

**MONDAY** September 1

12:00 – Registration

13:45 – 14:00 **Conference Opening**

**Afternoon Session I** Chair: Masuo

14:00 – 14:30

**Johan Hofkens:** *Trapping of (single) particles: from swarming to memory applications (Invited)*

14:30 – 14:50

**Atsushi Miura:** *Elucidation of Molecular Orientation Behavior toward Laser-Induced Spatiotemporal Control of Protein Crystallization*

14:50 – 15:20

**Ayumi Ishii:** *Spin-induced Photoelectric Functions in One-dimensional Helical Materials with Organic-inorganic Hybrid Structures (Invited)*

Coffee break

**Afternoon Session II** Chair: Miura

15:50 – 16:10

**Sadahiro Masuo:** *Energy Transfer from a Perovskite Nanocrystal to Organic Dyes*

16:10 – 16:40

**Arindam Chowdury:** *Role of Metastable Quenchers in Determining Spatially (Un)Correlated PL Blinking of Perovskite Crystals (Invited)*

16:40 – 17:00

**Shun Omagari:** *Variance of the Photophysical Properties of CsPbBr<sub>3</sub> Nanocrystals at Ensemble and Single-particle Level*

17:30 – **Welcome Reception (open to all participants)**  
at Wine Cluster Hokkaido

**TUESDAY** September 2

**Morning Session I**

Chair: Basché

9:00 – 9:45

**W. E. Moerner:** *Single-Molecule Detection, Spectroscopy, and Imaging Over the Years: From 1.4K to SARS-CoV-2 Nanostructures in Cells (Plenary online)*

9:45 – 10:15

**Richard Hildner:** *Structure-Property Relationships in Single Conjugated Co-Polymers (Invited)*

Coffee break

**Morning Session II**

Chair: Hildner

10:45 – 11:05

**Nicola Fairbairn:** *Highly efficient exciton-exciton annihilation in single conjugated polymer chains*

11:05 – 11:35

**Jürgen Köhler:** *Natural and Biomimetic Light-Harvesting Nanotubes in the Light of Single-Molecule Spectroscopy (Invited)*

11:35 – 11:55

**Syoji Ito:** *Local photoexcitation of conjugated polymer solids through excitation energy transfer from single upconversion nanoparticles towards characterization of energy migration length*

Lunch

**Afternoon Session I**

Chair: Sandoghdar

13:30 – 14:00

**Kohei Imura:** *Near-field imaging of plasmon modes and chiral optical fields near single gold nanoplates (Invited)*

14:00 – 14:20

**Kosei Ueno:** *Controlling Chemical Processes via Modulation of Electronic and Vibrational Relaxation Dynamics under Plasmonic and Polaritonic Coupling*

14:20 – 14:50

**Vladimíra Petráková:** *High-Yield Assembly of Plasmon-Coupled Nanodiamonds using DNA Origami for Tuned Emission (Invited)*

Coffee break

**Afternoon Session II**

Chair: Petráková

15:10 – 15:30

**Christoph Kertzsch:** *Polariton-Mediated Energy Transfer Between Organic Molecules at Distances of Several  $\mu\text{m}$*

15:30 – 16:00

**Sabrina Jürgensen:** *Collective optical states in one- and two-dimensional molecular lattices (Invited)*

Conference photo taking

16:30 – 18:30 **Poster session**

**WEDNESDAY** September 3

**Morning Session I**

Chair: Scheblykin

9:00 – 9:30

**Masaru Kuno:** *Widefield mid-infrared photothermal heterodyne imaging (Invited)*

9:30 – 9:50

**Satoru Fujiyoshi:** *Cryogenic Fluorescence Nanoscopy of Individual Molecules using Three-Dimension Camera System*

9:50 – 10:20

**Mikako Ogawa:** *Cancer therapy based on light-induced chemical structural transformation (Invited)*

Coffee break

**Morning Session II**

Chair: Lauret

10:50 – 11:10

**Linda Biondelli:** *Local environment influence on mid-infrared photothermal contrast*

11:10 – 11:40

**Hugo Levy-Falk:** *Hybrid Interfaces for Sensing and Control in Fluorescent Organic Molecules (Invited)*

11:40 – 12:00

**Tsuyoshi Fukaminato:** *Efficient photoswitchable fluorescent nanoparticles: Design and development*

Lunch (International Committee meeting)

