

April 6 14:30-17:30 Tutorial Session

Chairperson: Din-Ping Tsai, City University of Hong Kong

14:30-15:10 **Lei Zhou**, Fudan University

Title: Metasurfaces: Physics and Applications

15:10-15:50 **Javier Garcia de Abajo**, ICFO-Institut de Ciències Fotoniques

Title: Quantum optical phenomena in two-dimensional materials

15:50-16:10 Coffee Break

16:10-16:50 **Javier Aizpurua**, Donostia International Physics Center (DIPC)

Title: Limits of Classical Models to Describe Optical Properties of Metallic Nanoparticles

16:50-17:30 **Liang Feng**, University of Pennsylvania

Title: Non-Hermitian Photonics for Information Processing and Reconfigurable Computing Acceleration

17:30-20:00 Welcome Reception

April 7 08:30-08:50 Opening Ceremony

Chairpersons: Hongxing Xu, Wuhan University

Xiaoshi Zhang, Yunnan University

April 7 08:50-10:10 Fundamental Physics in Plasmonics

Chairperson: Hongxing Xu, Wuhan University

08:50-09:10 **Javier Garcia de Abajo**, ICFO-Institut de Ciències Fotoniques

Title: Quantum interactions of free electrons and confined optical modes (Invited)

09:10-09:30 **Shiwu Gao**, Beijing Computational Science Research Center

Title: Charge transfer and photocatalysis induced by plasmonic hot carriers (Invited)

09:30-09:50 **Yonatan Sivan**, Ben-Gurion University

Title: "Hot" carriers in metal nanostructures – when they matter, and when they do not. (Invited)

09:50-10:10 **Hui Liu**, Nanjing University

Title: A conformal mapping approach to broadband nonlinear optics on chip (Invited)

10:10-10:40 Photo Time & Coffee Break

April 7 10:40-12:00 Integrated Active Source

Chairperson: Ren-Min Ma, Peking University

- 10:40-11:00 **Liang Feng**, University of Pennsylvania
Title: Orbital Angular Momentum Microlasers (Invited)
- 11:00-11:20 **Xuechun Lin**, Institute of Semiconductors, Chinese Academy of Sciences
Title: High-Power Pulsed Laser and its Application (Invited)
- 11:20-11:40 **Tianrui Zhai**, Beijing University of Technology
Title: Dual-color emissive OLED with orthogonal polarization modes (Invited)
- 11:40-11:50 Jun Guan, The Chinese University of Hong Kong, Shenzhen
Title: Plasmonic Metasurface Lasers with Controllable Emission Properties (Oral)
- 11:50-12:00 Zhenglong Zhang, Shaanxi Normal University
Title: Luminescence of Rare earth doped nanoparticle in plasmonic nanocavity (Oral)

12:00-13:30 Lunch

April 7 13:30-15:40 Metasurface and Metamaterial I

Chairperson: Tao Li, Nanjing University

- 13:30-13:50 **Ruwen Peng**, Nanjing University
Title: Polarization manipulation and multiplexing with optical metasurfaces (Invited)
- 13:50-14:10 **Qinghai Song**, Harbin Institute of Technology (Shenzhen)
Title: Phase gradients in the gap and new degrees of freedom for meta-devices (Invited)
- 14:10-14:30 **Xianzhong Chen**, Heriot-Watt University
Title: Optical Metasurface for Generating and Manipulating Complex Structured Beams (Invited)
- 14:30-14:50 **Shuming Wang**, Nanjing University
Title: Optical imaging based on metasurfaces (Invited)
- 14:50-15:10 **Howard Lee**, University of California
Title: “Meta”-Optical Fibers: Integration of Metaphotonics with

- Fiber Optics (Invited)
- 15:10-15:20 Jingtian Hu, Harbin Institute of Technology (Shenzhen)
Title: All-optical Sub-wavelength Imaging using a Solid Immersion Diffractive Processor (Oral)
- 15:20-15:30 Renhao Fan, Nanjing University
Title: Improving Photoelectric Conversion with Broadband Perovskite Metasurface (Oral)
- 15:30-15:40 Cheng Zhang, Soochow University
Title: Harvesting losses in plasmonic nanostructures for photodetection in telecommunication band (Oral)

