CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo1A] Inverse Design for Metamaterials I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Sunae So (Korea Univ., Korea)

[Mo1A-1] [Invited] 10:30-11:00

Adjoint Sensitivity Analysis based Photonic Structure Efficiency Prediction and Data Augmentation

Chanik Kang, Dongjin Seo (Hanyang Univ., Korea), Svetlana Boriskina (Massachusetts Inst. of Tech., USA), and Haejun Chung (Hanyang Univ., Korea)

[Mo1A-2] 11:00-11:15

Deep Learning-Based Metasurface Design Platform with Self-Data Generation

Ki Won Jeong and Yun Seon Do (Kyungpook Nat'l Univ., Korea)

[Mo1A-3] 11:15-11:30

Mutative Evolution for Calculating Maximally Localized Wannier Functions in Photonic Crystals

Dayeong Lee, Gitae Lee, Seungkyun Park, Hyungchul Park, Namkyoo Park, and Sunkyu Yu (Seoul Nat'l Univ., Korea)

[Mo1A-4] 11:30-11:45

Incoherent Meta-imaging System for Noise-robust Object Recognition

Jungmin Kim (Univ. of Wisconsin–Madison, USA), Nanfang Yu (Columbia Univ., USA), and Zongfu Yu (Univ. of Wisconsin–Madison, USA)

[Mo1A-5] 11:45-12:00

Artificial Intelligence-enhanced Metasurfaces for the Instantaneous Measurement of Dispersive Refractive Index

Seokho Lee, Trevon Badloe, Younghwan Yang, and Junsuk Rho (POSTECH, Korea)

Session Title:	[Mo1B] Ultrafast and Nonlinear Optics in Emerging Materials I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Jonghwan Kim (POSTECH, Korea)

[Mo1B-1] [Invited] 10:30-11:00

Second Harmonic Generation from Centrosymmetric Graphene Induced by Interfacial Charge Doping

Xuetao Gan and Mingwen Zhang (Northwestern Polytechnical Univ., China)

[Mo1B-2] 11:00-11:15

BIC-Stimulated Harmonic Generation in Dielectric Metasurfaces Integrated with Transition Metal Dichalcogenide Monolayers

A. A. Nazarenko, A.M.Chernyak, A.I.Musorin, A.S.Shorokhov, and A. A. Fedyanin (Lomonosov Moscow State Univ., Russia)

[Mo1B-3] 11:15-11:30

Upconversion Nanoparticle Thin Film Amplifier of Third Harmonic Generation

Taewon Kim, Seungjai Won (KAIST, Korea), Geon Dae Kim, Won-woo Noh, Murad Abualrejal (Sungkyunkwan Univ., Korea), Seung-Woo Kim (KAIST, Korea), Donghwan Kim (Sungkyunkwan Univ., Korea), and Young-Jin Kim (KAIST, Korea)

[Mo1B-4] 11:30-11:45

Efficient Polarization-Insensitive Second Harmonic Generation via Bound States in the Continuum

Kezhou Fan (The Hong Kong Univ. of Science and Tech., Hong Kong S.A.R), Haohan Chen (South China Normal Univ., China), Aleksandr A. Sergeev (The Hong Kong Univ. of Science and Tech., Hong Kong S.A.R), Lijun Wu (South China Normal Univ., China), and Kam Sing Wong (The Hong Kong Univ. of Science and Tech., Hong Kong S.A.R)

[Mo1B-5] 11:45-12:00

Strong Enhancement of Nonlinear Optical Response in $BaTiO_3$ Membrane Wrinkle Structure on a Metal Substrate

Jungseok Choi, Gyeongmo Yang, Youngmin Kim, Tayyaba Batool, Hyungwoo Lee, and Dong-

Il Yeom (Ajou Univ., Korea)

Session Title:	[Mo1C] Quantum Optics and Quantum Information I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Yoon-Ho Kim (POSTECH, Korea)

[Mo1C-1] [Invited] 10:30-11:00

Programmable Continuous-Variable Photonic Quantum Computing in the Time Domain

Shuntaro Takeda (The Univ. of Tokyo, Japan)

[Mo1C-2] 11:00-11:15

Experimental Quantum State Tomography of Multimode Gaussian States

Chan Roh, Geunhee Gwak, Young-Do Yoon, and Young-Sik Ra (KAIST, Korea)

[Mo1C-3] 11:15-11:30

Generating Schrodinger's Kitten State from Coherent Pulses via Deterministic Photon Subtraction

Abdolreza Pasharavesh and Michal Bajcsy (Univ. of Waterloo, Canada)

[Mo1C-4] 11:30-11:45

Wigner's Phase Space Current for the Conditional Dynamics in Entangled Two Mode Systems — Seeing Beam Splitters in a New Light —

Ole Steuernagel and Ray-Kuang Lee (Nat'l Tsing Hua Univ., Taiwan)

[Mo1C-5] 11:45-12:00

Quantum Contextuality Observed by Operational Input State Preparations

Kengo Matsuyama, Ming Ji, Holger F. Hofmann, and Masataka Iinuma (Hiroshima Univ., Japan)

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Session Title:	[Mo1D] Heterogeneous Integration 1: Lithium Niobate
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room D (113)
Session Chair(s)	Dr. Amirhassan Shams-Ansari (Harvard Univ., USA)

[Mo1D-1] [Invited] 10:30-11:00

Integrated Lithium Niobate Microwave Photonics

Cheng Wang (City Univ. of Hong Kong, Hong Kong S.A.R)

[Mo1D-2] 11:00-11:15

Observation of Su-Schrieffer-Heeger Topological Model Band Structure in Integrated LNOI Coupled Ring Cavities

Hiep X. Dinh, Armandas Balcytis (RMIT Univ., Australia), Tomoki Ozawa (Tohoku Univ., Japan), Yasutomo Ota (Keio Univ., Japan), Toshihiko Baba (Yokohama Nat'l Univ., Japan), Satoshi Iwamoto (The Univ. of Tokyo., Japan), Arnan Mitchell, and Thach G. Nguyen (RMIT Univ., Australia)

[Mo1D-3] 11:15-11:30

Micro-transfer Printed Thin-film Lithium Niobate Modulator for Heterogeneous Si Photonic Platform

Toshiya Murai, Rai Kou, Cong Guangwei (AIST, Japan), Masahiko Imai, Kazumasa Takabayashi, Nobuaki Mitamura, Suguru Akiyama (Fujitsu Optical Components Ltd., Japan), and Koji Yamada (AIST, Japan)

[Mo1D-4] 11:30-11:45

Multiband Electro-optic Modulator Employing a Lithium Niobate Racetrack Resonator Integrated with Two Pulley Couplers

Hyeon Hwang, Mohamad Reza Nurrahman (KAIST, Korea), Hyungjun Heo (KIST, Korea), Kiyoung Ko (KAIST, Korea), Kiwon Moon, Jung Jin Ju (ETRI, Korea), Sang-Wook Han, Hojoong Jung (KIST, Korea), Hansuek Lee, and Min-Kyo Seo (KAIST, Korea)

[Mo1D-5] 11:45-12:00

Characterisation of Micro-Transfer Printed cm-scale Lithium Niobate on a Silicon Nitride Platform

Margot Niels, Tom Vanackere, Stijn Poelman, Tom Vandekerckhove, Günther Roelkens, Maximilien Billet, and Bart Kuyken (Ghent Univ., Belgium)

Session Title:	[Mo1E] Optical Metrology I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room E (114)
Session Chair(s)	Dr. Hojoong Jung (KIST, Korea), Dr. Akiko Hirai (Nat'l Metrology Inst. of Japan, Japan)

[Mo1E-1] [Invited] 10:30-11:00

Rapid and Nanometric-Precision Distance Measurement with Hybrid Comb Lasers

Jiawen Zhi (Huazhong Univ. of Science and Tech., China), Zhichuang Wang (Xi'an Inst. of Optics and Precision Mechanics, Chinese Academy of Sciences, China), Hanzhong Wu (Huazhong Univ. of Science and Tech., China), Brent E. Little (Xi'an Inst. of Optics and Precision Mechanics, Chinese Academy of Sciences, China), Sai T. Chu (City Univ. of Hong Kong, Hong Kong S.A.R), Panpan Wang, Chenggang Shao (Huazhong Univ. of Science and Tech., China), Weiqiang Wang, and Wenfu Zhang (Xi'an Inst. of Optics and Precision Mechanics, Chinese Academy of Sciences, China)

[Mo1E-2] 11:00-11:15

Experimental Investigation of Thermally Insensitive Kerr Microresonator Soliton Comb

Kenji Nishimoto (Tokushima Univ., Japan), Kaoru Minoshima (The Univ. of Electro-Communications, Japan), and Naoya Kuse (Tokushima Univ., Japan)

[Mo1E-3] 11:15-11:30

Low-phase-noise Microwave Synthesis from Ultra-stable Lasers via a Frequency Comb as a Transfer Oscillator

Dang-Bao-An Tran, Giuseppe Marra, and Patrick Gill (Nat'l Physical Lab., UK)

[Mo1E-4] 11:30-11:45

Dispersion Engineering of Crystalline Microresonators for Optical Frequency Comb Generation beyond C-band

Ryomei Takabayashi, Hikaru Kodama, Koya Tanikawa, Yasuhiro Kakinuma, Takasumi Tanabe, and Shun Fujii (Keio Univ., Japan)

[Mo1E-5] 11:45-12:00

Development of Broadband Fiber-Based Frequency Comb Light Sources Beyond the Gain

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Bandwidth Using Nonlinearity in a Laser Cavity

Ryusei Uchiyama, Tadashi Matsumoto, Takumi Yumoto (Toho Univ., Japan), Wataru Kokuyama (Nat'l Metrology Inst. of Japan/AIST, Japan), and Yoshiaki Nakajima (Toho Univ., Japan)

Session Title:	[Mo1F] Low-dimensional Photonics I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-11:45
Session Room:	Room F (115)
Session Chair(s)	Prof. Lei Zhou (Fudan Univ., China)

[Mo1F-1] [Invited] 10:30-11:00

Exploring Waveguide Modes in 2D Materials for Integrated Photonics

Myungjae Lee (Seoul Nat'l Univ., Korea)

[Mo1F-2] 11:00-11:15

Advancing Photodetection with Enhanced Sensitivity, Spectral and Polarization Selectivity in Two-Dimensional Semiconductors

Lavrov S.D., Guskov A.A., and Stepanov M.A. (MIREA - Russian Technological Univ., Russia)

[Mo1F-3] 11:15-11:30

Second-order Nonlinear Optics in Ultrahigh-Q Silica Microcavities Decorated by Two-Dimensional Materials

Shun Fujii (Keio Univ., Japan), Nan Fang (RIKEN Cluster for Pioneering Research, Japan), Daiki Yamashita, Daichi Kozawa (RIKEN Center for Advanced Photonics, Japan), Chee Fai Fong (RIKEN Cluster for Pioneering Research, Japan), and Yuichiro K. Kato (RIKEN Center for Advanced Photonics, Japan)

[Mo1F-4] 11:30-11:45

Investigating Critical Librational/Rotational Transitions of Optically-Levitated Nanoparticles

Chaoxiong He, Jinchuan Wang, Ying Dong, Shaochong Zhu, Qianwen Ying (Zhejiang Lab, China), Yuanyuan Ma (Nanjing Univ., China), Fu Feng (Zhejiang Lab, China), Zhangqi Yin (Beijing Inst. of Tech., China), Cuihong Li (Zhejiang Lab, China), and Huizhu Hu (Zhejiang Univ., China)

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Session Title:	[Mo1G] Molecular Sensing
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room G (116)
Session Chair(s)	Prof. Seung Ah Lee (Yonsei Univ., Korea)

[Mo1G-1] [Tutorial] 10:30-11:15

Digital Molecular Sensing and Analytics

Matthew R. Foreman (Nanyang Technological Univ., Singapore)

[Mo1G-2] 11:15-11:30

PMMA Fiber-based Microbubble Laser for High-sensitive Biomolecule Detection

Sun Xiyu, Xia Yuhan, Fang Guocheng, and Yu-Cheng Chen (Nanyang Technological Univ., Singapore)

[Mo1G-3] 11:30-11:45

Au-Pt Alloy Nanoislands for Localized Surface Plasmon Resonance (LSPR)-based Sensing of Bio-chemical Analytes

Wen Di Chan, Xiaotian Zhu, Sai Tak Chu, and Chi-Man Lawrence Wu (City Univ. of Hong Kong, Hong Kong S.A.R)

[Mo1G-4] 11:45-12:00

Sensing Dissolved Methane Using Optical Microfiber Coupler Probe

K. Barnfather, T. Lee (Univ. of Southampton, UK), S. Steigenberger, E. Papadimitriou (Nat'l Oceanography Center, UK), M. Beresna (Univ. of Southampton, UK), T. Brotin (Univ. de Lyon, France), F. Siracusa, M. Mowlem (Nat'l Oceanography Center, UK), G. Brambilla, and R. Ismaeel (Univ. of Southampton, UK)

Session Title:	[Mo1H] Solid-State Lasers I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room H (117)
Session Chair(s)	Prof. Weidong Chen (Chinese Academy of Sciences, China)

[Mo1H-1] 10:30-10:45

Sub-40-fs Diode-pumped Mode-locked Yb:CaF_2 Laser

Zhi-Qiang Li, Wen-Ze Xue (Fujian Inst. of Research on the Structure of Matter, Chinese Academy of Sciences, China), Pavel Loiko (Univ. de Caen, France), Zhang-Lang Lin, Huang-Jun Zeng, Hai-Yu Nie, Ge Zhang (Fujian Inst. of Research on the Structure of Matter, Chinese Academy of Sciences, China), Simone Normani, Abdelmjid Benayad, Patrice Camy (Univ. de Caen, France), Xavier Mateos (Univ. Rovira i Virgili, Spain), Hsing-Chih Liang (Nat'l Yang Ming Chiao Tung Univ., Taiwan), Valentin Petrov (Max Born Inst. for Nonlinear Optics and Short Pulse Spectroscopy, Germany), and Weidong Chen (Fujian Inst. of Research on the Structure of Matter, Chinese Academy of Sciences, China)

[Mo1H-2] 10:45-11:00

Numerical Simulation on Synchronization of Pulse-Timing for Passively Q-Switched Microchip Lasers

Rhona Hamilton (The Univ. of Tokyo, Japan), Kenichi Hirosawa, Nobuo Ohata (Mitsubishi Electric Corp., Japan), Sze Yun Set, and Shinji Yamashita (The Univ. of Tokyo, Japan)

[Mo1H-3] 11:00-11:15

7.5-Watt 2.29 μm Continuous-Wave Laser Operation of Diffusion-Bonded Composite YVO_4/Tm:$GdVO_4$ Crystal

Xiaoxu Yu, Zhongben Pan, Han Pan, Hongwei Chu, and Dechun Li (Shandong Univ., China)

[Mo1H-4] 11:15-11:30

Microchip Orbital Angular Momentum Switchable Laser

Lan Hai, Chen Li, and Shiyao Fu (Beijing Inst. of Tech., China)

[Mo1H-5] [Invited] 11:30-12:00

Non-collinear Optical Parametric Oscillators (NOPOs): Broadband and Rapidly Tunable Femtosecond Laser Sources

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F. J. Geesmann, R. Mevert (Leibniz Univ. Hannover, Germany), T. Lang (Deutsches Elektronen-Synchrotron, Germany), Y. Binhammer, D. Zuber, and U. Morgner (Leibniz Univ. Hannover, Germany)

Session Title:	[Mo1I] mmWare / THz / FSO Communications
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room I (118)
Session Chair(s)	Dr. HwanSeok Chung (ETRI, Korea)

[Mo1I-1] [Invited] 10:30-11:00

Experimental Demonstrations of Next Generation Communication Networks Enabled by Sub-THz Band Technologies

Sang-Rok Moon, Minkyu Sung, Sooyeon Kim, and Seung-Hyun Cho (ETRI, Korea)

[Mo1I-2] 11:00-11:15

SMF/NDF-FSO-5G NR/6G Converged Systems

Wei-Xiang Chen, Chih-Hong Lin, Jia-Lian Jin, Yan-Zhen Xu, Tsai-Man Wu, and Hai-Han Lu (Nat'l Taipei Univ. of Tech., Taiwan)

[Mo1I-3] 11:15-11:30

Interference Reduction for Underwater Wireless Optical Communication System Based on HACO-OFDM

Xuan Huang, Xu Xia, and Peng Chen (China Telecom Research Inst., China)

[Mo1I-4] [Invited] 11:30-12:00

Millimeter-wave and THz Fixed Wireless System and Its Challenges in Tropical Weather Condition

Sitthichok Nakprasert and Ukrit Mankong (Chiang Mai Univ., Thailand)

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Session Title:	[Mo1J] Topology and Photonics I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Su-Hyun Gong (Korea Univ., Korea), Prof. Jae Woong Yoon (Hanyang Univ., Korea)

[Mo1J-1] [Invited] 10:30-11:00

Topological Structures in and for Light

L. (Kobus) Kuipers (Kavli Inst. Delft, The Netherlands)

[Mo1J-2] [Invited] 11:00-11:30

Orbital Angular Momentum Microlasers

Liang Feng (Univ. of Pennsylvania, USA)

[Mo1J-3] 11:30-11:45

Flat Band Light Localization in One Dimensional Moiré Bilayer Photonic Crystals with Staggered Potential

Stepan Maksimovich Trushin, Yuki Ishii, Takahiro Ito (Keio Univ., Japan), Satoshi Iwamoto (The Univ. of Tokyo, Japan), and Yasutomo Ota (Keio Univ., Japan)

[Mo1J-4] 11:45-12:00

Investigation of One-dimensional Moiré Photonic Crystal Nanobeam Cavities

Takahiro Ito, Yuki Ishii, Stepan Maksimovich Trushin (Keio Univ., Japan), Guangtai Lu, Satoshi Iwamoto (The Univ. of Tokyo, Japan), and Yasutomo Ota (Keio Univ., Japan)

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Session Title:	[Mo1K] Short-Haul Systems
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room K (204-205)
Session Chair(s)	Prof. Sunghyun Bae (Kangwon Nat'l Univ., Korea)

[Mo1K-1] [Tutorial] 10:30-11:15

Enhancing Fiber-to-The-Room (FTTR) Technologies: Addressing Key Challenges and Solutions

Gangxiang Shen, Jun Li, Jinhan Cai, Mingyuan Zan, and Shen Yu (Soochow Univ., China)

[Mo1K-2] 11:15-11:30

Precoding-assisted Inter-ONU Interference Alleviation in OFDM-NOMA-PON System

Geyang Wang (The Chinese Univ. of Hong Kong, Hong Kong S.A.R), Xiaohao Chen (The Univ. of Hong Kong, Hong Kong S.A.R), and Lian-Kuan Chen (The Chinese Univ. of Hong Kong, Hong Kong S.A.R)