**Afternoon Session I**

Chair: Kuno

13:30 – 14:00

**Yoshihiko Kanemitsu:** *Single quantum dot spectroscopy of halide perovskite nanocrystals (Invited)*

14:00 – 14:20

**Hanses Niklas:** *Enhancing Molecule Detection in Localization Microscopy through False Positive Probability Selection*

14:20 – 14:50

**Xiaoyong Wang:** *Up-Converted Photoluminescence from a Single Perovskite Nanocrystal at Cryogenic Temperatures (Invited)*

Coffee break

**Afternoon Session II**

Chair: Wang

15:10 – 15:30

**Nithin Pathoor:** *Enhanced exciton diffusion in anthracene-based supramolecular fibers and perovskite micro-disks*

15:30 – 16:00

**Ivan Scheblykin:** *“Digitization” Effects in Luminescence of Micro- and Nanostructured Semiconductors (Invited)*

16:00 – 16:20

**Marc Bröckel:** *Probing the Mesomeric Effect and its Influence on the Molecular Electron Density via Surface-Enhanced Raman Spectroscopy*

19:00 – **Conference Dinner**

**THURSDAY** September 4

**Morning Session I**

Chair: Köhler

9:30 – 10:00

**Thomas Renger:** *Energy Transfer in Far-Red-Light and White-Light Photosystem I (Invited)*

10:00 – 10:20

**Yutaka Shibata:** *Variability of energy-transfer pathway in photosynthetic pigment-protein complex revealed by single molecule excitation-emission spectroscopy*

10:20 – 10:50

**Toru Kondo:** *Photosynthetic light harvesting observed by single-molecule spectroscopy (Invited)*

Coffee break

**Morning Session II**

Chair: Kondo

11:10 – 11:40

**H. Peter Lu:** *Single-Molecule Force Manipulation and Nanoscopic Imaging of Protein Structure-Dynamics-Function Relationship (Invited)*

11:40 – 12:10

**Tjaart Krüger:** *Protein aggregation studied by real-time feedback-driven single-particle tracking spectroscopy (Invited)*

Lunch

**Afternoon Session I**

Chair: Jelezko

13:30 – 14:00

**Vahid Sandoghdar:** *Fourier-limited transition of single surface-adsorbed molecules (Invited)*

14:00 – 14:20

**Kenji Hirai:** *Directed Molecular Assembly within Optical Cavities*

14:20 – 14:50

**Jean-Sébastien Lauret:** *Nanographenes as single quantum emitters (Invited)*

Coffee break

**Afternoon Session II**

Chair: Lu

15:10 – 15:30

**Heyou Zhang:** *Photoswitchable Nanoparticle Arrays*

15:30 – 16:00

**Fedor Jelezko:** *Coherent control of single color centers in diamond (Invited)*

16:00 – 16:20

**Norio Murase:** *Next-Generation Phosphors: Encapsulation of Quantum Dots in Silica Nanoparticles and Single Particle Analysis Insights*

**FRIDAY** September 5

**Morning Session I**

Chair: Krüger

9:00 – 9:30

**Miya Ishihara:** *In vivo spectroscopic photoacoustic imaging and system development (Invited)*

9:30 – 9:50

**Hiroshi Ujii:** *Novel Microscopic Tools for cellular Responses to anti-cancer stimuli ~From Single-cell to Cell Populations~*

9:50 – 10:10

**James Hutchinson:** *Lanthanide nanomaterials for anti-cancer applications (Invited)*

Coffee break

**Morning Session II**

Chair: Hofkens

10:40 – 11:00

**Martin Vacha:** *Nanoscale photophysics and long-range exciton transport in supramolecular and perovskite meso-hierarchical structures*

11:00 – 11:30

**Thomas Basché:** *Singlet fission among two single molecules (Invited)*

11:30 - Conference Closing

Free sightseeing