15:40-16:00 Coffee Break

April 7 16:00-17:40 Chiral Plasmonics

Chairperson: Zheyu Fang, Beijing University

- 16:00-16:20 **Mikael Käll**, Chalmers University of Technology
Title: Rotary nanomachines driven by light (Invited)
- 16:20-16:40 **Shunping Zhang**, Wuhan University
Title: TBC (Invited)
- 16:40-17:00 **Zhifeng Huang**, The Chinese University of Hong Kong
Title: Alloy Chiral Nanoparticles with Engineerable Chiroptical Activities (Invited)
- 17:00-17:20 **Weihai Ni**, Soochow University
Title: Single-particle Spectroscopic and Photocatalytic Characterizations on Plasmonic Chiral Nanostructures (Invited)
- 17:20-17:30 Wei Zhang, Institute of Applied Physics and Computational Mathematics
Title: Chiroptics of hybrid nanostructures with strong coupling effects (Oral)
- 17:30-17:40 Xiaolu Zhuo, The Chinese University of Hong Kong
Title: Intrinsic Chiral Gold Nanorods: Optical Activity, Structural Stability, and Chiroptical Switching (Oral)

17:40-20:00 Dinner

April 8 08:30-10:20 Emerging Concepts in Nanophotonics

Chairperson: Ling Lu, Institute of Physics, Chinese Academy

of Sciences

- 08:30-08:50 **Ren-Min Ma**, Peking University
Title: Reconfigurable moiré nanolaser arrays with phase synchronization (Invited)
- 08:50-09:10 **Jun Lou**, Rice University
Title: Synthesis and Optical Characterization of Two-Dimensional Materials (Invited)
- 09:10-09:30 **Xuewen Chen**, Huazhong University of Science and Technology
Title: Interaction of Photons and Electrons Co-localized to the Deep Nanoscale (Invited)
- 09:30-09:50 **Deng Pan**, East China Normal University
Title: Driving thermal vacuum photons by time-modulated media (Invited)
- 09:50-10:00 Zhaoju Yang, Zhejiang University
Title: Photonic skin-topological effect (Oral)
- 10:00-10:10 Meng Kang, The Hong Kong University of Science and Technology
Title: Janus Bound States in the Continuum with Asymmetric Topological Charges and Intrinsic Chirality (Oral)
- 10:10-10:20 Jiahua Duan, Beijing Institute of Technology
Title: Twisted Nano-Optics: steering the flow of electromagnetic energy at will at the nanoscale (Oral)

10:20-10:40 Coffee Break

April 8 10:40-12:00 Nanoscale Optical Imaging

Chairperson: Anders Mikkelsen, Lund University

- 10:40-11:00 **Zhenchao Dong**, University of Science and Technology of China
Title: Sub-nanometer Resolved Single-Molecule Optical Imaging (Invited)
- 11:00-11:20 **Xiaoshi Zhang**, Yunnan University
Title: EUV and Soft X-Ray Nano-imaging for the Next Generation Nano and Quantum Science Applications (Invited)
- 11:20-11:40 **Zheyu Fang**, Beijing University
Title: Cathodoluminescence Spectroscopy For Nanophotonics (Invited)
- 11:40-11:50 Xin Zhang, Huazhong University of Science and Technology
Title: Ultrafast anisotropic dynamics of hyperbolic nanolight pulse

propagation (Oral)

11:50-12:00

Jie Ma, East China Normal University

Title: Probing topological nearfield thermal flux using electron beams (Oral)

11:50-13:30 Lunch

April 8 13:30-15:40 Near-Field Optics

Chairperson: Zhenchao Dong, University of Science and Technology of China

13:30-13:50

Anders Mikkelsen, Lund University

Title: Extreme spatiotemporal imaging and control of nanophotonic components and potential computing applications (Invited)

13:50-14:10

Qing Dai, National Center for Nanoscience and Technology

Title: Polariton modulation and devices (Invited)

14:10-14:30

Huanjun Chen, Sun Yat-sen University

Title: Van Der Waals Polaritonic Crystals and Their Nanostructures (Invited)