[Mo1K-3] 11:30-11:45

4 x 50 Gb/s 0.85 pJ/bit PAM-4 CMOS VCSEL Driver for Linear Pluggable Optics

Jun-Seo Kim, Kihun Kim (Yonsei Univ., Korea), Tae Hwan Jin, Pyung-Su Han (Qualitas Semiconductor Co., Ltd., Korea), and Woo-Young Choi (Yonsei Univ., Korea)

[Mo1K-4] 11:45-12:00

Multi-tap DFE with State-tracking Demapper for IM-DD Systems

Zhengyu Ma, Jing Zhang, Jiahao Zhou, Xue Zhao, Rui Wang, and Kun Qiu (Univ. of Electronic Science and Tech. of China, China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo1L] Biophotonic Imaging I
Session Date:	August 5 (Mon.), 2024
Session Time:	10:30-12:00
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Euiheon Chung (GIST, Korea)

[Mo1L-1] [Invited] 10:30-11:00

High Performance Photoacoustic Microscopy based on Miniature Ultrasound Transducer

Chengbo Liu (Shenzhen Inst. of Advanced Tech., Chinese Academy of Sciences, China)

[Mo1L-2] 11:00-11:15

Polarization Assessment of Ballistically Reflected and Multiply Scattered Photons in Retinal OCT

Xincheng Yao, Shaiban Ahmed, and Taeyoon Son (Univ. of Illinois Chicago, USA)

[Mo1L-3] 11:15-11:30

High Resolution Imaging of Stress-Induced Murine Atherosclerosis Using Electrocardiogram Triggered Electrically Tunable Lens Motion Synchronization Intravital Microscopy

Minseok Jang (KAIST, Korea), Joon Woo Song, Jin Won Kim (Korea Univ.'s Guro Hospital, Korea), and Hongki Yoo (KAIST, Korea)

[Mo1L-4] 11:30-11:45

Time-lapse 3D Observation of Surgical Sutures by SD-OCT

Fengcheng Wei, Hinata Nakakubo, Ruri Handa, and Masato Ohmi (Osaka Univ., Japan)

[Mo1L-5] 11:45-12:00

Master/slave Polarization-sensitive Optical Coherence Tomography for Birefringence Measurement of Oocytes

Samuel Choi (Niigata Univ., Japan), Manuel J. Marques (Univ. of Kent, UK), Rasmus Eilkær Hansen (Tech. Univ. of Denmark, Denmark), Philipp Tatar-Mathes (Tampere Univ., Finland), Julien Camard, Giuseppe Silvestri, Carla Canedo-Ribeiro (Univ. of Kent, UK), Alejandro Chavez-Badiola (Conceivable Life Sciences, UK), and Adrian Podoleanu (Univ. of Kent, UK)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo2A] Inverse Design for Metamaterials II
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Haejun Chung (Hanyang Univ., Korea)

[Mo2A-1] [Invited] 13:30-14:00

Very-Large-Scale Metasurface Design

Owen D. Miller (Yale Univ., USA)

[Mo2A-2] [Invited] 14:00-14:30

Photonic Integrated Circuits with Inverse Design

Kiyoul Yang (Harvard Univ., USA)

[Mo2A-3] 14:30-14:45

Inverse Design of 3D Chiral Metamaterial with Generative Networks

Jeonghoon Park, Jaebum Noh, Jehyeon Shin (POSTECH, Korea), Grace X. Gu (Univ. of California, USA), and Junsuk Rho (POSTECH, Korea)

[Mo2A-4] 14:45-15:00

An Experiment Driven Approach to Machine Learning for Nanophotonic Inverse Design

Arturo Burguete-Lopez (King Abdullah Univ. of Science and Tech., Saudi Arabia), Maksim Makarenko (EXPEC Advanced Research Center, Saudi Arabia), Qizhou Wang, Sergei Rodionov, and Andrea Fratalocchi (King Abdullah Univ. of Science and Tech., Saudi Arabia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo2B] Ultrafast and Nonlinear Optics in Emerging Materials II
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Dong-Il Yeom (Ajou Univ., Korea)

[Mo2B-1] [Invited] 13:30-14:00

Nonlinear Optical Signatures of Topological Dirac Fermion

Shiwei Wu (Fudan Univ., China)

[Mo2B-2] 14:00-14:15

Exploration of Light-Spin Interaction: Coherent Dynamics and Laser-Induced Effects

In Cheol Yu, Jung Hyun Oh, San Ko, Kab-Jin Kim, Kyung-Jin Lee, and Fabian Rotermund (KAIST, Korea)

[Mo2B-3] 14:15-14:30

Ultrafast Element-Specific Microscopy for Electronic, Spin, and Structural Dynamics at the Nanoscale

Sergey Zayko, Hung-Tzu Chang (Max Planck Inst. for Multidisciplinary Sciences, Germany), Ofer Kfir (Tel Aviv Univ., Israel), Murat Sivis, and Claus Ropers (Max Planck Inst. for Multidisciplinary Sciences, Germany)

[Mo2B-4] 14:30-14:45

Table-Top Tunable Chiral Photonic Emitter

Lu Wang (Wuhan Inst. of Physics and Mathematics, Chinese Academy of Sciences, China), Marcelo Fabian Ciappina (Guangdong Technion - Israel Inst. of Tech., China), Thomas Brabec (Univ. of Ottawa, Canada), and Xiaojun Liu (Wuhan Inst. of Physics and Mathematics, Chinese Academy of Sciences, China)

[Mo2B-5] 14:45-15:00

Analysis of High-Order Harmonic Generation from a Chiral Molecule

Akihito Kato and Nobuhiko Yokoshi (Osaka Metropolitan Univ., Japan)

Session Title:	[Mo2C] Cold Atoms I
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Xiaodong He (Chinese Academy of Sciences, China)

[Mo2C-1] [Invited] 13:30-14:00

Engineering and Understand Atomic Topological Matter with Non-Hermiticity

Gyu-Boong Jo (The Hong Kong Univ. of Science and Tech., Hong Kong S.A.R)

[Mo2C-2] 14:00-14:15

Transfer of Skyrmion Structure from Light to Ultracold Atomic Ensemble

Chirantan Mitra (Nanyang Technological Univ., Singapore), Chetan Madasu (Nat'l Univ. of Singapore, Singapore), Lucas Gabardos, Chang Chi Kwong, Yijie Shen, David Wilkowski (Nanyang Technological Univ., Singapore), and Janne Ruostekoski (Lancaster Univ., UK)

[Mo2C-3] 14:15-14:30

Pushing Single Atoms into an Optical Cavity Mode

Dowon Lee, Taegyu Ha, Donggeon Kim, Keumhyun Kim (POSTECH, Korea), Kyungwon An (Seoul Nat'l Univ., Korea), and Moonjoo Lee (POSTECH, Korea)

[Mo2C-4] 14:30-14:45

Simultaneous Trapping of Two Optical Pulses in an Atomic Ensemble as Stationary Light Pulses

U-Shin Kim and Yoon-Ho Kim (POSTECH, Korea)

[Mo2C-5] 14:45-15:00

Machine Learning-Enhanced Quantum State Tomography with Direct Parameter Estimations

Hsien-Yi Hsieh, Yi-Ru Chen, Jingyu Ning, Hsun-Chung Wu, Hua Li Chen, Zi-Hao Shi, Po-Han Wang, Popo Yang, Ole Steuernagel, Chien-Ming Wu, and Ray-Kuang Lee (Nat'l Tsing Hua Univ., Taiwan)

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Session Title:	[Mo2D] Advances in Light Sources 1
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room D (113)
Session Chair(s)	Prof. Kasper Van Gasse (Ghent Univ., Belgium)

[Mo2D-1] [Invited] 13:30-14:00

Laser Integration with Thin-film Lithium Niobate

Amirhassan Shams-Ansari (Harvard Univ., USA)

[Mo2D-2] 14:00-14:15

High-Power C-band DFB Lasers with Sub-50 kHz Linewidth for Precise FMCW LiDAR

Te-Hua Liu, You-Yu Tu, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[Mo2D-3] 14:15-14:30

Mode Control and Direct Modulation for a Deformed-Square-FP Coupled-Cavity Laser

Zhen-Ning Zhang, Yue-De Yang, Meng-Wei Sheng, Jin-Long Xiao, and Yong-Zhen Huang (Inst. of Semiconductors, Chinese Academy of Sciences, China)

[Mo2D-4] 14:30-14:45

Generating Photon Pairs in a Hybrid Si-BTO Platform

D. Marchant, I. Faruque, and J. Barreto (Univ. of Bristol, UK)

[Mo2D-5] 14:45-15:00

Improved AlGaInP-based Red Micro-LED with Sidewall Passivation via Atomic-Layer Deposition (ALD) and Sulfide Treatment

Ming-June Wu, Natchanon Prechatavanich, Chee-Keong Yee, Theeradech Sutheebanjerd, Yi-Tzu Tseng, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo2E] Optical Metrology II
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room E (114)
Session Chair(s)	Prof. Yuki Shimizu (Hokkaido Univ. Japan) Prof. Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Mo2E-1] [Invited] 13:30-14:00

Robust Yb Optical Lattice Clock for Time Scales and Dark Matter Search

Takumi Kobayashi (AIST, Japan), Daisuke Akamatsu (Yokohama Nat'l Univ., Japan), Akifumi Takamizawa, Kazumoto Hosaka (AIST, Japan), Yusuke Hisai (Yokohama Nat'l Univ., Japan), Akiko Nishiyama, Akio Kawasaki, Masato Wada, Hajime Inaba, Takehiko Tanabe (AIST, Japan), Feng-Lei Hong (Yokohama Nat'l Univ., Japan), and Masami Yasuda (AIST, Japan)

[Mo2E-2] 14:00-14:15

Rydberg Atom-Based Microwave to Optical Conversion in Ambient Temperature

Sebastian Borówka, Uliana Pylypenko, Mateusz Mazelanik, and Michał Parniak (Univ. of Warsaw, Poland)

[Mo2E-3] 14:15-14:30

Practical and High SNR Mid-infrared Dual-comb Spectroscopy Based on Bidirectional Dual-comb Er Fiber Laser

Akifumi Asahara, Gakuto Fukawa, Takayuki Shimizu, Takashi Kato, and Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Mo2E-4] 14:30-14:45

Proposal and Experimental Demonstration of a Compact Setup to Measure Spin-Orbit Coupling

Minkyung Kim and Jeonghoon Choi (GIST, Korea)

[Mo2E-5] 14:45-15:00

Master-Follower Dual Comb System based on 207 MHz Repetition Rate Optical Frequency Combs

Shotaro Kitajima, Sota Sakaguchi, and Norihiko Nishizawa (Nagoya Univ., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo2F] Metasurface
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-14:45
Session Room:	Room F (115)
Session Chair(s)	Prof. Myungjae Lee (Seoul Nat'l Univ., Korea), Prof. Su-Hyun Gong (Korea Univ., Korea)

[Mo2F-1] [Invited] 13:30-14:00

Dielectric Metasurfaces for Controlling Light Waves

Lei Zhou (Fudan Univ., China)

[Mo2F-2] 14:00-14:15

Vortex Fiber Laser Based on an All-Dielectric Full-Space Metasurface

Yiyuan Xu, Lili Gui, Hao Chen, Xianglong Mei, and Kun Xu (Beijing Univ. of Posts and Telecommunications, China)

[Mo2F-3] 14:15-14:30

Nanoscale Phase Change of $Cr_2Ge_2Te_6$ Thin Films Induced by Terahertz Near-fields

Dang-il Kim, Mizuki Kawaj, Ryo Tamaki, Satoshi Kusaba (Yokohama Nat'l Univ., Japan), Yinli Wang, Yi Shuang, Yuji Sutou (Tohoku Univ., Japan), Ikufumi Katayama, and Jun Takeda (Yokohama Nat'l Univ., Japan)

[Mo2F-4] 14:30-14:45

Selective Detection of DNA by Optical Condensation with Nano-bowl Substrate

Ryoma Hasegawa, Masatoshi Kanoda, Kota Hayashi, Shuichi Toyouchi (Osaka Metropolitan Univ., Japan), Mamoru Tamura (Osaka Univ., Korea), Shiho Tokonami, and Takuya Iida (Osaka Metropolitan Univ., Japan)

Session Title:	[Mo2G] Photonic Device & Sensing I
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room G (116)
Session Chair(s)	Dr. Florenta Costache (Fraunhofer Inst. for Photonic Microsystems, Germany)

[Mo2G-1] [Invited] 13:30-14:00

Miniaturisation of Optical Spectrometers Enabled by Computational Algorithms

Tawfique Hasan (Univ. of Cambridge, UK)

[Mo2G-2] 14:00-14:15

Utilization of High Optoelectronic Chromatic Dispersion in Photodetectors for On-chip Wavelength Monitoring and Spectroscopy

Ayuushi Dutta, Rita Abramov (Ariel Univ., Israel), Egor Liokumovitch (PerCiv Ltd., Isarel), Ziv Glasser, and Shmuel Sternklar (Ariel Univ., Israel)

[Mo2G-3] 14:15-14:30

Specklegram Demodulation of Fiber Bragg Grating Sensor Based on Convolutional Neural Network

Haoen Cai, Juanli Li, Chang Liu, and Zhengyong Liu (Sun Yat-sen Univ., China)

[Mo2G-4] 14:30-14:45

Soft Optical Waveguide Shape Sensing Using Deep Learning

Xuechun Wang, Zilong Li, Yufei Wang, and Lei Su (Queen Mary Univ. of London, UK)

[Mo2G-5] 14:45-15:00

WGM Microbubble Cavity for Laser Power Measurement

Chunhui Ma, Bing Duan, Yong-Pan Gao, Xuan Zhang, and Daquan Yang (Beijing Univ. of Posts and Telecommunications, China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo2H] Raman Lasers / Amplifiers
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-14:45
Session Room:	Room H (117)
Session Chair(s)	Prof. Balaji Srinivasan (Indian Inst. of Tech. Madras, India)

[Mo2H-1] 13:30-13:45

Power Scaling of Spectral Peaked Optical Frequency Comb Using Fiber Raman Amplifier at λ = 1.65 um

Norihiko Nishizawa, Yui Ozawa, and Shotaro Kitajima (Nagoya Univ., Japan)

[Mo2H-2] 13:45-14:00

Pulsed 695-nm Sub-Nanosecond Source Based on Backward-Pumped Raman Fiber Amplifier

Youngjae Kim, Serguei Papernyi, and Wallace Clements (MPB Communications Inc., Canada)

[Mo2H-3] 14:00-14:15

Mode Dynamics of Raman Lasing in Multimode Graded-index Fiber with Mode-selective Mirror for Stokes Beam

M.D. Gervaziev, A.G. Kuznetsov, V.S. Terentyev, A.A. Revyakin, V.A. Simonov, A.V. Dostovalov, D.S. Kharenko, and S.A. Babin (Inst. of Automation and Electrometry, Russia)

[Mo2H-4] [Invited] 14:15-14:45

High Power, Widely Tunable, Near-infrared and Visible Laser Sources Using Raman Fiber Lasers

Sarthak Dash, Rashmita Deheri, and V R Supradeepa (Indian Inst. of Science, India)

Session Title:	[Mo2I] Communications based on Microwave Photonics
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room I (118)
Session Chair(s)	Prof. Atsushi Kanno (Nagoya Inst. of Tech., Japan)

[Mo2I-1] [Invited] 13:30-14:00

Key Application Issues for Continued-Wave Terahertz Technologies

Kyung Hyun Park, Mugeon Kim, Eui Su Lee, Dong Woo Park, Jungsoo Kim, Sungwoo Jo, Da-Hye Choi, Yong-Ho Kim, Jaeyeong Lee, Dong Hun Lee, Dong Young Kim, Il-Min Lee (ETRI, Korea), and Munkyo Seo (Sungkyunkwan Univ., Korea)

[Mo2I-2] 14:00-14:15

Flexible Optical Wireless Communication System Based on Enhanced ADO-OFDM with Subcarrier Allocation

Xuan Huang (China Telecom Research Inst., China), Zhibo Wang (Huawei Technologies Co., Ltd., China), and Peng Chen (China Telecom Research Inst., China)

[Mo2I-3] 14:15-14:30

Transmission in the 300 GHz Band using a Soliton Comb

Mantaro Imamura, Ayaka Yomoda, Koya Tanikawa, Soma Kogure, Ryo Sugano, Satoki Kawanishi, Shun Fujii, and Takasumi Tanabe (Keio Univ., Japan)

[Mo2I-4] [Invited] 14:30-15:00

Terahertz Signal Transparent Relay and Routing Using Photonic Technology

Pham Tien Dat (Nat'l Inst. of Information and Communications Tech., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo2J] Topology and Photonics II
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-14:45
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Xianji Piao (The Univ. of Seoul, Korea)

[Mo2J-1] [Invited] 13:30-14:00

Topological Leaky-mode Resonances and Potential Applications

Jae Woong Yoon, Ki Young Lee, Yu Sung Choi, Chan Young Park, and Joong Hyun Pyo (Hanyang Univ., Korea)

[Mo2J-2] 14:00-14:15

Inverse Design Method of Hyperuniform Materials using System Factorization

Kunwoo Park, Ikbeom Lee, and Sunkyu Yu (Seoul Nat'l Univ., Korea)

[Mo2J-3] 14:15-14:30

Iterative Design of Hyperuniform Materials using Wannier Functions

Gitae Lee, Hyungchul Park, Seungkyun Park, Namkyoo Park, and Sunkyu Yu (Seoul Nat'l Univ., Korea)

[Mo2J-4] 14:30-14:45

Design of Wave Scattering from Gain and Loss Disordered Materials

Ikbeom Lee, Kunwoo Park, and Sunkyu Yu (Seoul Nat'l Univ., Korea)

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Session Title:	[Mo2K] Optical Devices for Telecom Applications
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-14:30
Session Room:	Room K (204-205)
Session Chair(s)	Dr. Fukutaro Hamaoka (NTT, Japan)

[Mo2K-1] [Invited] 13:30-14:00

Toward Practical Utilization of Dually Modulated EML as Optical SSB Transmitter

Shuhua Zhao, Tianwai Bo, Zhongwei Tan, and Yi Dong (Beijing Inst. of Tech., China)

[Mo2K-2] 14:00-14:15

24-Tb/s PS-PDM-64QAM Bidirectional Transmission over 10-km 24-core Fiber using Silicon Photonics IC-TROSA

Chao Yang, Ming Lu, Jin Tao, Ying Qiu (China Information Communication Technologies Group Corp., China), and Xi Xiao (Nat'l Information Optoelectronics Innovation Center, China)

[Mo2K-3] 14:15-14:30

Simultaneous Sensing and Communication over 20 km Fiber Based on Si_3N_4 Micro-Ring

