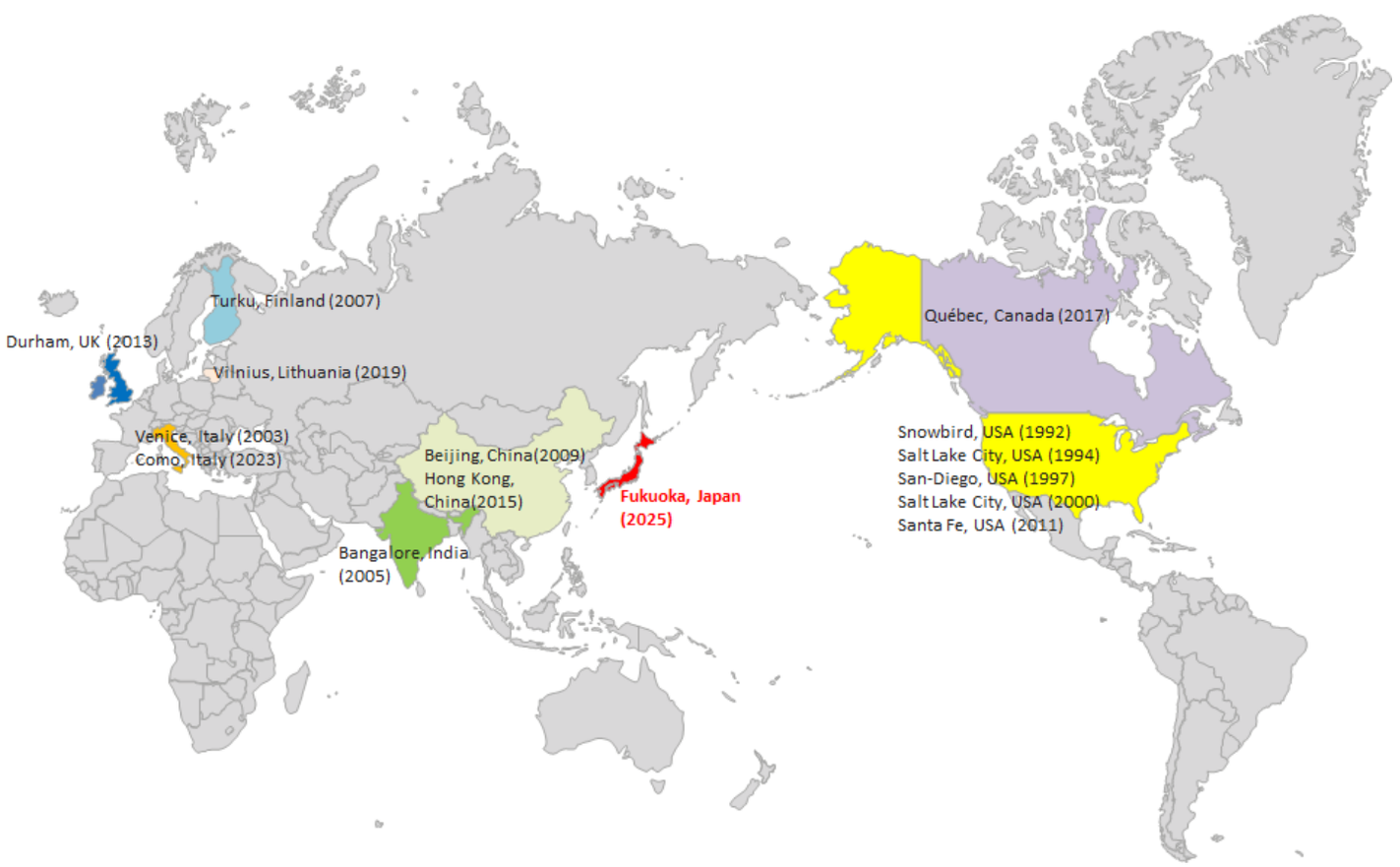
History of Optical Probes

Snowbird, USA (1992), Salt Lake City, USA (1994), San-Diego, USA (1997), Salt Lake City, USA (2000), Venice, Italy (2003), Bangalore, India (2005), Turku, Finland (2007), Beijing, China (2009), Santa Fe, USA (2011), Durham, UK (2013), Hong Kong, China (2015), Québec, Canada (2017), Vilnius, Lithuania (2019), Como, Italy (2023).



Revision history

[10th Sep., 2025]

- Poster layout was revised.
- P60, P61 were added.

Addition:

P60* **Ryota Zenke** (Kyushu University) “Investigation of Photophysical Properties of Triazine Derivatives Bearing Two-Photon Absorption and TADF Characters”

P61* **Jung Hyunje** (Kyushu University) “Investigation on Photophysical Properties of $HzTFEX_2$”

- P12 were changed.

Before:

P12* **Prasannamani Govindharaj** (Łódź University of Technology) “Efficient deep blue OLEDs using Diazaborole-based TADF and/or RTP emitters”

After:

P12 **Ming Lee Tang** (University of Utah) “Photogenerated excitons for spin-polarized QD-molecular nanostructures”

[16th Sep., 2025]

- OR56 information was corrected.

Error:

OR56 17:30—17:45 **Marc Etherington** (Institute of Nanotechnology CNR NANOTEC - Lecce)
Tuning the chromophore of an N-aryl scaffold for thermally activated delayed fluorescence

Correction:

OR56 17:30—17:45 **Marc Etherington** (Northumbria University)
Tuning the chromophore of an N-aryl scaffold for thermally activated delayed fluorescence

[22nd Sep., 2025]

- Information of OR20, OR41 was corrected.

Error:

OR20 11:25—11:40 **Cristina Sissa** (University of Genova)

Correction:

OR20 11:25—11:40 **Cristina Sissa** (University of Parma)

Error:

OR41 14:55—15:10 **Andrea Lanfranchi** (University of Parma)

Correction:

OR41 14:55—15:10 **Andrea Lanfranchi** (University of Genova)

Error:

P51* Andrea Szloboda (University of Parma)

Correction:

P51* Andrea Szloboda (University of Sheffield)