14:30-14:50

Yang Zhang, University of Science and Technology of China

Title: Tip-enhanced optomagnetism induced spin magnetic dipole transition unveiled at atomic scale (Invited)

14:50-15:10

Lasse Jensen, The Pennsylvania State University

Title: Modeling Atomistic Near-Field Spectroscopy (Invited)

15:10-15:20

Shu Chen, University of Shanghai for Science and Technology

Title: Real-space observation of ultra-confined in-plane anisotropic acoustic THz plasmon polaritons (Oral)

15:20-15:30

Caixing Hu, Huazhong University of Science and Technology

Title: Efficient nano-light orientation strategy via source-configured symmetry-broken hyperbolic polaritons (Oral)

15:30-15:40

Weiwei Luo, Nankai University

Title: Topological valley plasmons in twisted monolayer-double graphene moiré superlattices (Oral)

15:40-16:00 Coffee Break

April 8 16:00-18:00 Metasurface and Metamaterial II

Chairperson: Ruwen Peng, Nanjing University

- 16:00-16:20 **Din-Ping Tsai**, City University of Hong Kong
Title: Meta Optical Devices from Classical to Quantum Photonics (Invited)
- 16:20-16:40 **Tao Li**, Nanjing University
Title: Neural network enhanced meta-devices (Invited)
- 16:40-17:00 **Xiangping Li**, Jinan University
Title: Poincaré Sphere Trajectory Encoding Metasurfaces (Invited)
- 17:00-17:20 **Yuanmu Yang**, Tsinghua University
Title: Monocular metasurface camera for single-shot multi-dimensional imaging (Invited)
- 17:20-17:40 **Junsuk Rho**, Pohang University of Science and Technology
Title: Scalable Manufacturing of Optical Metasurfaces in the Visible with Engineered Optical Materials (Low-loss a-Si:H, PER, and Hybrid ALD Structural Resin) (Invited)
- 17:40-17:50 Jinwei Shi, Beijing Normal University
Title: Chiral Response of plasmonic metasurface (Oral)
- 17:50-18:00 Jingcheng Zhang, City University of Hong Kong
Title: Varifocal Meta-devices from 1D to 3D for Bioimaging and Future 6G Communication (Oral)

18:00-20:00 Dinner

April 9 08:30-09:50 Plasmon-Exciton Interaction

Chairperson: Javier Aizpurua, Donostia International Physics Center

- 08:30-08:50 **Jianfang Wang**, The Chinese University of Hong Kong
Title: Interactions between Localized Plasmons and Two-dimensional Excitons (Invited)
- 08:50-09:10 **Hong Wei**, Institute of Physics, Chinese Academy of Sciences
Title: Interaction between Surface Plasmons and Excitons (Invited)
- 09:10-09:30 **Tao Jiang**, Tongji University
Title: Nano-optics of quasiparticles in two-dimensional heterostructures (Invited)
- 09:30-09:40 Shu Hu, Xiamen University
Title: Robust and consistent single-quantum-dot plasmonic-nanocavity: strong coupling at room temperature (Oral)
- 09:40-09:50 Tianwei Qin, Huazhong University of Science and Technology

Title: Phonon polaritons in van der Waals polar heterostructures for broadband strong light–matter interactions (Oral)

09:50-10:10 Coffee Break

April 9 10:10-11:30 Plasmon-Enhanced Spectroscopy

Chairperson: Jianfang Wang, The Chinese University of Hong Kong

- 10:10-10:30 **Javier Aizpurua**, Donostia International Physics Center
Title: Controlling Spectral Properties in Fluorescence and Raman Scattering from Plasmonic Configurations (Invited)
- 10:30-10:50 **Tao Ding**, Wuhan University
Title: Supramolecular plasmonics: from classical to quantum regime (Invited)
- 10:50-11:10 **Ivana Qianqi Lin**, University of Twente
Title: Plasmonic Nanocavities to Picocavities: Tracking Dynamics of Polymers, Few- to Single-Molecules (Invited)
- 11:10-11:20 Wen Chen, East China Normal University
Title: A Molecular Optomechanical Nanocavity Platform for Continuous-Wave Mid-Infrared to Visible Frequency Upconversion (Oral)
- 11:20-11:30 Longkun Yang, Capital Normal University
Title: Quantitative SERS detection: From traditional intensity gauging to statistical route (Oral)