Ying Qiu (China Information Communication Technologies Group Corp., China), Xiangpeng Ou (Inst. of Microelectronics of the Chinese Academy of Sciences, China), Ming Luo, Chao Yang (China Information Communication Technologies Group Corp., China), Zhixue He (Peng Cheng Lab., China), Xi Xiao (China Information Communication Technologies Group Corp., China), Yan Yang (Inst. of Microelectronics of the Chinese Academy of Sciences, China), and Jin Tao (China Information Communication Technologies Group Corp., China)

Session Title:	[Mo2L] Biophotonic Imaging II
Session Date:	August 5 (Mon.), 2024
Session Time:	13:30-15:00
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Pilhan Kim (KAIST, Korea)

[Mo2L-1] [Invited] 13:30-14:00

Raman-based Noninvasive Continuous Glucose Monitoring (CGM)

Jeon Woong Kang (Massachusetts Inst. of Tech., USA)

[Mo2L-2] 14:00-14:15

Rolling Shutter Speckle Plethysmography for Pulsatile Blood Flow Monitoring

Sangjun Byun, Yujin Lee, Changyoon Yi, Jaewoo Jung, Yong Guk Kang, and Seung Ah Lee (Yonsei Univ., Korea)

[Mo2L-3] 14:15-14:30

High-throughput 3D Histopathology of Skin Cancer with Two-photon Light Sheet Fluorescence Microscopy for Surgical Margin Detection

Jieun Yun, Won Yeong Park, Suil Jeon, Jisang Lee (POSTECH, Korea), Byung Ho Oh (Yonsei Univ., Korea), and Ki Hean Kim (POSTECH, Korea)

[Mo2L-4] 14:30-14:45

Rapid Surface-enhanced Raman Imaging for Intracellular Drug Detection and Low-concentration Amino Acid/Dipeptide Analysis

Kazuki Bando, Kota Koike (Osaka Univ., Japan), Jun Ando (RIKEN, Japan), Hiroyuki Yamakoshi (Nagoya City Univ., Japan), Naoki Terayama, Kosuke Dodo (RIKEN, Japan), Nicholas Isaac Smith (Osaka Univ., Japan), Mikiko Sodeoka (RIKEN, Japan), Masaya Okada (Osaka Univ., Japan), Yasunori Nawa (AIST, Japan), Shigeki Iwanaga (Sysmex Corp., Japan), Satoshi Fujita, and Katsumasa Fujita (Osaka Univ., Japan)

[Mo2L-5] 14:45-15:00

Longitudinal Imaging of Conjunctival Goblet Cells in Mice under Hyperosmotic Stress

Noseong Park, Suil Jeon, Jisang Lee (POSTECH, Korea), Chang Ho Yoon (Seoul Nat'l Univ., Korea), Chulmin Joo (Yonsei Univ., Korea), and Ki Hean Kim (POSTECH, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3A] Specialty Fibers
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Yosuke Mizuno (Yokohama Nat'l Univ., Japan)

[Mo3A-1] [Invited] 15:15-15:45

Proposal of Error-Free GI POF for Beyond 5G Society

Yasuhiro Koike and Kenta Muramoto (Keio Univ., Japan)

[Mo3A-2] 15:45-16:00

3D Glass Printing of Preforms for Development of Highly Nonlinear Microstructured Fibers

R. Buczynski (Univ. of Warsaw, Poland), P. Wienclaw (Sygnis S.A., Poland), P. Golebiewski, G. Stepniewski, P. Socha, D. Pysz, A. Filipkowski (Lukasiewicz - Inst. of Microelectronics and Photonics, Poland), O. Czerwinska (Sygnis S.A., Poland), R. Kasztelanic (Univ. of Warsaw, Poland), and A. Burgs (Sygnis S.A., Poland)

[Mo3A-3] 16:00-16:15

Flexible Delivery of Watt-Level, High-Repetition-Rate Ultrafast Pulses Using Vacuumized Anti-Resonant Hollow-Core Fiber

Cong Wu (Univ. of Science and Tech. of China, China), Donghan Liu, Zhiyuan Huang, Jinyu Pan, Jie Zhang, Zhuozhao Luo (Russell Centre for Advanced Lightwave Science, China), Simao Chen, Yu Zheng (iFiber Optoelectronics Technology Co., Ltd., China), Ruochen Yin, Wenbin He, Meng Pang, and Xin Jiang (Russell Centre for Advanced Lightwave Science, China)

[Mo3A-4] 16:15-16:30

Single-Polarization Low-loss Dual-ring Antiresonant Hollow-Core Fiber

Yuxi Wang, Charu Goel, and Wonkeun Chang (Nanyang Technological Univ., Singapore)

[Mo3A-5] 16:30-16:45

Antiresonant Hollow-Core Fiber Polarization Beam Splitter

Charu Goel, Guillaume Raynal, Wonkeun Chang, and Seongwoo Yoo (Nanyang Technological Univ., Singapore)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3B] Ultrafast and Nonlinear Optics in Emerging Materials Ⅲ
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Ji-Hee Kim (Pusan Nat'l Univ., Korea)

[Mo3B-1] [Invited] 15:15-15:45

High-performance Miniaturized Computational Spectrometers with Van Der Waals Junctions

Faisal Ahmed, Md Gius Uddin, Andreas C. Liapis, Yawei Dai, Xiaoqi Cui, Fedor Nigmatullin (Aalto Univ., Finland), Hoon Hahn Yoon (GIST, Korea), and Zhipei Sun (Aalto Univ., Finland)

[Mo3B-2] [Invited] 15:45-16:15

Device-level Ultrafast Spectroscopy of Two-dimensional Materials

Dongyang Wan, Tao Zhou, Yuwei Zhang, Junpeng Lu, and Zhenhua Ni (Southeast Univ., China)

[Mo3B-3] 16:15-16:30

Fast MoS_2 Photodetector with Ultralow Contact Resistance

Wangheng Pan, Anran Wang, Hu Chen, and Fengqiu Wang (Nanjing Univ., China)

[Mo3B-4] 16:30-16:45

Strong Phonon-assisted Luminescence from Indirect Excitons in Semiconductor Moiré Superlattices

Yerin Han, Seong Joon Jeon, Su-Beom Song, Sangho Yoon, Sera Yang (POSTECH, Korea), Kenji Watanabe, Takashi Taniguchi (Nat'l Inst. for Materials Science, Japan), Moon-Ho Jo, and Jonghwan Kim (POSTECH, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3C] Trapped Ions and Interfaces
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Hyukjoon Kwon (KIAS, Korea)

[Mo3C-1] [Invited] 15:15-15:45

Toward Realizing Quantum Advantage with Trapped Ions

Kihwan Kim (Tsinghua Univ., China)

[Mo3C-2] [Invited] 15:45-16:15

Building Blocks for Atom-Photon Interfaces

Christian Kurtsiefer (Nat'l Univ. of Singapore, Singapore)

[Mo3C-3] 16:15-16:30

Third-Order Exceptional Point in an Ion-Cavity System

Jinuk Kim (KRISS, Korea), Taegyu Ha, Donggeon Kim, Dowon Lee, Ki-Se Lee, Jongcheol Won, Youngil Moon, and Moonjoo Lee (POSTECH, Korea)

[Mo3C-4] 16:30-16:45

Experimental Implementation of Single-shot Joint Parity Measurement for Quantum State Tomography of Phonon Modes of a Trapped Ion

Honggi Jeon, Jiyong Kang, Jaeun Kim, Wonhyeong Choi, Kyunghye Kim, Jaehun You, and Taehyun Kim (Seoul Nat'l Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3D] Advances in Light Sources 2
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room D (113)
Session Chair(s)	Prof. Il-Sug Chung (UNIST, Korea)

[Mo3D-1] [Invited] 15:15-15:45

Titanium:Sapphire-on-insulator for On-chip Solid-state Laser Technology

K. Van Gasse, J. Yang, D. M. Lukin, M. A. Guidry, G. H. Ahn, A. D. White, and J. Vučković (Stanford Univ., USA)

[Mo3D-2] 15:45-16:00

High-quality $In_{0.1}Ga_{0.9}As$-AlAs Distributed Bragg Reflector Monolithically Grown on Si for Surface-emitting Lasers

Tsimafei Laryn, Rafael Jumar Ch, Yeonhwa Kim, Won Jun Choi, and Daehwan Jung (KIST, Korea)

[Mo3D-3] 16:00-16:15

Enhancing Thermal Sensing with Cascaded Quantum-Well Heterojunction Bipolar Light-Emitting Transistors in Darlington Transistor Configuration

Mukul Kumar, Kuang-Yu Hsueh, Yun-Jie Huang, Guan-Jen Lai, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[Mo3D-4] 16:15-16:30

Elliptical-Apertured 850-nm VCSEL Enabling Reduced RMS Linewidth and Enhanced Output Power

Ting-Yu Wu, Jun-Zhang Chen, Yun-Cheng Yang, and Chao-Hsin Wu (Nat'l Taiwan Univ., Korea)

[Mo3D-5] 16:30-16:45

High-Performance 940 nm Ge-based VCSEL with an Over 16.8 GHz Modulation Bandwidth at 85°C

Chih-Chuan Chiu, Yun-Cheng Yang (Nat'l Taiwan Univ., Taiwan), Zeyu Wan (The Univ. of British Columbia, Canada), I-Chi Liu, Wei-Hsin Chen (Nat'l Taiwan Univ., Taipei), Guangrui(Maggie) Xia (The Univ. of British Columbia, Canada), and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

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Session Title:	[Mo3E] Dimensional Metrology I
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room E (114)
Session Chair(s)	Dr. Kisoo Kim (KOPTI, Korea), Prof. Guanhao Wu (Tsinghua Univ., China)

[Mo3E-1] [Invited] 15:15-15:45

Steps Towards Femtosecond Optical Time Transfer Between Ground and Space

Emily D. Caldwell, Fabrizio R. Giorgetta (NIST, USA), Jean-Daniel Deschenes (Octosig Consulting, Canada), Theodora Triano, William Swann, Nathan R. Newbury, and Laura C. Sinclair (NIST, USA)

[Mo3E-2] 15:45-16:00

Microcomb-Based Precise, Gigahertz Data Acquisition Rate, and Large Dynamic Range Time-of-Flight Detection

Changmin Ahn, Minji Hyun, Daewon Suk, Hansuek Lee, and Jungwon Kim (KAIST, Korea)

[Mo3E-3] 16:00-16:15

Rotational Doppler Measurement Using Wavefront-splitting Optical Vortex Interferometer

Jianing Ouyang, Dong Yang, Yanfeng Zhang, and Siyuan Yu (Sun Yat-sen Univ., China)

[Mo3E-4] 16:15-16:30

Precise Ultrasonic Ranging Using Polymer Fiber Based Time-stretched Self-coherence Detection

Yujia Li, King Shing Lo, Dongmei Huang, Chao Lu, and P. K. A. Wai (The Hong Kong Polytechnic Univ., Hong Kong S.A.R)

[Mo3E-5] 16:30-16:45

Phase Noise Characterization of Femtosecond Laser using Subspace Tracking

A. Razumov (Technical Univ. of Denmark, Denmark), P. Varming, J. Pedersen (NKT Photonics, Denmark), J. Riebesehl, H.R. Heebøll, F. Da Ros, and D. Zibar (Technical Univ. of Denmark, Denmark)

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Session Title:	[Mo3F] Signal Processing based on Microwave Photonics
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room F (115)
Session Chair(s)	Prof. Sang-Rok Moon (ETRI, Korea)

[Mo3F-1] [Invited] 15:15-15:45

Microwave Photonic Signal Processing Using a Quantum Dash Optical Frequency Comb Source

Lawrence R. Chen (McGill Univ., Canada)

[Mo3F-2] 15:45-16:00

High-performance Wide-band RF Photonic Channelized Receiver

Chenyuan Li, Guchang Chen (Beijing Univ. of Posts and Telecommunications, China), Xiangzhi Xie (City Univ. of Hong Kong, Hong Kong S.A.R), Feifei Yin, Kun Xu, and Yitang Dai (Beijing Univ. of Posts and Telecommunications, China)

[Mo3F-3] 16:00-16:15

Optical Transfer Delay Change Monitoring based on a Sub-femtosecond-resolution Photonic Subsampling Phase Shift Discriminator

Xiaohu Tang, Kunlin Shao, Yamei Zhang, and Shilong Pan (Nanjing Univ. of Aeronautics and Astronautics, China)

[Mo3F-4] [Invited] 16:15-16:45

Brillouin Scattering-based Integrated Microwave Photonics

Benjamin J. Eggleton (The Univ. of Sydney, Australia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3G] Photonic Device & Sensing II
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:30
Session Room:	Room G (116)
Session Chair(s)	Prof. Young Min Song (GIST, Korea)

[Mo3G-1] [Invited] 15:15-15:45

Silicon Photonic Biosensors for Label-Free Detection of Small Biomolecules

Florenta Costache, Ziyu Wang, Andreas Stoll (Fraunhofer IPMS, Germany), David Smith, Hendrik Reichelt (Fraunhofer Center FZE, Germany), Andreas Kölsch (Fraunhofer IZI, Germany), Aarya Lakshmireddy (Fraunhofer Center FZE, Germany), and Zhiqiu Lu (Fraunhofer IPMS, Germany)

[Mo3G-2] 15:45-16:00

Development and Optimisation of a Photonic Waveguide Device for Methane Detection

Z. Wang, S. McQuillan (Univ. of Southampton, UK), S. Steigenberger, E. Papadimitriou (Nat'l Oceanography Center, UK), I. Chakraborty, F. Gardes (Univ. of Southampton, UK), M. Mowlem (Nat'l Oceanography Center, UK), and R. Ismaeel (Univ. of Southampton, UK)

[Mo3G-3] 16:00-16:15

Simultaneous Measurement of Bragg Gratings' Reflection Spectra and Their Positions in Multicore Fiber using Two Photon Absorption Process in Si-APD

Shinta Tsuzuki, Ryosuke Sato, and Yosuke Tanaka (Tokyo Univ. of Agriculture and Tech., Japan)

[Mo3G-4] 16:15-16:30

Photomultiplication Narrowing in Self-filtering Organic Photodetectors

Fang-Chung Chen, Gajendra Suthar, and Chih-Wei Chu (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3H] Ultrafast Lasers
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room H (117)
Session Chair(s)	Prof. Norihiko Nishizawa (Nagoya Univ., Japan)

[Mo3H-1] [Invited] 15:15-15:45

Advances in Ultrashort Pulse Generation from Fiber Kerr Resonators

William H. Renninger (Univ. of Rochester, USA)

[Mo3H-2] 15:45-16:00

All-fiber 1-MHz Mode-locked Laser at 1.7 μm for Three Photon Microscopy

Meng Zhou, Xiaoxiao Wen (The Univ. of Hong Kong, Hong Kong S.A.R), Hongsen He (Xiamen Univ., China), and Kenneth Kin-Yip Wong (The Univ. of Hong Kong, Hong Kong S.A.R)

[Mo3H-3] 16:00-16:15

Self-starting NPE Mode Locked Linear Cavity Single Mode Yb:fiber Laser Delivering 736 MHz Repetition Rate Femtosecond Pulses

Jinpeng Cao (Beihang Univ., China), Bowei Yang, Zhendong Chen, Ruoao Yang, Zhigang Zhang (Peking Univ., China), and Meng Zhang (Beihang Univ., China)

[Mo3H-4] 16:15-16:30

High-power, >1 GHz Repetition-rate Femtosecond Laser and Its Frequency Conversion

In Chul Park, Eun Kyoung Park (Hanyang Univ., Korea), Hoon Jeong (Korea Inst. of Industrial Tech., Korea), and Ji Won Kim (Hanyang Univ., Korea)

[Mo3H-5] 16:30-16:45

Continuous-wave and Pulsed Laser Operations in Femtosecond-laser-inscribed Yb:CaF_2 Channel Waveguide

Deok Woo Kim, Seung Jai Won, Seong-Eun Lim, Young-Jin Kim, and Fabian Rotermund (KAIST, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3I] Laser Cutting
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room I (118)
Session Chair(s)	Prof. Changkyoo Park (Seoul Nat'l Univ. of Science and Tech., Korea)

[Mo3I-1] [Invited] 15:15-15:45

Underwater Laser Cutting for Decommissioning of Nuclear Power Plants using High Power Laser

Su Jin Lee, Ding Sig Shin, Jeong Suh, In Duck Park (Korea Inst. of Machinery & Materials, Korea), and Jong Do Kim (Korea Maritime and Ocean Univ., Korea)

[Mo3I-2] 15:45-16:00

The Study on Nanosecond Pulsed Laser Dicing Process of Full-Thickness Silicon Wafer

Yeongil Son and Joonghan Shin (Kongju Nat'l Univ., Korea)

[Mo3I-3] 16:00-16:15

60 mm Heterogeneous Metal Cutting of 1 kW Laser and Oxygen Hybrid Cutting

Hanjin Jo, Sion Kim, Geonhui Lee (Handong Global Univ., Korea), Duckbong Seo (Sun Engineering Inc., Korea), and Tae Jun Yu (Handong Global Univ., Korea)

[Mo3I-4] 16:15-16:30

Acousto-optic Material Differentiation During Water Jet Guided Laser Cutting by Applying a Neural Network

Roland Axel Richter (EMPA, Switzerland), Luca Disalvo (Synova SA, Switzerland), Toni Ivas, Vigneashwara Pandiyan (EMPA, Switzerland), Amédée Zryd (Synova SA, Switzerland), Patrik Hoffmann, and Sergey Shevchik (EMPA, Switzerland)

[Mo3I-5] 16:30-16:45

Comparison of Lithium-ion Battery Laser Cutting Characteristics

Mincheoul Seong, Myeongho Park, Haeun Kim, and Dongkyoung Lee (Kongju Nat'l Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3J] THz Spectroscopy
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room J (201-202)
Session Chair(s)	Dr. Minah Seo (KIST, Korea)

[Mo3J-1] [Invited] 15:15-15:45

THz Spectroscopic Analysis of Perovskites and its Stability

Zhi-Wei Huang and Hyeyoung Ahn (Nat'l Yang Ming Chiao Tung, Taiwan)

[Mo3J-2] [Invited] 15:45-16:15

THz Nanoscopy of Conductive Thin-films

Edmund J. R. Kelleher, Henrik B. Lassen, Leonid Iliushyn, Tim J. Booth, Peter B ø ggild, and Peter U. Jepsen (Technical Univ. of Denmark, Denmark)

[Mo3J-3] 16:15-16:30

Nanoslot-Induced Ultrastrong Phonon–Photon and Phonon–Phonon Coupling in Hybrid Organic–Inorganic Perovskites