11:30-12:30 Lunch

April 9 12:30-18:00 Poster Session

- 12:30-18:00 **Poster Session**
- 14:30-18:00 **Lab Tour**

18:00-20:00 Dinner

April 10 08:30-10:00 Light-Matter Interaction

Chairperson: Junsuk Rho, Pohang University of Science and Technology

- 08:30-08:50 **Yun Lai**, Nanjing University

- Title:** Zero-spacing photonic waveguides and circuits (Invited)
 08:50-09:10 **Dangyuan Lei**, City University of Hong Kong
Title: Electromagnetic Asymmetry and Optical Magnetism for Nonlinear Plasmonics (Invited)
 09:10-09:30 **Ning Liu**, University of Limerick
Title: Plasmonic nanocavities for quantum light emitters (Invited)
 09:30-09:40 Heyuan Guan, Jinan University
Title: Efficient Second Harmonic Generation of Quasi-Bound States in the Continuum in Lithium Niobate Thin Film Enhanced by Bloch Surface Waves (Oral)
 09:40-09:50 Fan Yang, Sichuan University
Title: Transformation Optics Approach to Nonlinear and Nonclassical Plasmonics (Oral)
 09:50-10:00 Shaoxin Shen, Huaqiao University
Title: Nonlinear Light Amplification Governed by Multi-dimensional Structural Asymmetry (Oral)

10:00-10:20 Coffee Break

April 10 10:20-12:00 Plasmonic Loss Issue

- Chairperson: Shiwu Gao**, Beijing Computational Science Research Center
- 10:20-10:40 **Ling Lu**, Institute of Physics, Chinese Academy of Sciences
Title: Hyper-gap transparent metal (Invited)
 10:40-11:00 **Lin Zhou**, Nanjing University
Title: Steering the optical loss of emerging plasmonic materials for advanced nanophotonics (Invited)
 11:00-11:20 **Huigao Duan**, Hunan University
Title: High-quality Ultrathin Transparent Plasmonic Nanostructures (Invited)
 11:20-11:40 **Peng Yu**, University of Electronic Science and Technology of China
Title: Harvesting plasmonic losses: from hot electron to photothermal effect (Invited)
 11:40-11:50 Alexey Krasavin, King's College London
Title: Atomically Smooth Single-Crystalline Platform for High-Quality Plasmonic Resonances (Oral)
 11:50-12:00 Wenhui Wang, Xi'an Jiaotong University

Title: Reduced loss of surface plasmon propagation on hybrid metal nanostructures (Oral)

12:00-13:30 Lunch

April 10 13:30-15:00 Sensing and Bioimaging

Chairperson: Hong Wei, Institute of Physics, Chinese Academy of Sciences

- 13:30-13:50 **Hairong Zheng**, Shaanxi Normal University
Title: Plasmonic effects on rare earth doped luminescent particles (Invited)
- 13:50-14:10 **Jianing Chen**, Institute of Physics, Chinese Academy of Sciences
Title: Probing Transient Plasmons in Semiconductors (Invited)
- 14:10-14:30 **Xing Yi Ling**, Nanyang Technological University
Title: Intelligent Surface-Enhanced Raman Scattering Platforms for Predictive Chemical and Biosensing: A Machine Learning Approach (Invited)
- 14:30-14:40 Hongyan Liang, Tianjin University
Title: Developing Metallic Nanostructures for Electrochemical Energy Conversion (Oral)
- 14:40-14:50 Kai Chen, Jinan University
Title: ZIF-8 modified Plasmonic nanoantennas for the detection of ethanol vapors (Oral)
- 14:50-15:00 Ieng-Wai Un, South China Normal University
Title: Electronic and Optical Nonlinear response of Low-Electron-Density Drude Materials to Ultrafast Optical Illumination (Oral)

April 10 15:00-15:30 Closing Ceremony

- 15:00-15:15 **Xiaoshi Zhang**, Yunnan University
Best Poster Award
- 15:15-15:30 **Hongxing Xu**, Wuhan University
Closing Remarks & Announcement about FOP7