Dasom Kim, Jin Hou (Rice Univ., USA), Geon Lee (KIST, Korea), Ayush Agrawal (Rice Univ., USA), Sunghwan Kim (UNIST, Korea), Hao Zhang (Rice Univ., USA), Di Bao (Nanyang Technological Univ., Singapore), Andrey Baydin, Wenjing Wu, Fuyang Tay, Shengxi Huang (Rice Univ., USA), Daivd Hagenmüller (Univ. Strasbourg and CNRS, France), Elbert E. M. Chia (Nanyang Technological Univ., Singapore), Dai-Sik Kim (UNIST, Korea), Minah Seo (KIST, Korea), Aditya D. Mohite, and Junichiro Kono (Rice Univ., USA)

[Mo3J-4] 16:30-16:45

Applications of Terahertz Time-Domain Coherent Raman Spectroscopy to Aqueous Solutions

Masahiko Tani, Ryosuke Awata, Takahiro Namazuta, Hideaki Kitahara, Takashi Furuya, and Mary Clare Escaño (Univ. of Fukui, Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3K] Switching Systems
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room K (204-205)
Session Chair(s)	Dr. Inwoong Kim (Fujitsu Network Communications, USA)

[Mo3K-1] [Invited] 15:15-15:45

Optical Switching for Inter and Intra Computing Center Networks

Ning Deng (Great Bay Univ., China), Zeshan Chang, and Ruishan Chen (Huawei Tech. Co., Ltd, China)

[Mo3K-2] [Invited] 15:45-16:15

Design of Large-Scale OXC for the Next-generation ROADM

Tong Ye, Jiayi Luo, Herui Li, and Yibei Yao (Shanghai Jiao Tong Univ., China)

[Mo3K-3] 16:15-16:30

Architecture Optimized 6×6 Optical Switch Assisted with In-Line Non-Invasive Light Monitors

Xin Fu (Inst. of Semiconductors, Chinese Academy of Sciences, China), Zhao Wang, Kai Zou (Tianjin Univ., China), Jiaqi Niu (Inst. of Semiconductors, Chinese Academy of Sciences, China), Yun Meng (Tianjin Univ., China), Siwei Liu, Lin Yang (Inst. of Semiconductors, Chinese Academy of Sciences, China), and Xiaolong Hu (Tianjin Univ., China)

[Mo3K-4] 16:30-16:45

Novel Wavelength Router Configuration with Asymmetric Wavelength Input / Output Properties

Kimio Oguchi, Chi-Chia Chung, and Bo-Shen Yang (Nat'l Taiwan Univ. of Science and Tech., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo3L] Ultrahigh Intensity Laser
Session Date:	August 5 (Mon.), 2024
Session Time:	15:15-16:45
Session Room:	Room L (206-207)
Session Chair(s)	Dr. Jae Hee Sung (GIST, Korea)

[Mo3L-1] [Invited] 15:15-15:45

Current Progress of SEL-100 PW Laser Facility

Yujie Peng, Yi Xu, Xinliang Wang, Xiaoming Lu, Yanyan Li, Lianghong Yu, Cheng Wang, Xiaoyan Liang, Yuxin Leng, and Ruxin Li (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[Mo3L-2] [Invited] 15:45-16:15

10 PW Laser System at ELI-NP – Status Updates

Ioan Dancus (Extreme Light Infrastructure-Nuclear Physics, Romania)

[Mo3L-3] 16:15-16:30

Progress on Commissioning a 10 H_z Petawatt Laser at the Extreme Photonics Applications Centre

Paul Mason, Nicholas Stuart, Jonathan Phillips, Robert Heathcote, Samuel Buck, Tiago de Faria Pinto, Veselin Aleksandrov, Danielle Clarke, Luke McHugh, Agnieszka Wojtusiak, Steve Hawkes, Gary Quinn, Steph Tomlinson, Rajeev Pattathil, Thomas Butcher, Cristina Hernandez-Gomez, and John Collier (Central Laser Facility, Science and Tech. Facilities Council, UK)

[Mo3L-4] 16:30-16:45

Optically Synchronized Optical Parametric Chirped-pulse Amplification Pumped by Sub-nanosecond Nd:YAG Green Laser

Yasuhiro Miyasaka, Kotaro Kondo, Michiaki Mori, Masaki Kando, and Hiromitsu Kiriyama (Nat'l Institutes for Quantum Science and Tech., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo4A] Fiber Lasers
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room A (102-103)
Session Chair(s)	Dr. Yongmin Jung (Univ. of Southampton, UK)

[Mo4A-1] [Invited] 17:00-17:30

Normal Dispersion Tm-doped Fiber for Shortwave Infrared Ultrafast Laser

Seongwoo Yoo, Debjit Dutta, Xiao Hu, Wonkeun Chang (Nanyang Technological Univ., Singapore), Shaoxiang Chen (Wuhan Huaray Precision Laser Co., Ltd., China), Yuhao Chen, and Sidharthan Rghuraman (Nanyang Technological Univ., Singapore)

[Mo4A-2] 17:30-17:45

Waveguiding of Fluorescence Induced by Long-distance Femtosecond Laser Filament

Jiayun Xue, Yuezheng Wang, Jiewei Guo, Binpeng Shang, Zhi Zhang, Pengfei Qi, Lu Sun, and Weiwei Liu (Nankai Univ., China)

[Mo4A-3] 17:45-18:00

Integrated Kilowatt Level Iber Laser Based on Side Pumping

Zhixian Li, Zilun Chen, and Zefeng Wang (Nat'l Univ. of Defense Tech., China)

[Mo4A-4] 18:00-18:15

Short-pulse GHz Class Chip Lasers for Comb Applications

D.G. Lancaster, D.E. Otten, J.Choi, and C. Hall (Univ. of South Australia, Australia)

[Mo4A-5] 18:15-18:30

High Beam Quality 3×1 Double-cone Fiber Signal Combiner at 9kW Level

Zilun Chen, Fu Min, Zhixian Li, Meng Wang, Lin Wang, Hu Xiao, and Zefeng Wang (Nat'l Univ. of Defense Tech., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo4B] Ultrafast and Nonlinear Optics in Emerging Materials Ⅳ
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Fengqiu Wang (Nanjing Univ., China)

[Mo4B-1] [Invited] 17:00-17:30

Nonlinear Optical Processes in Strained Graphene with Pseudo-Landau Quantization

Donguk Nam, Kunze Lu, Manlin Luo, Weibo Gao, Qi Jie Wang (Nanyang Technological Univ., Singapore), and Hao Sun (Nat'l Univ. of Singapore, Singapore)

[Mo4B-2] 17:30-17:45

Second Harmonic Generation from Centrosymmetric 2D Materials after van der Waals Stacking

Mingwen Zhang and Xuetao Gan (Northwestern Polytechnical Univ., China)

[Mo4B-3] 17:45-18:00

Highly Tunable Near-degenerate Four-wave Mixing in Monolayer Graphene Through Electrical Gating

Seongju Ha (KRISS, Korea), Nam Hun Park (Agency for Defense Development, Korea), Jungseok Choi (Ajou Univ., Korea), Jaedeok Park, Hee-Su Park (KRISS, Korea), Dong-Il Yeom (Ajou Univ., Korea), and Sang Min Lee (KRISS, Korea)

[Mo4B-4] 18:00-18:15

Gate-tunable Quantum Pathways of Massless Dirac Fermions in High Harmonic Generation

Minjeong Kim (POSTECH, Korea), Soonyoung Cha (Center for Van der Waals Quantum Solids, IBS, Korea), Youngjae Kim (DGIST, Korea), Shinyoung Choi (POSTECH, Korea), Sejong Kang, Hoon Kim, Sangho Yoon, Gunho Moon, Taeho Kim, Ye Won Lee, Gil Young Cho, Moon Jeong Park, Cheol-Joo Kim, B. J. Kim (POSTECH, Korea), JaeDong Lee (DGIST, Korea), Moon-Ho Jo, and Jonghwan Kim (POSTECH, Korea)

[Mo4B-5] 18:15-18:30

Sensing of Bacteria Using Second Harmonic Generation in MoS_2 Monolayers

Young-Chul Kim and Yeong-Hwan Ahn (Ajou Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo4C] Quantum Information Processing
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:15
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Kae Nemoto (Okinawa Inst. of Science and Tech., Japan)

[Mo4C-1] [Invited] 17:00-17:30

Universal Fluctuations and Noise Learning from Hilbert-space Ergodicity

Joonhee Choi (Stanford Univ., USA)

[Mo4C-2] 17:30-17:45

Qudit-based Variational Quantum Eigensolver by Using Photonic Azimuthal Orbital Angular Momentum States

Byungjoo Kim (Korea Inst. of Machinery & Materials, Korea), Kang-Min Hu (KIST, Korea), Myung-Hyun Sohn (Kyung Hee Univ., Korea), Yosep Kim (Korea Univ., Korea), Yong-Su Kim, Seung-Woo Lee, and Hyang-Tag Lim (KIST, Korea)

[Mo4C-3] 17:45-18:00

On Computational Complexity and Average-case Hardness of Shallow-depth Boson Sampling

Byeongseon Go (Seoul Nat'l Univ., Korea), Changhun Oh (The Univ. of Chicago, USA), and Hyunseok Jeong (Seoul Nat'l Univ., Korea)

[Mo4C-4] 18:00-18:15

Evidence-Based Quantum-Information Processing: Applications on Photonic Quantum Systems

Y. S. Teo, S. U. Shringarpure, H. Jeong (Seoul Nat'l Univ., Korea), N. Prasannan, B. Brecht, C. Silberhorn (Univ. of Paderborn, Germany), M. Evans (Univ. of Toronto, Canada), Mogilevtsev (B.I.Stepanov Inst. of Physics - Nat'l Academy of Sciences of Belarus, Belarus), and L. L. Sánchez-Soto (Complutense Univ. of Madrid, Spain)

Session Title:	[Mo4D] Novel Active Devices
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room D (113)
Session Chair(s)	Prof. Il-Sug Chung (UNIST, Korea)

[Mo4D-1] [Invited] 17:00-17:30

InAs Nanostructure Arrays for Room-Temperature Ultra-Broadband Infrared Photodetection

Ziyuan Li (Beijing Inst. of Tech., China)

[Mo4D-2] 17:30-17:45

Estimation of Local Phase Errors in Silicon Photonic MZI Mesh from Passive Measurements

Kumar Piyush, Yash Raj, Akash Shekhar, Ashitosh Velamuri, Arnab Goswami (Centre for Programmable Photonic Integrated Circuits and Systems, India), Naveen Raj Murugesan, Anandha Padmanabhan, Dinanath Soni (IZMO Microsystems Private Limited, India), Janakiraman Viraraghavan, and Bijoy Krishna Das (Centre for Programmable Photonic Integrated Circuits and Systems, India)

[Mo4D-3] 17:45-18:00

Ultra-Low Power Stress-Optic Phase-Shifters in 400 nm Silicon Nitride Platform Using Thin Film Sputtered-PZT

Daniel Yumnam, Venkatachalam P, Rakshitha Kallega, Vishnu Kumar, and Shankar Kumar Selvaraja (Indian Inst. of Science, India)

[Mo4D-4] 18:00-18:15

Thin Film Silicon-organic Hybrid Electro-optic Modulator

Yang Feng, Yilang Hu, Yanmei Li (Harbin Inst. of Tech., China), Di Zhang (City Univ. of Hong Kong, Hong Kong S.A.R), Zhanshi Yao (Huawei Technologies Co., Ltd., China), Jingdong Luo (City Univ. of Hong Kong, Hong Kong S.A.R), and Xiaochuan Xu (Harbin Inst. of Tech., China)

[Mo4D-5] 18:15-18:30

Optical-Amplification-Free 206/112 Gbaud OOK/PAM4 O-band SiP RRM-based Links

Armands Ostrovskis, Toms Salgals (Riga Technical Univ., Latvia), Michael Koenigsmann (Keysight Technologies Deutschland GmbH, Germany), Kristaps Rubuls (Riga Technical Univ., Latvia), Azra Farid, Benjamin Krüger (Keysight Technologies Deutschland GmbH, Germany),

Arvids Sedulis (Riga Technical Univ., Latvia), Fabio Pittalà (Keysight Technologies Deutschland GmbH, Germany), Ryan P. Scott (Keysight Technologies, Inc., USA), Hansjoerg Haisch (Keysight Technologies Deutschland GmbH, Germany), Lu Zhang, Xianbin Yu (Zhejiang Univ., China), Rafael Puerta (Ericsson, Sweden), Sandis Spolitis (Riga Technical Univ., Latvia), Richard Schatz, Katia Gallo (KTH Royal Inst. of Tech., Sweden), Markus Gruen, Hadrien Louchet, Robert Jahn, Kazuo Yamaguchi (Keysight Technologies Deutschland GmbH, Germany), Vjaceslavs Bobrovs (Riga Technical Univ., Latvia), Xiaodan Pang (KTH Royal Inst. of Tech., Sweden), and Oskars Ozolins (Riga Technical Univ., Latvia)

Session Title:	[Mo4E] Dimensional Metrology II
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room E (114)
Session Chair(s)	Dr. Jungjae Park (KRISS, Korea), Dr. Dong-Hoon Lee (KRISS, Korea)

[Mo4E-1] [Invited] 17:00-17:30

Versatile Deflectometry Applications

Heejoo Choi, Daewook Kim, Roger Angel, Hubert M. Martin, Hyukmo Kang, and Yiyang Huang (Univ. of Arizona, USA)

[Mo4E-2] 17:30-17:45

Proof-of-Concept of Submillisecond-Temporal-Resolution 4D X-ray Tomography with Multibeam X-ray Imaging System

Wataru Yashiro, Xiaoyu Liang, Tadashi Abukawa (Tohoku Univ., Japan), Wolfgang Voegeli, Etsuo Arakawa (Tokyo Gakugei Univ., Japan), Tetsuroh Shirasawa (AIST, Japan), Kentaro Kajiwara (Japan Synchrotron Radiation Research Inst., Japan), and Hiroyuki Kudo (Univ. of Tsukuba, Japan)

[Mo4E-3] 17:45-18:00

Tomographic Imaging with Broadband Optical Noise Cancelling Using Antiphase Pulse by Phase-controlled Optical Frequency Comb

Takashi Kato, Keito Hino, Yasuhisa Nekoshima, Akifumi Asahara, and Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Mo4E-4] 18:00-18:15

Reconstructing Three-Degree-of-Freedom Pose through Temporal Phase-Shifted Low-Coherence Spatial Interferograms

Liheng Shi (Yangtze Delta Region Inst. of Tsinghua Univ., China), Jinxu Zhang (Tsinghua Univ., China), Yingying Gu, Fangqin Gai, Jing Liu (Beijing Inst. of Control Engineering, China), and Guanhao Wu (Tsinghua Univ., China)

[Mo4E-5] 18:15-18:30

Frequency-comb-referenced Plasmonic Phase Spectroscopy for Measurement of Spatial

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Distribution of Effective Refractive Index at a Nano Slit

Dae Hee Kim, Young Ho Park, Jun Hyung Park, Huy Hoang Chu, Seung-Woo Kim, and Young-Jin Kim (KAIST, Korea)

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Session Title:	[Mo4F] System Applications of Microwave Photonics
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:15
Session Room:	Room F (115)
Session Chair(s)	Dr. Seung Hyun Cho (ETRI, Korea)

[Mo4F-1] [Tutorial] 17:00-17:45

Millimeter-wave and Terahertz System Applications Enabled by Photonics

Tadao Nagatsuma (Osaka Univ., Japan)

[Mo4F-2] [Invited] 17:45-18:15

High-Power Optical Fiber Transmission for Remote Antenna Units

Motoharu Matsuura (The Univ. of Electro-Communications, Japan)

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Session Title:	[Mo4G] Photonic Device & Sensing Ⅲ
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room G (116)
Session Chair(s)	Prof. Mooseok Jang (KAIST, Korea)

[Mo4G-1] 17:00-17:15

Atomic Scale Photomemristors Engineered by Ion Implantation

Jinbin Yang, Seyed Saleh Mousavi Khaleghi, Zhijuan Su, and Yaping Dan (Shanghai Jiao Tong Univ., China)

[Mo4G-2] 17:15-17:30

Scintillation Performance Enhancement of Two Dimensional Perovskites Via Alkali Metal Doping

Francesco Maddalena (Nanyang Technological Univ., Sinpapore), Benoit Mahler (Univ. de Lyon, France), Marcin E. Witkowski, Michal Makowski, Winicjusz Drozdowski (Nicolaus Copernicus Univ., Poland), Christophe Dujardin (Univ. de Lyon, France), Muhammad Danang Birowosuto (Lukasiewicz Research Network, Poland), and Cuong Dang (Nanyang Technological Univ., Singapore)

[Mo4G-3] 17:30-17:45

Lossy Mode Resonance Sensor Based on the Directly Drawn D-shape Fiber

R. Kasztelanic, G. Stepniewski, A. Filipkowski, D. Pysz (Lukasiewicz – Inst. of Microelectronics and Photonics, Poland), R. Buczynski (Univ. of Warsaw, Poland), and M. Smietana (Warsaw Univ. of Tech., Poland)

[Mo4G-4] 17:45-18:00

Wide-angle Field-of-view Air-hole Metalens Based on Quadratic Phase Profile

Rong Shi and Hamza Kurt (KAIST, Korea)

[Mo4G-5] 18:00-18:15

Simultaneous Detection of Rotation Angle and Speed Using a Monolithic GaN Optoelectronic Chip

Fan Shi, Chengxiang Jiang, Li Fang, Jiabin Yan, and Yongjin Wang (Nanjing Univ. of Posts and Telecommunications, China)

[Mo4G-6] 18:15-18:30

Real-Time Foot Pressure Mapping Using a Smart Insole with Sinusoidally Embedded Fiber Bragg Gratings

Steven Binder, Thomas Anton, and Mable Fok (Univ. of Georgia, USA)

Session Title:	[Mo4H] Solid-State Lasers II
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room H (117)
Session Chair(s)	Prof. Ji Won Kim (Hanyang Univ., Korea)

[Mo4H-1] 17:00-17:15

Watt-Level Diode-Pumped Tm:$LuVO_4$ Laser at 2.29 μm

Xiaoxu Yu (Shandong Univ., China), Kirill Eremeev (Univ. of Caen Normandy, France), Zhongben Pan (Shandong Univ., China), Pavel Loiko (Univ. of Caen Normandy, France), Hongwei Chu, Han Pan (Shandong Univ., China), Alain Braud, Patrice Camy (Univ. of Caen Normandy, France), and Dechun Li (Shandong Univ., China)

[Mo4H-2] 17:15-17:30

10-watt Level Continuous Wave Nd:YVO_4-KGW Intracavity Raman laser

Jingni Geng, Quan Sheng, Tianchang Liu (Tianjin Univ., China), Pengbo Jiang (Qilu Univ. of Tech., China), Shijie Fu, Wei Shi, and Jianquan Yao (Tianjin Univ., China)

[Mo4H-3] 17:30-17:45

High-Dimensional Non-Separable States from a Solid-State Laser

Zhichao Zhang, Lan Hai, Chunqing Gao, and Shiyao Fu (Beijing Inst. of Tech., Japan)

[Mo4H-4] 17:45-18:00

Measuring Radial Coherence

Radhika Prasad, Nilakshi Senapati, Abhinandan Bhattacharjee (Indian Inst. of Tech. Kanpur, India), Bruno Piccirillo (Università degli Studi di Napoli Federico II, Italy), Miguel A. Alonso (Aix Marseille Univ., France), and Anand K. Jha (Indian Inst. of Tech. Kanpur, India)

[Mo4H-5] [Invited] 18:00-18:30

Ultrastable and Ultrafast Mid-IR Laser Sources Based on a Cr:ZnS/ZnSe Laser Technology

Maciej Kowalczyk, Karolina Suliga (Wroclaw Univ. of Science and Tech., Poland), Nathalie Lenke (Ludwig-Maximilians-Universitat Munchen, Germany), Philipp Steinleitner, Nicholas Karpowiczr (Max-Planck-Inst. for Quantum Optics, Germany), Vladimir Pervak (Ludwig-Maximilians-Universitat Munchen, Germany), Aleksander G ł uszek, Arkadiusz Hudzikowski (Wroclaw Univ. of Science and Tech., Poland), Ka Fai Makr (Max-Planck-Inst. for Quantum

Optics, Germany), Jarosław Sotor (Wroclaw Univ. of Science and Tech., Poland), Ferenc Krausz, and Alexander Weigelr (Max-Planck-Inst. for Quantum Optics, Germany)

Session Title:	[Mo4I] Laser Surface Treatment
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:15
Session Room:	Room I (118)
Session Chair(s)	Dr. Su Jin LEE (KIMM, Korea)

[Mo4I-1] 17:00-17:15

Correlation Analysis between Laser Shock Peening Effects and Spatiotemporal Profile of Laser Beam

Geonhui Lee, Sanghyun Park, Hanjin Jo (Handong Global Univ., Korea), Seungjin Hwang, Sungyoon Lee (HILLAB Inc., Korea), Seokjun Yu (Pavetech Co., Ltd., Korea), and Tae Jun Yu (Handong Global Univ., Korea)

[Mo4I-2] 17:15-17:30

Formation of Cu-Sn High-temperature Phase by Ultra-short Pulse Laser Irradiation

Hiroto Seki, Taketo Furuichi (Tokushima Univ., Japan), Keisuke Takabayashi, Eibon Tsuchiya, Tsubasa Endo (The Univ. of Tokyo, Japan), Makoto Yamaguchi (Akita Univ., Japan), Tatsuya Okada (Tokushima Univ., Japan), Yohei Kobayashi (The Univ. of Tokyo, Japan), and Takuro Tomita (Tokushima Univ., Japan)

[Mo4I-3] 17:30-17:45

Dual Laser Annealing for Improved Phosphorous-Dopant Activation in Advanced Silicon Devices

R. A. Taiwo and J.H. Shin (Kongju Nat'l Univ., Korea)

[Mo4I-4] 17:45-18:00

Wedge Prism Scanner for Laser Surface Cleaning

HA-MY HOANG and JI-WHAN NOH (Korea Inst. of Machinery & Materials, Korea)

[Mo4I-5] 18:00-18:15

Study on the Effect of Laser Micromachining on the Physical Properties and Grain Structure of Tungsten in Nuclear Fusion Science

Haotian Yang, Ryo Yasuhara, Hiroyuki Noto (The Graduate Univ. for Advanced Studies, SOKENDAI, Japan), Daisuke Nagata (Nat'l Inst. for Fusion Science, Japan), Masayuki Tokitani, Haruki Kawaguchi, Chihiro Suzuki (The Graduate Univ. for Advanced Studies, SOKENDAI,

Japan), Reina Miyagawa (Nagoya Inst. of Tech., Japan), and Hiyori Uehara (The Graduate Univ. for Advanced Studies, SOKENDAI, Japan)

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Session Title:	[Mo4J] Infrared/THz Source and Device
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Young-Mi Bahk (Incheon Nat'l Univ., Korea), Prof. Yen-Chieh Huang (Nat'l Tsing Hua Univ., Taiwan)

[Mo4J-1] [Invited] 17:00-17:30

Infrared Entangled Photon Sources for Quantum Sensing

Masayuki Hojo and Koichiro Tanaka (Kyoto Univ., Japan)

[Mo4J-2] [Invited] 17:30-18:00

Pixelated Directional Thermal Emitter

Ziwei Fan, Taeseung Hwang, Sam Lin, Yixin Chen, and Zi Jing Wong (Texas A&M Univ., USA)

[Mo4J-3] 18:00-18:15

Terahertz Emitter Based on Co/Mo with Amplitude Control and Polarization Reversal Capabilities

P.Yu. Avdeev, A.V. Gorbatova, E.D. Lebedeva (MIREA – Russian Technological Univ., Russia), N.S. Gusev, M.V. Sapozhnikov (Inst. for Physics of Microstructures of the Russian Academy of Sciences, Russia), and A.M. Buryakov (MIREA – Russian Technological Univ., Russia)

[Mo4J-4] 18:15-18:30

THz Distributed-feedback Free-electron Laser

Hossein Shirvani and Yen-Chieh Huang (Nat'l Tsing Hua Univ., Taiwan)

Session Title:	[Mo4K] Amplified Transmission Systems
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room K (204-205)
Session Chair(s)	Prof. Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[Mo4K-1] [Invited] 17:00-17:30

Optical Parametric Amplification Technology with PPLN Waveguide for WDM Bandwidth Extension

Shimpei Shimizu, Takayuki Kobayashi, Takushi Kazama, Masashi Abe, Koji Enbutsu, Takahiro Kashiwazaki, Masanori Nakamura, Akira Kawai, Fukutaro Hamaoka, Takeshi Umeki, and Yutaka Miyamoto (NTT Corp., Japan)

[Mo4K-2] [Invited] 17:30-18:00

Coherent O-band WDM Transmission Using Bismuth Doped Fiber Amplifiers

Daniel J. Elson and Yuta Wakayama (KDDI Research Inc., Japan)

[Mo4K-3] 18:00-18:15

Optimization Strategy of Raman Pump for C+L+S Optical Transmissions with ANN

Rui Wang, Jing Zhang, Hong Lin, Xue Zhao, Bo Xu, and Kun Qiu (Univ. of Electronic Science and Tech. of China, China)

[Mo4K-4] 18:15-18:30

Real-time Transmission of 400GbE Signal over 4-Core Multi-Core Fiber in Data Center Network

Lipeng Feng (China Telecom Research Inst., China), Jun Chu (Yangtze Optical Fibre and Cable Joint Stock Limited Company, China), Yuyang Liu (China Telecom Research Inst., China), Yuanliang Chu (Yangtze Optical Fibre and Cable Joint Stock Limited Company, China), Hao Liu (China Telecom Research Inst., China), Lei Zhang (Yangtze Optical Fibre and Cable Joint Stock Limited Company, China), Taoling Xiang (Sunstar Communication Tech. Co., Ltd., China), Jie Luo (Yangtze Optical Fibre and Cable Joint Stock Limited Company, China), Tao Ma (China Telecom Co., Ltd., China), and Anxu Zhang (China Telecom Research Inst., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Mo4L] High Energy Laser
Session Date:	August 5 (Mon.), 2024
Session Time:	17:00-18:30
Session Room:	Room L (206-207)
Session Chair(s)	Dr. Paul D. Mason (Science and Tech. Facilities Council, UK)

[Mo4L-1] [Invited] 17:00-17:30

Development of Next-generation High-power Laser - Conductive-Cooled Active-Mirror Laser System "SENJU (100J, 100Hz)"

Jumpei Ogino, Koji Tsubakimoto, Hidetsugu Yoshida, Satoshi Matsuo (Osaka Univ., Japan), Shinji Motokoshi (Inst. of Laser Tech., Japan), Noboru Morio, Kana Fujioka (Osaka Univ., Japan), Shigeki Tokita (Kyoto Univ., Japan), Noriaki Miyanaga (Osaka Univ., Japan), Ken-ichi Ueda (The Univ. of Electro-Communications, Japan), Ryousuke Kodama, and Akifumi Yogo (Osaka Univ., Japan)

[Mo4L-2] [Invited] 17:30-18:00

Development and Commissioning of DiPOLE 100 Hz: A Nanosecond Diode-pumped Solid State Laser Operating at 10 J, 100 Hz

Mariastefania De Vido, Gary Quinn, Danielle Clarke, Luke McHugh, Paul Mason, Jacob Spear, Jodie M. Smith (Rutherford Appleton Lab., UK), Martin Divoky, Jan Pilar, Ondrej Denk (HiLASE Centre, Czech Republic), Thomas J. Butcher, Chris Edwards (Rutherford Appleton Lab., UK), Tomas Mocek (HiLASE Centre, Czech Republic), and John L. Collier (Rutherford Appleton Lab., UK)

[Mo4L-3] 18:00-18:15

Generation of High-Intensity, High-Quality Vortex Beams Using a Reflective Spiral Phase Mirror

Jin Woo Yoon (GIST, Korea), Sunwoo Lee (Korea Basic Science Inst., Korea), Il Woo Choi (GIST, Korea), and I Jong Kim (Korea Basic Science Inst., Korea)

[Mo4L-4] 18:15-18:30

Experimental Validation of Beam Pointing Error in Tiled Array Coherent Beam Combining

Satyajit Maji, Viswanathan Sankar, C.L. Linslal, M.S. Sooraj, and Balaji Srinivasan (Indian Inst. of Tech. Madras, India)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1A] Optical Neural Network
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Seungyeol Lee (Kyungpook Nat'l Univ., Korea)

[Tu1A-1] [Invited] 11:00-11:30

Programmable Photonics using Dynamically Modulated Coupled Resonances

Xianji Piao (The Univ. of Seoul, Korea)

[Tu1A-2] 11:30-11:45

Single-Shot Matrix-Matrix Multiplication via Hyperspectral Compute-In-Memory

Byoung Jun Park (Korea Univ., Korea), Mostafa Honari Latifpour (City Univ. of New York, USA), Yoshihisa Yamamoto, and Myoung-Gyun Suh (NTT Research Inc., USA)

[Tu1A-3] 11:45-12:00

Optical Random Neural Networks with Genetic Programming

Bora Carpinlioglu, Bahrem Serhat Danis, and Ugur Tegin (Koc Univ., Turkey)

[Tu1A-4] 12:00-12:15

Attention Mechanism-based Joint Fiber Event Identification and Location Using Monitoring Data in φ-OTDR System

Yuhang Zhou (Beijing Univ. of Posts and Telecommunications, China), Yi Ding (China Telecom Research Inst., China), Zhiqun Gu (Beijing Univ. of Posts and Telecommunications, China), Xia Gao, Qian Hu (China Telecom Research Inst., China), Jiawei Zhang, Rentao Gu, and Yuefeng Ji (Beijing Univ. of Posts and Telecommunications, China)

[Tu1A-5] 12:15-12:30

Multi-layer Nonlinear Lensless Opto-electrical Neural Network with Quantum Dot Activation

Wanxin Shi (China Mobile Research Inst., China), Zheng Huang (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Xi Jiang, Xue Li (Beijing Inst. of Tech., China), Yuyang Han, Sigang Yang (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Haizheng Zhong (Beijing Inst. of Tech., China), and Hongwei Chen (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1B] Ultrafast Dynamics and Spectroscopy
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Donguk Nam (Nanyang Technological Univ., Singapore)

[Tu1B-1] [Invited] 11:00-11:30

High-speed Broadband Mid-infrared and Coherent Raman Spectroscopy with Photonic Time-stretch Technology

Takuro Ideguchi (The Univ. of Tokyo, Japan)

[Tu1B-2] 11:30-11:45

Transient Absorption Microscopy of Photocarrier in-Plane Transport in Graphene-based Heterostructures

Hui Zhao (The Univ. of Kansas, USA)

[Tu1B-3] 11:45-12:00

High-Resolution Time-Stretch Infrared Spectroscopy with Frequency Down-Conversion of Near-Infrared Lasers

Makoto Shoshin, Takahiro Kageyama, Kazuki Hashimoto, Takuma Nakamura, and Takuro Ideguchi (The Univ. of Tokyo, Japan)

[Tu1B-4] 12:00-12:15

Phonon Amplification via Transparent $PbZrO_3$ Layer on top of $SrRuO_3/SrTiO_3$ Heterostructures

Shuai Wang, Yangyang Si, Jianan Duan, Zuhuang Chen, and Feng He (Harbin Inst. of Tech., China)

[Tu1B-5] 12:15-12:30

Multipulse Activation and Control of a GHz Coherent Acoustic Phonon in WSSe

S.I. Rey, L. Monin (AMOLF, The Netherlands), M.J. Cross, M.L. Welsch, F. Schröder, B. Zhou, N. Stenger (Technical Univ. of Denmark, Denmark), W. Albrecht (AMOLF, The Netherlands), P.U. Jepsen, and E.J.R. Kelleher (Technical Univ. of Denmark, Denmark)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1C] Quantum Sensing I
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Li You (Tsinghua Univ., China)

[Tu1C-1] [Invited] 11:00-11:30

Quantum Interferometry for Sensing

Gerd Leuchs (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

[Tu1C-2] 11:30-11:45

Distributed Multiple-phase Estimation with Fewer Photons

Dong-Hyun Kim (KIST, Korea), Seongjin Hong (Chung-Ang Univ., Korea), Yong-Su Kim (KIST, Korea), Yosep Kim (Korea Univ., Korea), Seung-Woo Lee (KIST, Korea), Raphael C. Pooser (QC82, USA), Kyunghwan Oh (Yonsei Univ., Korea), Su-Yong Lee (Agency for Defense Development, Korea), Changhyoup Lee (KRISS, Korea), and Hyang-Tag Lim (KIST, Korea)

[Tu1C-3] 11:45-12:00

Heisenberg-limited Metrology via Weak-value Amplification Without Using Entangled Resources

Yosep Kim, Seung-Yeun Yoo, and Yoon-Ho Kim (POSTECH, Korea)

[Tu1C-4] 12:00-12:15

Detecting Submicron-Scale Continuous Variation in Phase of AC Magnetic Field around Micro-Circuit with Diamond Quantum Sensor

Fuki Otsubo, Takumi Mikawa (Keio Univ., Japan), Yuichiro Matsuzaki (Chuo Univ., Japan), Norio Tokuda (Kanazawa Univ., Japan), Norikazu Mizuochi (Kyoto Univ., Japan), and Junko Ishi-Hayase (Keio Univ., Japan)

[Tu1C-5] 12:15-12:30

Mid-infrared Sensing using an Antiresonant Hollow Core Fiber in a Quantum Interferometer

Thomas Produit, Tanmoy Chakraborty, Leonid Krivitsky (A*STAR, Singapore), Ang Deng, Wonkeun Chang (Nanyang Technological Univ., Singapore), and Anna V. Paterova (A*STAR, Singapore)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1D] Novel Nonlinear Devices 1
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room D (113)
Session Chair(s)	Dr. Moritz Merklein (The Univ. of Sydney, Australia)

[Tu1D-1] [Invited] 11:00-11:30

Nonlinear Photonics with Resonant Optical Structures

Yuri Kivshar (The Australian Nat'l Univ., Australia)

[Tu1D-2] 11:30-11:45

Soliton Microcomb Generation with Low Pump Powers in Normal Dispersion Lithium Niobate Microdisks by Mode Recombination

Botao Fu, Jintian Lin (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Renhong Gao (East China Normal Univ., China), and Ya Cheng (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[Tu1D-3] 11:45-12:00

Two-octave-spanning Supercontinuum Generation in Gallium Nitride Waveguides

Zhaoqin He, Yuqian Zhang (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Yongyuan Chu, Lu Yang (Shanghai Univ., China), Bing Xiong, Jian Wang, Zhibiao Hao, Lai Wang, Yanjun Han, Hongtao Li, Lin Gan, Yi Luo (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Hairun Guo (Shanghai Univ., China), and Changzheng Sun (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China)

[Tu1D-4] 12:00-12:15

Broadband Mid-infrared Kerr Comb Generation in Suspended AlGaAs Microresonators

Yuqian Zhang (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Qibing Sun (Xi'an Inst. of Optics and Precision Mechanics, Chinese Academy of Sciences, China), Bing Xiong, Jian Wang, Zhibiao Hao, Lai Wang, Yanjun Han, Hongtao Li, Lin Gan, Yi Luo (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Leiran Wang, Wenfu Zhang (Xi'an Inst. of Optics and Precision Mechanics, Chinese Academy of Sciences, China), and Changzheng Sun (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China)

[Tu1D-5] 12:15-12:30

Octave-spanning Supercontinuum Generation in Suspended AlGaAs Waveguides

Yuqian Zhang, Zhaoqin He (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Yongyuan Chu, Lu Yang (Shanghai Univ., China), Bing Xiong, Jian Wang, Zhibiao Hao, Lai Wang, Yanjun Han, Hongtao Li, Lin Gan, Yi Luo (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China), Hairun Guo (Shanghai Univ., China), and Changzheng Sun (Beijing Nat'l Research Center for Information Science and Tech. of Tsinghua Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1E] Dimensional Metrology Ⅲ
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room E (114)
Session Chair(s)	Dr. Jonghan Jin (KRISS, Korea), Dr. Kisoo Kim (KOPTI, Korea)

[Tu1E-1] [Invited] 11:00-11:30

Double-sided Interferometer for SI-traceable Thickness Measurement

Akiko Hirai and Youichi Bitou (Nat'l Metrology Inst. of Japan, Japan)

[Tu1E-2] 11:30-11:45

Application for Wafer Measurement using Multi-channel Laser Ranging based on Dual-comb Time-of-flight with High-efficiency Cross-correlation via Semiconductor Optical Amplifier

Jaeyoung Jang, Hyeokin Kang, Hyunsu Kim, Seung-Woo Kim, and Young-Jin Kim (KAIST, Korea)

[Tu1E-3] 11:45-12:00

Measurement of Temporal Phase of Weak Optical Pulses in a Noisy Environment

Jerzy Szuniewicz (Univ. of Warsaw, Poland), Steven Sagona-Stophel, Sarah Thomas, Ian Walmsley (Imperial College London, UK), and Michał Karpiński (Univ. of Warsaw, Poland)

[Tu1E-4] 12:00-12:15

Phase Noise Measurement with Delay Interferometer During Fast Polarization Fluctuation

Shiro Ryu (Meiji Univ., Japan)

[Tu1E-5] 12:15-12:30

Precise Enhancement for Optical Delay Measurement

Haoxuan Zhang, Weimeng Wang, Song Yu, Bin Luo, and Tianwei Jiang (Beijing Univ. of Posts and Telecommunications, China)

Session Title:	[Tu1F] Light Manipulation I
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room F (115)
Session Chair(s)	Prof. Hong-Gyu Park (Seoul Nat'l Univ., Korea)

[Tu1F-1] [Invited] 11:00-11:30

Strong Exciton-Photon Interaction of Halide Perovskite Nanostructures towards Continuous-Wave Lasing

Qing Zhang (Peking Univ., China)

[Tu1F-2] 11:30-11:45

Spectroscopic and Microscopic Study on Superfluorescent Halide-based Quasi-two-dimensional Perovskites

Aaron Wildenborg, Ryan Munter, and Jae Yong Suh (Michigan Technological Univ., USA)

[Tu1F-3] 11:45-12:00

Enhanced Absorption in Organic Solar Cells Using Light Scattering by Dielectric Nano-pyramid Arrays

Donggyu Lim, Seongcheol Ju, Cheolhun Kang, Dohyun Kim (Inha Univ., Korea), Jeonghyun Kim (Kwangwoon Univ., Korea), Hui Joon Park (Hanyang Univ., Korea), and Kyu-Tae Lee (Inha Univ., Korea)

[Tu1F-4] 12:00-12:15

Enhanced Light Absorption in Organic Solar Cells by All-dielectric Nanostructures

Seongcheol Ju, Hyeonwoo Kim, Hojae Kwak, Incheol Jung, Seunghyun Oh, Seung Gol Lee (Inha Univ., Korea), Jeonghyun Kim (Kwangwoon Univ., Korea), Hui Joon Park (Hanyang Univ., Korea), and Kyu-Tae Lee (Inha Univ., Korea)

[Tu1F-5] 12:15-12:30

Optical Pulling of Synthetic Janus Particles Mediated by Photonic Nanojet

Yu-Xuan Ren (Fudan Univ., China), Johannes Frueh, Sven Rutkowski (Nat'l Research Tomsk Polytechnic Univ., Russia), Cihang Kong, Bo Li (Fudan Univ., China), and Kenneth K. Y. Wong (The Univ. of Hong Kong, Hong Kong S.A.R)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1G] Optical Reflectometry
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room G (116)
Session Chair(s)	Prof. Atsushi Shibukawa (Hokkaido Univ., Japan)

[Tu1G-1] 11:00-11:15

Proposal of Dual-Laser Brillouin Optical Correlation-Domain Reflectometry

Guangtao Zhu (Yokohama Nat'l Univ., Japan), Hiroshi Takahashi, Yusuke Koshikiya (NTT Corp., Japan), Heeyoung Lee (Shibaura Inst. of Tech., Japan), and Yosuke Mizuno (Yokohama Nat'l Univ., Japan)

[Tu1G-2] 11:15-11:30

Sensitivity Enhancement Through Triangular Chirped-Pulse Phase OTDR

Numan Kifayat and Hoon Kim (KAIST, Korea)

[Tu1G-3] 11:30-11:45

Pulse Coded BOTDA Sensing System based on Optical Orthogonal Code and SEFDM

Mingzheng Huang and Changjian Guo (South China Normal Univ., China)

[Tu1G-4] 11:45-12:00

Data Volume Reduction of Optical Correlation-domain Reflectometry by Application of Compressed Sensing

Yuki Katsutani, Kohei Noda, Takuma Shirahata, Shinji Yamashita, and Sze Yun Set (The Univ. of Tokyo, Japan)

[Tu1G-5] 12:00-12:15

Frequency-Modulated Continuous-Wave Ranging through Timing Jitter Correction

Ting-Qing Liao, Ting-Chia Chang, Shih-Hsiang Hsu, and Shien-Kuei Liaw (Nat'l Taiwan Univ. of Science and Tech., Taiwan)

[Tu1G-6] 12:15-12:30

Two-Dimensional CNN Based on Vertical Edge Detection and Density-Based Spatial Clustering for Φ-OTDR Vibration Recognition

Xia Gao, Xin Qin (China Telecom Research Inst., China), Yong Zhang (China Telecom Beijing Branch, China), Yi Ding (China Telecom Research Inst., China), Qiang Fu (China Telecom Zhejiang Branch, China), Qian Hu (China Telecom Research Inst., China), Yan Zhang (China Telecom Beijing Branch, China), Jixiong Huang (China Telecom Guangxi Branch, China), and Xiankun Zhu (China Telecom Research Inst., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1H] Optical Comb Generation
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room H (117)
Session Chair(s)	Prof. Ju Han Lee (The Univ. of Seoul, Korea)

[Tu1H-1] [Tutorial] 11:00-12:00

Ultrafast Laser-based Frequency Comb and Dual-comb Generation

Ursula Keller (ETH Zurich, Switzerland)

[Tu1H-2] [Invited] 12:00-12:30

High-Power Dual-comb Thin-disk Oscillator

Tobias Hofer, Gregor Hehl, Kilian Fritsch, and Oleg Pronin (Helmut Schmidt Univ., Germany)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1I] Femtosecond Laser Structuring
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room I (118)
Session Chair(s)	Dr. Jiyeon Choi (KIMM, Korea)

[Tu1I-1] [Tutorial] 11:00-11:45

Transforming and Tuning Materials Properties with Femtosecond Lasers, from 3D Part Fabrication, Photonics and Beyond

Yves Bellouard (EPFL, Switzerland)

[Tu1I-2] 11:45-12:00

Fabrication of 2D Periodic Surface Nanostructures for Functionalization of Titanium Surface by Femtosecond Laser Pulses with GHz Burst Mode

Shota Kawabata, Felix Sima, Shi Bai, Kotaro Obata, Kazunari Ozasa (RIKEN Center for Advanced Photonics, Japan), Godai Miyaji (Tokyo Univ. of Agriculture and Tech., Japan), and Koji Sugioka (RIKEN Center for Advanced Photonics, Japan)

[Tu1I-3] 12:00-12:15

Laser-Assisted-Etching for Hybrid Polymer-Silica Lab-on-chip

George T Ong, T. Lee, P. Maniewski, S. McQuillan, M. Beresna, R. Ismaeel, and G. Brambilla (Univ. of Southampton, UK)

[Tu1I-4] 12:15-12:30

Femtosecond Laser Written Waveguides in CVD Diamonds

D. Perevoznik, J. Locmelis, D. Zuber, A. Glukhovskoy (Leibniz Univ. Hannover, Germany), A. Afentaki, M. Hinkelmann (Laser Zentrum Hannover e.V., Germany), F.Dencker, M. Wurz, and U. Morgner (Leibniz Univ. Hannover, Germany)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu1J] Metasurface I
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Sunae So (Korea Univ., Korea), Prof. Teun-Teun Kim (Univ. of Ulsan, Korea)

[Tu1J-1] [Invited] 11:00-11:30

Poles and Zeros in Resonant Nano-Photonic Systems

Felix Binkowski, Fridtjof Betz (Zuse Inst. Berlin, Germany), Martin Hammerschmidt, Lin Zschiedrich (JCMwave GmbH, Germany), and Sven Burger (Zuse Inst. Berlin, Germany)

[Tu1J-2] 11:30-11:45

Large-angle Manipulation of Nonlocal Metasurfaces

Dongmin Jeon and Junsuk Rho (POSTECH, Korea)

[Tu1J-3] 11:45-12:00

Pinning Effect with Geometry-Independent Resonances Controlled by Epsilon-Near-Zero Hyperbolic Metamaterials

Chenxingyu Huang, H. Y. Fu (Tsinghua Univ., China), and Qian Li (Peking Univ., China)

[Tu1J-4] 12:00-12:15

Reflective Moiré Metasurfaces: A Paradigm of Innovation and Challenge

Shuo Liu, Lei Zhang, and Xiaoqing Chen (Southeast Univ., China)

[Tu1J-5] 12:15-12:30

Narrowband Detection of Full Polarization States through the Metasurfaces with Identical Unit Cells

Yu Geun Ki, Byeong Je Jeon, Il Hoon Song, Seong Jun Kim, Sangtae Jeon, and Soo Jin Kim (Korea Univ., Korea)

Session Title:	[Tu1K] Optical Networks
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:30
Session Room:	Room K (204-205)
Session Chair(s)	Prof. Gangxiang Shen (Soochow Univ., China)

[Tu1K-1] [Invited] 11:00-11:30

Computing Power-oriented Intelligent Optical Networking Technology

Hui Yang, Tiankuo Yu, and Qiuyan Yao (Beijing Univ. of Posts and Telecommunications, China)

[Tu1K-2] [Invited] 11:30-12:00

Broadband On-chip Light-matter Interface in Telecom Band

Qiang Zhou, Xueying Zhang (Univ. of Electronic Science and Tech. of China, China), Bin Zhang (Shandong Univ., China), Hao Li, Lixing You (Shanghai Inst. of Microsystem and Information Tech., Chinese Academy of Sciences, China), Feng Chen (Shandong Univ., China), and Guangcan Guo (Univ. of Electronic Science and Tech. of China, China)

[Tu1K-3] 12:00-12:15

Multi-Faults Location based on Knowledge Graphs and Gated Graph Neural Network in Optical Networks

Xin Qin, Xia Gao (China Telecom Research Inst., China), Jing Wang (China Telecom Shandong Branch, China), Jie Liu (China Telecom Jiangsu Branch, China), Yinuo Wu (China Telecom Shandong Branch, China), Haoru Wang (China Telecom Jiangsu Branch, China), Fan Yang, Qian Hu (China Telecom Research Inst., China), Luming Liu, Di Liu, and Jiling Liu (China Telecom Shandong Branch, China)

[Tu1K-4] 12:15-12:30

Optimization of Unrepeatered Transmission using DCF Based Pre-Distortion and Optical Phase Conjugation

Christian Koefoed Schou (Technical Univ. of Denmark, Denmark), Mark Pelusi, Ryosuke Matsumoto, Takashi Inoue, Shu Namiki (AIST, Japan), Smaranika Swian, Michael Galili, and Leif K. Oxenløwe (Technical Univ. of Denmark, Denmark)

Session Title:	[Tu1L] Computational Optical Microscopy I
Session Date:	August 6 (Tue.), 2024
Session Time:	11:00-12:15
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Chulmin Joo (Yonsei Univ., Korea)

[Tu1L-1] [Invited] 11:00-11:30

isoSTED Nanoscopy using Adaptive Optics for Thick Tissue Imaging

Dong-Ryoung Lee (Soongsil Univ., Korea)

[Tu1L-2] 11:30-11:45

An Unmixing Approach for Multi-color Spectral Cellular Imaging without Reference Spectra Measurement

Jinhong Yan, Yi He, and Kun Chen (Univ. of Electronic Science and Tech. of China, China)

[Tu1L-3] 11:45-12:00

Virtual Re-staining of Faded H&E-Stained Slides Using NIR Quantitative Phase Imaging

Hyesuk Chae, Jongho Kim, Joonsung Jeon, Kyungwon Lee, Kyung Chul Lee, Ji Ung Choi, Suki Kang, Soyoung Choi, Geunbae Bang, Nam Hoon Cho, and Seung Ah Lee (Yonsei Univ., Korea)

[Tu1L-4] 12:00-12:15

Efficient Physics-constrained Random Matrix Modelling of Polarized Light Scattering in Disordered Media

Niall Byrnes and Matthew R. Foreman (Nanyang Technological Univ., Singapore)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2A] Fiber Sensors
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room A (102-103)
Session Chair(s)	Dr. Kwanil Lee (KIST, Korea)

[Tu2A-1] [Invited] 16:00-16:30

Tomographic Reconstruction for Distributed Brillouin Sensing

Youhei Okawa (AIST, Japan)

[Tu2A-2] [Invited] 16:30-17:00

Distributed SBS-induced Birefringence Detection in SMF

Yuan Wang, Yuelang Huang, and Xiaoyi Bao (Ottawa Univ., Canada)

[Tu2A-3] 17:00-17:15

Experimental Analysis of Golay Codes Applied to Phase Sensitive Optical Time-Domain Reflectometry

Sebastián San Martín (Universidad Tecnica Federico Santa Maria, Chile), Qian Zhang, Zhisheng Yang (Beijing Univ. of Posts and Telecommunications, China), and Marcelo A. Soto (Universidad Tecnica Federico Santa Maria, Chile)

[Tu2A-4] 17:15-17:30

Greatest Common Divisor Used for Two-orders Resolution Improvement in Single-point and Multi point Fiber Refractometer

Jonathan Esquivel-Hernández, Rodolfo Martínez-Manuel, and Luis M. Valentín-Coronado (Centro de Investigaciones en Óptica, Mexico)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2B] Ultrafast Lasers
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Nan Ei YU (GIST, Korea)

[Tu2B-1] [Invited] 16:00-16:30

Ultra-high-power Multi-cycle Far-infrared Parametric Source

Ming-Hsiung Wu and Yen-Chieh Huang (Nat'l Tsing Hua Univ., Taiwan)

[Tu2B-2] 16:30-16:45

Widely-Tunable Mode-Locked Cr:ZnS Laser with GHz Spectral Width

Zheyuan Zhang, Xiangbao Bu, Wenqing Song, Ikki Morichika, and Satoshi Ashihara (The Univ. of Tokyo, Japan)

[Tu2B-3] 16:45-17:00

Ultrahigh-Repetition-Rate Plused Fiber Laser Based on Four-Wave Mixing in a Microcavity

Wenyu Wang, Kang Xu, Linhao Ren, Lei Shi, and Xinliang Zhang (Huazhong Univ. of Science and Tech., China)

[Tu2B-4] 17:00-17:15

Multiple-Soliton Pulses Generated in Fiber Laser for Parallel Chaos LiDAR

Chuangkai Li (Peking Univ., China), Yaqi Han, H. Y. Fu (Tsinghua Shenzhen Int'l Graduate School, Tsinghua Univ., China), and Qian Li (Peking Univ., China)

[Tu2B-5] 17:15-17:30

Breathing Dissipative Soliton Pairs in Mode-locked Fiber Lasers

Yifang Li, Ran Xia, Jia Liu, Shengbo Xu, Yunru Chen, Xiahui Tang, and Gang Xu (Huazhong Univ. of Science and Tech., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2C] Quantum Sensing II
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Ray-Kuang Lee (Nat'l Tsing Hua Univ., Taiwan)

[Tu2C-1] [Invited] 16:00-16:30

Quantum Enhanced Sensing with Condensed Atoms in Linear and Nonlinear Interferometries

Li You (Tsinghua Univ., China)

[Tu2C-2] 16:30-16:45

Sensitivity Analysis of Distributed Quantum Sensing with a Limited Squeezing Level

Yunseo Jeong (Chung-Ang Univ., Korea), Changhyoup Lee (KRISS, Korea), and Seongjin Hong (Chung-Ang Univ., Korea)

[Tu2C-3] 16:45-17:00

Experimental Measurement of Path Fluctuations in Photon Interference

Ryuya Fukuda, Holger F. Hofmann, and Masataka Iinuma (Hiroshima Univ., Japan)

[Tu2C-4] 17:00-17:15

Recovering Quantum Entanglement After Its Certification

Hyeon-Jin Kim, Ji-Hyeok Jung, Kyung-Jun Lee, and Young-Sik Ra (KAIST, Korea)

[Tu2C-5] 17:15-17:30

Unitary Spectral-temporal Mode Shaping for Applicationsin Photonic Quantum Information Processing

Jerzy Szuniewicz, Ksawery Mielczarek, Michał Chrzanowski, Filip Sośnicki, and Michał Karpiński (Univ. of Warsaw, Poland)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2D] Novel Nonlinear Devices 2
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room D (113)
Session Chair(s)	Prof. Sangyoon Han (DGIST, Korea)

[Tu2D-1] [Invited] 16:00-16:30

On-chip Brillouin Interactions in Tailored Waveguides

Moritz Merklein (The Univ. of Sydney, Australia)

[Tu2D-2] 16:30-16:45

Enhanced Femtosecond Photon Echo Generation from Inhomogeneous InAs Quantum Dots by Chirped Pulses

Yuta Kochi, Yutaro Kinoshita (Keio Univ., Japan), Kouichi Akahane (Nat'l Inst. of Information and Communications Tech., Japan), and Junko Ishi-Hayase (Keio Univ., Japan)

[Tu2D-3] 16:45-17:00

Generation and Dynamics of Soliton Microcombs in Microring Resonators Pumped by Two Self-Injection Locked Laser Diodes

D. A. Chermoshentsev, A. E. Shitikov, M. L. Galkin, A. N. Danilin, A.K. Vorobyev, D. M. Sokol, A.V. Masalov, V. E. Lobanov, and I. A. Bilenko (Russian Quantum Center, Russia)

[Tu2D-4] 17:00-17:15

Self-injection Locked Nonlinear Brillouin Laser in Chalcogenide Microresonators

Wendong Chen, Zifu Wang, Di Xia, Yufei Li, Zhaohui Li, and Bin Zhang (Guangdong Provincial Key Lab. of Optoelectronic Materials and Chips, Sun Yat-sen Univ., China)

[Tu2D-5] 17:15-17:30

Microwave-rate Dark Pulse Microcombs in Integrated $LiNbO_3$ Microresonators

Xiaomin Lv, Binbin Nie, Chen Yang (Peking Univ., China), Rui Ma (Nankai Univ., China), Ze Wang, Yanwu Liu, Xing Jin (Peking Univ., China), Zhenyu Chen (Nankai Univ., China), Du Qian, Guanyu Zhang, Guowei Lv, Qihuang Gong (Peking Univ., China), Fang Bo (Nankai Univ., China), and Qi-Fan Yang (Peking Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2E] Optical Metrology Ⅲ
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room E (114)
Session Chair(s)	Prof. Hanzhong Wu (Huazhong Univ. of Science and Tech., China), Dr. Yoon-Soo Jang (KRISS, Korea)

[Tu2E-1] [Invited] 16:00-16:30

Direct Measurement of Underwater Sound Velocity Based on Dual Comb System

Haihan Zhao, Xiaobo Li, Haonan Shi, Jingsheng Zhai, and Bin Xue (Tianjin Univ., China)

[Tu2E-2] 16:30-16:45

Photo-induced Surface Vibration Movie with 23,000 Frames using Dual-comb Based Asynchronous Optical Sampling System

D. Nishikawa, K. Maezawa, R. Shibata, and S. Watanabe (Keio Univ., Japan)

[Tu2E-3] 16:45-17:00

Coherent-Controllable Vis-NIR Dual-Comb Spectroscopy with a High-Power, High-Coherence Fiber Comb System

Ruichen Zhu, Haochen Tian, Takashi Kato, Akifumi Asahara, and Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Tu2E-4] 17:00-17:15

Generation of Long-Wavelength Infrared Frequency Comb Generation Based on a Dual-comb Fiber Laser

Kousuke Kubota, Ryusei Uchiyama, Takumi Yumoto (Toho Univ., Japan), Wataru Kokuyama (Nat'l Metrology Inst. of Japan/AIST, Japan), Peter G. Schunemann (BAE Systems, USA), and Yoshiaki Nakajima (Toho Univ., Japan)

[Tu2E-5] 17:15-17:30

Measurement of Gas Temperature and Concentration Based on a Simplified Spectral Normalization Method in Dual-Comb Spectroscopy

Naoki Takeshi, Ryusei Uchiyama, Kousuke Kubota, Takumi Yumoto (Toho Univ., Japan), Yohei Sugiyama, Feng-Lei Hong (Yokohama Nat'l Univ., Japan), and Yoshiaki Nakajima (Toho Univ., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2F] Metaphotonics
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room F (115)
Session Chair(s)	Prof. Hong-Gyu Park (Seoul Nat'l Univ., Korea)

[Tu2F-1] [Tutorial] 16:00-16:45

Metaphotonics and Mie-tronics

Yuri Kivshar (The Australian Nat'l Univ., Australia)

[Tu2F-2] 16:45-17:00

Waveguide-Coupled Microcavities at Higher-Order Non-Hermitian Degeneracies

Daniel Grom, Julius Kullig (Otto von Guericke Univ. Magdeburg, Germany), Malte Röntgen (Le Mans Univ., France), Sebastian Klembt (Univ. of Wurzburg, Germany), and Jan Wiersig (Otto von Guericke Univ. Magdeburg, Germany)

[Tu2F-3] 17:00-17:15

Maximal Chiral Quasi-BIC in Anisotropic Metasurfaces

Shubhanshi Sharma, Pranab Jyoti Talukdar, Monica Pradhan, Basudev Lahiri, and Shailendra K. Varshney (Indian Inst. of Tech., India)

[Tu2F-4] 17:15-17:30

Mode Characterization of an InP Subwavelength Resonator

Simon Klinck Borregaard, Meng Xiong, Pawel Holewa, Elizaveta Semenova, Jesper Mørk, and Yi Yu (Technical Univ. of Denmark, Denmark)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2G] Pulse Compression and Beam Shaping
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room G (116)
Session Chair(s)	Dr. Martin Smrž (HiLASE Centre, Czech Republic)

[Tu2G-1] [Invited] 16:00-16:30

Post-compression of a High-energy Large-aperture Femtosecond Laser

Seong Ku Lee (GIST, Korea), Ji In Kim (Hanwha Systems, Korea), Jin Woo Yoon, Jung Mun Yang, Jae Hee Sung, and Chang Hee Nam (GIST, Korea)

[Tu2G-2] 16:30-16:45

12mJ Pulse Compression at 300W Average Power

Maksym Ivanov, Marco Scaglia, Étienne Doiron, Pedram Abdolghader, Gabriel Tempea (few-cycle Inc., Canada), François Légaré (INRS, Canada), Carlos Trallero-Herrero (Univ. of Connecticut, USA), and Bruno E Schmidt (few-cycle Inc., Canada)

[Tu2G-3] 16:45-17:00

1.08 TW Few-cycle 1.45 μm Vortex Laser Based on OPCPA and Multiple Thin-plates Post-compression

Renyu Feng, Junyu Qian, Yujie Peng, Yanyan Li, Wenkai Li, Yuxin Leng, and Ruxin Li (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[Tu2G-4] 17:00-17:15

Generation of Cylindrical Vector Vortex Beam from Nd:YVO_4 Laser in Continuous-wave and Q-switched Operation

Ye Jin Oh (Advanced Photonics Research Inst., GIST, Korea), In Chul Park, Eun Kyoung Park, and Ji Won Kim (Hanyang Univ., Korea)

[Tu2G-5] 17:15-17:30

High-power Self-phase-locked Doubly Resonant Optical Parametric Oscillator for 2-μm Frequency Comb Generation

Han Rao, Christian Markus Dietrich (Leibniz Univ. Hannover, Germany), José Ricardo Cardoso de Andrade (Max Born Inst., Germany), Robin Mevert, Fridolin Jakob Geesmann, Ayhan Demircan, Ihar Babushkin, and Uwe Morgner (Leibniz Univ. Hannover, Germany)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2H] Microwave Photonics for Sensing Applications
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room H (117)
Session Chair(s)	Prof. Kyung Hyun Park (ETRI, Korea)

[Tu2H-1] [Invited] 16:00-16:30

Sensing and Signal Processing based on Integrated Microwave Photonics

Xiaoke Yi, Xiaoyi Tian, Liwei Li, Suen Xin Chew, and Linh Nguyen (The Univ. of Sydney, Australia)

[Tu2H-2] 16:30-16:45

Ranging Enhancement of Optical Phased Array-based Lidar Enabled by Optical Passive Amplification

Lanxuan Zhang, Qijie Xie, Quanxin Na, Lei Wang (Peng Cheng Lab., China), Junfeng Song (Jilin Univ., China), and Lijun Wang (Changchun Inst. of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China)

[Tu2H-3] 16:45-17:00

Photonically-generated Multiband Complementary Dual Chirp Waveforms for Range and Velocity Detection

Mukund Jha, Rajveer Dhawan, Anu Sharma, and Amol Choudhary (Indian Inst. of Tech. Delhi, India)

[Tu2H-4] 17:00-17:15

Simultaneous Velocity and Distance Measurement using a Single Asymmetric Dual-Chirp for FMCW RADARs

Anu Sharma, Rajveer Dhawan, Mukund Jha, and Amol Choudhary (Indian Inst. of Tech. Delhi, India)

[Tu2H-5] 17:15-17:30

Mid-Infrared Chaos Lidar Based on an Interband Cascade Laser

Kai-Li Lin, Peng-Lei Wang, Yi-Bo Peng (ShanghaiTech Univ., China), Peng Wang, Wenxiang Huang (Raytron Tech. Co., Ltd., China), and Cheng Wang (ShanghaiTech Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2I] Ultrafast Laser Processing for Device Fabrication
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room I (118)
Session Chair(s)	Prof. Yves Bellouard (EPFL, Switzerland)

[Tu2I_1] [Invited] 16:00-16:30

Investigation of Ultrafast Dynamics after Femtosecond Laser Pulse Irradiation and Its Application to Ultrafast Processing of Transparent Materials

Yusuke Ito and Guoqi Ren (The Univ. of Tokyo, Japan)

[Tu2I_2] 16:30-16:45

Effect of Picosecond Laser Irradiation on Metal Electrode of P-type Gallium Nitride

Kaito Fukuda, Naoya Suto, Hiroto Seki, Takuya Kawakami (Tokushima Univ., Japan), Tsubasa Endo (The Univ. of Tokyo, Japan), Keisuke Takabayashi (Akita Univ., Japan), Yohei Kobayashi (The Univ. of Tokyo, Japan), Makoto Yamaguchi (Akita Univ., Japan), Kentaro Nagamatsu, Yuusuke Takashima, Yoshiki Naoi, and Takuro Tomita (Tokushima Univ., Japan)

[Tu2I_3] 16:45-17:00

Ohmic Contact Formation on 4H-SiC Using Pico-second Laser Irradiation

Naoya Suto, Hiroto Seki, Takuya Kawakami (Tokushima Univ., Japan), Keisuke Takabayashi (Akita Univ., Japan), Eibon Tsuchiya, Tsubasa Endo (The Univ. of Tokyo, Japan), Yuusuke Takashima, Kentaro Nagamatsu, Yoshiki Naoi (Tokushima Univ., Japan), Makoto Yamaguchi (Akita Univ., Japan), Yohei Kobayashi (The Univ. of Tokyo, Japan), and Takuro Tomita (Tokushima Univ., Japan)

[Tu2I_4] 17:00-17:15

Spectroscopic Investigation of Nd/Al Silica Glass Based on Laser Additive Manufacturing Method

Jiaming Li (South China Normal Univ., China), Nan Zhao (Guangdong Polytechnic Normal Univ., China), Shangming Ou, Qiongxiong Ma, and Qingmao Zhang (South China Normal Univ., China)

[Tu2I_5] 17:15-17:30

Smart Window Applications Enabled by Laser-Induced Graphene

Tongmei Jing, Han Ku Nam, Dongwook Yang, Younggeun Lee (KAIST, Korea), Rongke Gao (China Univ. of Petroleum, China), Seung-Woo Kim (KAIST, Korea), Liandong Yu (China Univ. of Petroleum, China), and Young-Jin Kim (KAIST, Korea)

Session Title:	[Tu2J] Enhancing THz Wave
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:00
Session Room:	Room J (201-202)
Session Chair(s)	Dr. Abul K Azad (Los Alamos Nat'l Lab, USA)

[Tu2J-1] [Invited] 16:00-16:30

Enhancing Infrared/Terahertz Light-Matter Interaction via Structured Surfaces

Luca Razzari (INRS Energie Materiaux Telecommunications, Canada)

[Tu2J-2] 16:30-16:45

Epsilon-Near-Zero Platforms based Graphene Oxide in Terahertz Frequency

Seung Won Jun, Jong Hyuk Yim, and Yeong-Hwan Ahn (Ajou Univ., Korea)

[Tu2J-3] 16:45-17:00

Silica Stub Integrated Nanoplasmonic Circular Ring Resonator Based Multiband Pass Filters

Kola Thirupathaiah (Koneru Lakshmaiah Education Foundation, India) and Monatasir Qasymeh (Abu Dhabi Univ., UAE)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Tu2K] Optical Transport Networks
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room K (204-205)
Session Chair(s)	Dr. Hiroki Taniguchi (NTT, Japan)

[Tu2K-1] [Invited] 16:00-16:30

Past, Present and Future of Submarine Networks

Eduardo F. Mateo (NEC Corp., Japan)

[Tu2K-2] [Invited] 16:30-17:00

Technical Innovation and Standardization of Optical Transport Network

Shen Shikui, Wang Chuangye, and Wang Guangquan (China Unicom Research Inst., China)

[Tu2K-3] 17:00-17:15

In-service Core Identification for Multi-core Fiber-based Spatial-division Multiplexing Systems

Tianfeng Zhao (Univ. of Electronic Science and Tech. of China, China), Junpeng Liang, Jinlong Wei (Peng Cheng Lab., China), Feng Wen (Univ. of Electronic Science and Tech. of China, China), Qi Wu (Peng Cheng Lab., China), and Bo Xu (Univ. of Electronic Science and Tech. of China, China)

[Tu2K-4] 17:15-17:30

Real-time Feedback Control of 1.3 km Atmospheric Beam Wandering for Free-space Optical Communication

Shin Hyung Kim, Dong IL Lee, Jae Hyeon Lim, Tae Won Kim, Hyeokin Kang, Ki Bin Gu, and Young-Jin Kim (KAIST, Korea)

Session Title:	[Tu2L] Computational Optical Microscopy II
Session Date:	August 6 (Tue.), 2024
Session Time:	16:00-17:30
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Tae Joong Eom (Pusan Nat'l Univ., Korea)

[Tu2L-1] Invited 16:00-16:30

Computational Contrast Generation for Optical Coherence Microscopy

Yoshiaki Yasuno (Univ. of Tsukuba, Japan)

[Tu2L-2] Invited 16:30-17:00

Intravital Mesoscale Imaging with Digital Adaptive Optics

Jiamin Wu (Tsinghua Univ., China)

[Tu2L-3] 17:00-17:15

Visible Light Coherent Diffractive Imaging for Biological Tissues

Yun Xie (Fudan Univ., China), You-Yang Zhou, Xiao-Shi Zhang (Yunnan Univ., China), Perry Ping Shum (Southern Univ. of Science and Tech., China), Yu-Xuan Ren (Fudan Univ., China), and Feng Shu (The Univ. of Sydney, Australia)

[Tu2L-4] 17:15-17:30

Principle Component Analysis for Brillouin Imaging Data

Hadi Mahmodi, Kelly Wooden, Christopher Poulton, and Irina Kabakova (Univ. of Tech. Sydney, Australia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1A] Inverse Design in Integrated Photonics I
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Xianji Piao (The Univ. of Seoul, Korea)

[We1A-1] [Invited] 09:00-09:30

Lithium Niobate Photonic Circuits for Programmable Photonic Devices and Optimized Nonlinear Optics

Hyounghan Kwon (KIST, Korea)

[We1A-2] 09:30-09:45

Deep Learning-based Inverse Design Enabling a Highly Efficient Multimode Interference Coupler

Menglong Luo and Sang-Shin Lee (Kwangwoon Univ., Korea)

[We1A-3] 09:45-10:00

Extraction of Silicon Photonic Wafer-Scale Process Variability using ML-Enhanced Algorithm

Shruti Pandey, Tarun Arumugham, Anjana James, Ashitosh Velamuri, Arnab Goswami (Centre for Programmable Photonic Integrated Circuits and Systems, India), Gan Yih Loong, Ng Chew Yan (SilTerra Malaysia, Malaysia), Deleep R. Nair, Anjan Chakravorty, and Bijoy Krishna Das (Centre for Programmable Photonic Integrated Circuits and Systems, India)

[We1A-4] 10:00-10:15

Application of Super-Resolution Techniques to Photonic Integrated Circuit Design

Shota Toyota and Hiroshi Fukuda (Chitose Inst. of Science and Tech., Japan)

[We1A-5] 10:15-10:30

Dimensionality Reduction in the Design Domain of Photonic Crystal Waveguides for Deep Neural Networks by Implementing Transfer Learning

Junhyeong Kim, Berkay Neseli, Hyo-Hoon Park, and Hamza Kurt (KAIST, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1B] Microresonators and Microcombs I
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Lei Shi (Huazhong Univ. of Science and Tech., China)

[We1B-1] [Invited] 09:00-09:30

Mode-Locking Induced by Exceptional Point Proximity in Coupled Microresonators

Takasumi Tanabe, Riku Imamura, and Shun Fujii (Keio Univ., Japan)

[We1B-2] 09:30-09:45

Accessing the Nonlinear Regime with Selectively Laser Etched high-Q Microresonators

Toby Bi (Max Planck Inst. for the Science of Light, Germany), Lara Beckmann (Fraunhofer Inst., Germany), Julian M. Thoms (Max Planck Inst. for the Science of Light, Germany), Max Wenk (Fraunhofer Inst., Germany), Shuangyou Zhang (Max Planck Inst. for the Science of Light, Germany), Martin Kratz (Fraunhofer Inst., Germany), and Pascal Del'Haye (Max Planck Inst. for the Science of Light, Germany)

[We1B-3] 09:45-10:00

Mechanical Actuation of Kerr Soliton Microcombs in Ultrahigh-Q Crystalline Microresonators

Shun Fujii, Koshiro Wada, Soma Kogure, Hajime Kumazaki, and Takasumi Tanabe (Keio Univ., Japan)

[We1B-4] 10:00-10:15

Generation of Kerr Soliton Frequency Comb in an On-Chip Microresonator Assisted by Raman Scattering

Dohyeong Kim, In Hwan Do, Daewon Suk, Dongin Jeong, Seokjoo Go, Kiyoung Ko (KAIST, Korea), Hyun-Gue Hong, Dai-Hyuk Yu, Jae Hoon Lee (KRISS, Korea), and Hansuek Lee (KAIST, Korea)

[We1B-5] 10:15-10:30

Observation of Collision Dynamics and Rogue Waves in Chaotic Kerr Microcombs

Kai-Xuan Zhu, Ze Wang (Peking Univ., China), Fang-Xing Zhang (Peking Univ. Yangtze Delta Inst. Of Optoelectronics, China), Qi-Huang Gong, and Qi-Fan Yang (Peking Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1C] Quantum Optics and Quantum Information II
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Takuya Hirano (Gakushuin Univ., Japan)

[We1C-1] [Invited] 09:00-09:30

Three-Dimensional Cluster Entangled State of Light

Young-Sik Ra (KAIST, Korea)

[We1C-2] [Invited] 09:30-10:00

Large-Scale Integrated Quantum Photonics

Jianwei Wang Peking Univ., China)

[We1C-3] 10:00-10:15

Experimental Optimal Quantum State Estimation with Genuine Three-copyCollective Measurements

Guoyong Xiang (Univ. of Science and Tech. of China, China)

[We1C-4] 10:15-10:30

Optimal Multiple-phase Estimation with Multi-mode NOON States Against Photon Loss

Min Namkung, Dong-Hyun Kim (KIST, Korea), Seongjin Hong (Chung-Ang Univ., Korea), Yong-Su Kim (KIST, Korea), Changhyoup Lee (KRISS, Korea), and Hyang-Tag Lim (KIST, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1D] Novel Passive Devices 1
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room D (113)
Session Chair(s)	Prof. Je-Hyung Kim (UNIST, Korea)

[We1D-1] [Invited] 09:00-09:30

Mode Management in Bottom-up, Parity-time-symmetric Micro-cavity Lasers

Wei Wen Wong, Jihua Zhang, Gaurang Garg, Chennupati Jagadish, and Hark Hoe Tan (The Australian Nat'l Univ., Australia)

[We1D-2] 09:30-09:45

IHO Heater-assisted Planar Waveguide Photonic Emulator

Weiyu Tong, Shangsen Sun, and Jianji Dong (Huazhong Univ. of Science and Tech., China)

[We1D-3] 09:45-10:00

High-Bandwidth, Low-Insertion-Loss Nonreciprocal Transmission Based on a Chiral Silicon Microring

Ke Li, Jiewen Li, Wanxin Li, Rui Li, and Xiaochuan Xu (Harbin Inst. of Tech., China)

[We1D-4] 10:00-10:15

Integrated Silicon Photonic Modulator and Programmable Filter for Enhanced Fiber-Wireless Signal Transmission

C. Catalá-Lahoz (Universitat Politecnica de Valencia, Spain), D. Pérez-López (iPronics Programmable Photonics, Spain), T. Huy-Ho (Huawei Technologies Canada Co., Ltd., Canada), and J. Capmany (Universitat Politecnica de Valencia, Spain)

[We1D-5] 10:15-10:30

Optical Beam Steering and Beam Tracking by Silicon Photonics 2D Vertical MDM Grating Coupler

Yi-Jang Hsu, Shao-Ru Lin, Yu-Wei Liu, and Yinchieh Lai (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1E] Dimensional Metrology Ⅳ
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room E (114)
Session Chair(s)	Prof. Heejoo Choi (Univ. of Arizona, USA), Dr. Heulbi Ahn (Meterlab, Korea)

[We1E-1] [Invited] 09:00-09:30

Calibration of a Reflective-type Diffraction Scale Grating Based on the Angle of Diffraction of Diffracted Beams for Precision Positioning Technology

Yuki Shimizu (Hokkaido Univ., Japan)

[We1E-2] 09:30-09:45

One-shot Three-dimensional Measurement Based on Spectral Interferometry using a Digital Micromirror Device

Jinxu Zhang, Liheng Shi (Tsinghua Univ., China), Yingying Gu, Donglai Zhang, Lu Yin (Beijing Inst. of Control Engineering, China Academy of Space Tech., China), and Guanhao Wu (Tsinghua Univ., China)

[We1E-3] 09:45-10:00

Improvement of Measurement Precision in Comb-mode Resolved Spectral Interferometry via Programmable Line-by-line Spectral Shaping of Frequency Comb

Yoon-Soo Jang, Sunghoon Eom, Jungjae Park, and Jonghan Jin (KRISS, Korea)

[We1E-4] 10:00-10:15

Frequency-comb-referenced Multi-wavelength Interferometry for High-speed 3D Reconstruction of μ-bumps in Heterogeneous Integration Packaging

Jun Hyung Park, Dae Hee Kim, Jiwon Hahm, Young Ho Park, Huy Hoang Chu, Seung-Woo Kim, and Young-Jin Kim (KAIST, Korea)

[We1E-5] 10:15-10:30

Distance Error Correction for Time-of-Flight Cameras with Interchangeable Lenses

Ting-Hsu Huang, Chi-Jin Liu, and Yi-Chun Chen (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1F] Nanolaser I
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room F (115)
Session Chair(s)	Prof. SungWoo Nam (Univ. of California, Irvine, USA), Prof. Kwang-Yong Jeong (Chungnam Nat'l Univ., Korea)

[We1F-1] [Invited] 09:00-09:30

Dielectric Resonant Nanostructures for Extreme Light Manipulation and Amplification

Son Tung Ha (Inst. of Materials Research and Engineering, A*STAR, Singapore)

[We1F-2] [Invited] 09:30-10:00

Vortex Lasing Modes from Photonic Disclination Cavity

Min-Soo Hwang (Hanyang Univ., Korea), Yuri Kivshar (The Australian Nat'l Univ., Australia), and Hong-Gyu Park (Seoul Nat'l Univ., Korea)

[We1F-3] 10:00-10:15

Lattice Design for Multiple Topologically Protected Edge Modes

Gyunghun Kim, Joseph Suh, Dayeong Lee, Namkyoo Park, and Sunkyu Yu (Seoul Nat'l Univ., Korea)

[We1F-4] 10:15-10:30

Oscillatory Self-retiming of Optical Solitons in PCF-based Optoacoustically mode-locked Fiber Laser

X. Wang, B. Wang, W. He, X. Zhang, Q. Huang, Z. Huang, X. Jiang, and M. Pang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1G] THz Applications
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room G (116)
Session Chair(s)	Prof. Katsuhiko MIYAMOTO (Chiba Univ., Japan)

[We1G-1] [Invited] 09:00-09:30

Scanning Point Terahertz Source Microscope for Biosensing

Kazunori Serita and Masayoshi Tonouchi (Osaka Univ., Japan)

[We1G-2] 09:30-09:45

Voltage-controlled Terahertz Chemical Microscope for High-sensitive Measurement of Biological Materials

Xue Ding, Mana Murakami, Jin Wang, Hirofumi Inoue, and Toshihiko Kiwa (Okayama Univ., Korea)

[We1G-3] 09:45-10:00

Terahertz Circular Dichroism Imaging System

Takumi Yoichi, Uina Chiba, Takashige Omatsu (Chiba Univ., Japan), Takeo Minari (Nat'l Inst. for Materials Science, Japan), Seigo Ohno (Tohoku Univ., Japan), and Katsuhiko Miyamoto (Chiba Univ., Japan)

[We1G-4] 10:00-10:15

THz Scattering-type Scanning Near-field Microscopy with High Peak Power THz Source

Zeliang Zhang, Pengfei Qi, Lu Sun, Cheng Gong, and Weiwei Liu (Nankai Univ., China)

[We1G-5] 10:15-10:30

Evaluation of Birefringent Material with a Terahertz Nonlinear Quantum Cascade Laser

Atsushi Nakanishi, Shohei Hayashi, and Kazuue Fujita (Hamamatsu Photonics K. K., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1H] Mid-IR Lasers
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:00
Session Room:	Room H (117)
Session Chair(s)	Prof. David Lancaster (Univ. of South Australia, Australia)

[We1H-1] 09:00-09:15

Highly Stable Fluoride Glass for Mid-infrared Fibre Optics

Changjun Xu, Zhuowei Cheng, Changhui Liu, Hao Wu, and Pengfei Wang (Harbin Engineering Univ., China)

[We1H-2] 09:15-09:30

Mid-Infrared Single-Frequency Er-Doped ZBLAN Fiber Laser Based on Intracavity Germanium Etalon

Lu Zhang, Quan Sheng, Shijie Fu, Xuewen Luo, Junxiang Zhang, Wei Shi, and Jianquan Yao (Tianjin Univ., China)

[We1H-3] [Invited] 09:30-09:45

Mid-Infrared Grating-Free All-Fiber Laser at 2.8 μm

Junxiang Zhang, Shijie Fu, Quan Sheng, Lu Zhang, Wei Shi, and Jianquan Yao (Tianjin Univ., Taiwan)

[We1H-4] 09:45-10:00

4.3 μm Pulsed Fiber Laser in CO_2-filled Hollow-core Fibers

Jing Shi, Zhiyue Zhou, Zhixian Li, Meng Wang, Hu Xiao, Zilun Chen, and Zefeng Wan (Nat'l Univ. of Defense Tech., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1I] Laser Facility and Applications
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room I (118)
Session Chair(s)	Prof. Seong Ku Lee (GIST, Korea)

[We1I-1] [Invited] 09:00-09:30

Origin and Suppression of the Pre-pulse and Pedestal of the J-KAREN-P Laser Facility

H. Kiriyama, Y. Miyasaka, A. Kon, M. Nishiuchi, A. Sagisaka (Kansai Inst. for Photon Science, Nat'l Institutes for Quantum Science and Tech., Japan), H. Sasao (Naka Fusion Inst., Nat'l Institutes for Quantum Science and Tech., Japan), A. S. Pirozhkov, Y.Fukuda, K. Ogura, Ko. Kondo, N. Nakanii, Y. Mashiba, N. P. Dover, L. Chang, M. Kando (Kansai Inst. for Photon Science, Nat'l Institutes for Quantum Science and Tech., Japan), S.Bock, T. Ziegler, T. Püschel, H.-P.Schlenvoigt, K. Zeil, U. Schramm (Helmholtz-Zentrum Dresden-Rossendorf, Germany), I. W. Choi, and C. H. Nam (IBS, Korea)

[We1I-2] 09:30-09:45

Optimizing TNSA Ion Beam Source Size in Thin Foils Using Laser Pulse-Contrast

Deepak Kumar Sahu, Anandam Choudhary, Aparajit Chandrasekharan, Ankit Dulat, Amit D. Lad, G. Ravindra Kumar, and M. Krishnamurthy (Tata Inst. of Fundamental Research., India)

[We1I-3] 09:45-10:00

Femtosecond Soft X-ray Photoelectron Spectroscopy at the Soft X-ray Port of the European XFEL

Ekaterina Tikhodeev, David Doblas-Jimenez, Vahagn Vardanyan, Patrik Grychtol, Michael Heber, Ivars Karpics, Moises Bueno, Joshua Ohnesorge, Serguei Molodtsov, and Manuel Izquierdo (European XFEL, Germany)

[We1I-4] 10:00-10:15

Towards Portable Relativistic Energy Electron Source

Sonali Khanna (Tata Inst. of Fundamental Research Hyderabad, India), Ratul Sabui (Indian Inst. of Tech. Hyderabad, Indian), Deepak Kumar Sahu (Tata Inst. of Fundamental Research Mumbai, India), Angana Mondal, Sourabh Singh, Ram Gopal, and M Krishnamurthy

[We1I-5] 10:15-10:30

Enhancing Electron Emission in Laser-droplet Interaction by Doping the Droplets with Dopant of Lower Ionizability

Deepak Kumar Sahu (Tata Inst. of Fundamental Research Mumbai, India), Sonali Khanna (Tata Inst. of Fundamental Research Hyderabad, India), Ratul Sabui (Inst. of Tech. Hyderabad, India), Ram Gopal (Tata Inst. of Fundamental Research Hyderabad, India), and M. Krishnamurthy (Tata Inst. of Fundamental Research Mumbai, India)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1J] Metasurface II
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Minkyung Kim (GIST, Korea)

[We1J-1] [Invited] 09:00-09:30

Metal Metasurface Absorbers for Ultra-sensitive Molecular Detection

Takuo Tanaka (RIKEN, Japan)

[We1J-2] 09:30-09:45

Large Area RGB Achromatic Metalens

Minseok Choi, Joohoon Kim, Kilsoo Shin, and Junsuk Rho (POSTECH, Korea)

[We1J-3] 09:45-10:00

Polarization-multiplexing Metalens for Dual-functional Imaging

Zhenyu Xing, Zhelin Lin, Niu Liu, and Cheng Zhang (Huazhong Univ. of Science and Tech., China)

[We1J-4] 10:00-10:15

Nanopost Metamaterials for Polarizer-Free Top-Emitting Organic Light Emitting Diodes

Kyungnam Kang, Hajun Yoo, Hyunwoong Lee (Yonsei Univ., Korea), Young Gu Kim, Duckjong Suh, Sunghan Kim (Samsung Display Co., Ltd., Korea), and Donghyun Kim (Yonsei Univ., Korea)

[We1J-5] 10:15-10:30

Fabrication of Silicon Grass on the Surface of Diffractive/Meta Lenses for Increased Transmission for Long Wave Infrared Imaging

Angelos Bouchouri, Muhammad Nadeem Akram, Eivind Bardalen, and Per Alfred Øhlckers (Univ. of South-Eastern Norway, Norway)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1K] Impairment Compensation Techniques
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room K (204-205)
Session Chair(s)	Dr. Daniel J. Elson (KDDI, Japan)

[We1K-1] [Invited] 09:00-09:30

1.6-Tb/s O-band Transmission Using 400-Gb/s/lane SDM Channels Based on Nonlinear MLSE for Next-Generation Ethernet

H. Taniguchi, M. Nakamura, F. Hamaoka, T. Mori, K. Shibahara, T. Matsui, Y. Yamada, T. Jyo, M. Nagatani, M. Mutoh, Y. Shiratori, H. Wakita, T. Kobayashi, S. Yamamoto, H. Takahashi, K. Nakajima, Y. Kisaka, and Y. Miyamoto (NTT Corp., Japan)

[We1K-2] 09:30-09:45

2nd Order Backward Raman Amplifier Design using Autoencoder for C+L Band Transmission

Inwoong Kim, Youichi Akasaka, Olga Vassilieva, and Paparao Palacharla (Fujitsu Network Communications, Inc., USA)

[We1K-3] 09:45-10:00

Effects of Dispersion Fluctuation of Optical Fiber Line on the Nonlinear Fourier Coefficient b

Takumi Motomura, Akihiro Maruta, and Ken Mishina (Osaka Univ., Japan)

[We1K-4] 10:00-10:15

Turbulence-Free Long-Distance Optical Communication Based on Computational Temporal Ghost Imaging

Jianing Zhao, Zhenzhou Tang, Xiuyuan Sun, Han Gao, Haibo Zeng, Rongan Wu, and Shilong Pan (Nanjing Univ. of Aeronautics and Astronautics, China)

[We1K-5] 10:15-10:30

Measurement of Beam Wander Using 4 Degree of Freedom, and Calculation of Structure Constant Using Beam Wander

Jae Hyun Lim, Jeong Hun Seong, Shin Hyung Kim, Dong IL Lee, Ki Bin Gu, and Young-Jin Kim (KAIST, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We1L] Biophotonic Enabling Technologies I
Session Date:	August 7 (Wed.), 2024
Session Time:	09:00-10:30
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Ki-Hun Jeong (KAIST, Korea)

[We1L-1] [Invited] 09:00-09:30

Structured Illumination Microscopy at Speed: Projecting Arbitrary Interference Patterns with Only One Moving Part

Ke Guo, Abderrahim Boualam, James D Manton, and Christopher J Rowlands (Imperial College London, UK)

[We1L-2] 09:30-09:45

Spinning-Disk Coherent Anti-Stokes Raman Scattering Microscopy at a Record Frame Rate of 276 fps

Jun-An Chen (Nat'l Tsing Hua Univ., Taiwan), Guan-Jie Huang (Nat'l Taiwan Univ., Taiwan), Ann-Shyn Chiang, Bo-Han Chen (Nat'l Tsing Hua Univ., Taiwan), Shi-Wei Chu (Nat'l Taiwan Univ., Taiwan), and Shang-Da Yang (Nat'l Tsing Hua Univ., Taiwan)

[We1L-3] 09:45-10:00

Mid-infrared Optical Force Enhanced by Molecular Vibrational Resonance with Quantum Cascade Lasers

Yoshua Albert Darmawan, Takuma Goto (Toyota Technological Inst., Japan), Taiki Yanagishima (Kyoto Univ., Japan), Takao Fuji, and Tetsuhiro Kudo (Toyota Technological Inst., Japan)

[We1L-4] 10:00-10:15

Flat-field Lens Grating Microspectrometer Integrated Photothermal PCR System for Portable Multiplex Molecular Diagnostics

Gi Beom Kim, Hyejeong Jeong, Jung-Woo Park, Geonhui Han, and Ki-Hun Jeong (KAIST, Korea)

[We1L-5] 10:15-10:30

Empowering Non-invasive IR Diagnoses with the Unique Angle-resolved Light Cones from 3D Photonic Quantum Ring Laser

Byeonghoon Park (Samsung Electronics Co., Ltd) and O'Dae Kwon (POSTECH, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2A] Inverse Design in Integrated Photonics II
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room A (102-103)
Session Chair(s)	Dr. Hyounghan Kwon (KIST, Korea)

[We2A-1] 10:45-11:00

Predicting Supercontinuum Generation in Silicon Waveguides with a Fully Connected Neural Network

Shuyi Li, Meng Deng, and Yi Wang (Huazhong Univ. of Science and Tech., China)

[We2A-2] 11:00-11:15

Topology Optimization of Lithium Niobate Mode Converter

Munseong Bae (Hanyang Univ., Korea), Changhyun Kim (KIST, Korea), Sangbin Lee (Hanyang Univ., Korea), Minho Choi (KIST, Korea), Myunghoo Lee (Hanyang Univ., Korea), Hojoong Jung, Hyounghan Kwon (KIST, Korea), and Haejun Chung (Hanyang Univ., Korea)

[We2A-3] 11:15-11:30

Inverse Design of a 4-by-2 Silicon-Based Photonic Encoder Circuit Using Topology Optimization

Fakhriyya Mammadova, Berkay Neseli, and Hamza Kurt (KAIST, Korea)

[We2A-4] 11:30-11:45

Surpassing the Diffraction Limit with Inversely Designed Monolithic hBN Cavities for On-Chip Single Photon Sources

Damian Nelson, Kenneth B. Crozier, and Sejeong Kim (The Univ. of Melbourne, Australia)

[We2A-5] [Invited] 11:45-12:15

Inverse Design of Nanophotonic Structures using Artificial Intelligence

Sunae So (Korea Univ., Korea)

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Session Title:	[We2B] Microresonators and Microcombs II
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Takasumi Tanabe (Keio Univ., Japan)

[We2B-1] [Invited] 10:45-11:15

Nonlinear Dynamics in High-Q Optical Microresonators

Qi-Tao Cao (Peking Univ., China)

[We2B-2] 11:15-11:30

A Tunable Narrow-Linewidth Raman Laser Based on an Ultrahigh-Q Packaged Microrod Resonator

Chengnian Liu, Bing Duan, Yong-Pan Gao (Beijing Univ. of Posts and Telecommunications, China), Xiao-Chong Yu (Beijing Normal Univ., China), Xuan Zhang, and Daquan Yang (Beijing Univ. of Posts and Telecommunications, China)

[We2B-3] 11:30-11:45

Single-cavity Dual-comb Enabled Pump-probe Microscopy of Semiconductor Quantum Wells

Weiqi Jiang, Nan Zhang, Dongyuan Li, Anran Wang, Rong Zhang, and Fengqiu Wang (Nanjing Univ., China)

[We2B-4] 11:45-12:00

Toward Compact and Stand-Alone Microcomb Generation Enabled by DFB Lasers

Zhiming Shi, Siyang Li, Suwan Sun, Haiyun Yuan, Jiaming Bai, Xukun Lin, Xingxing Ding (Key Lab. of Special Fiber Optics and Optical Access Networks, Shanghai Univ., China), Xiaofeng Wan (SJTU-Pinghu Inst. of Intelligent Optoelectronics, China), and Hairun Guo (Key Lab. of Special Fiber Optics and Optical Access Networks, Shanghai Univ., China)

[We2B-5] 12:00-12:15

Generation of Optical Frequency Comb with Injection Locked DFB Laser on Silicon Nitride Chip

Siyang Li, Jiamin Bai, Zhiming Shi, Suwan Sun, and Hairun Guo (Shanghai Univ., China)

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Session Title:	[We2C] Quantum Optics and Quantum Information III
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:00
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Young-Sik Ra (KAIST, Korea)

[We2C-1] [Invited] 10:45-11:15

Quantum Fluctuation Theorem and Its Experimental Demonstration using Quantum Optics

Hui Li, Jie Xie (Nanjing Univ., China), Hyukjoon Kwon (Korea Inst. for Advanced Study, Korea), Yixin Zhao (Nanjing Univ., China), M.S. Kim (Imperial College London, UK), and Lijian Zhang (Nanjing Univ., China)

[We2C-2] 11:15-11:30

Characterization of Thermal Degraded Optical Cat States by Non-Gaussianity

Po-Han Wang and Ray-Kuang Lee (Nat'l Tsing Hua Univ., Taiwan)

[We2C-3] 11:30-11:45

Spatial Mode Conversion of Single Photons Using Long-Period Grating

Rodrigo Amorim, Kasper Alexander, Lars Grüner-Nielsen, and Karsten Rottwitt (Technical Univ. of Denmark, Denmark)

[We2C-4] 11:45-12:00

Phase Stabilization Using Two Lasers with Different Wavelengths for Entanglement Distribution

Yohei Sugiyama, Riho Amaki, Yuto Shitaka, Tomoki Tsuno, Daisuke Yoshida (Yokohama Nat'l Univ., Japan), Koji Nagano (LQUOM, Inc., Japan), Tomoyuki Horikiri, Feng-Lei Hong, and Daisuke Akamatsu (Yokohama Nat'l Univ., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2D] Novel Passive Devices 2
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room D (113)
Session Chair(s)	Prof. Sangyoon Han (DGIST, Korea)

[We2D-1] [Invited] 10:45-11:15

Comparative Analysis of Self-injection and External Cavity Locking Influenced by Linewidth Enhancement Factor

Artem Prokoshin (King Abdullah Univ. of Science and Tech., Saudi Arabia), Weng W. Chow (Sandia Nat'l Laboratories, USA), and Yating Wan (King Abdullah Univ. of Science and Tech., Saudi Arabia)

[We2D-2] 11:15-11:30

Fabrication of 3D Mode Size Converter for Efficient Edge Coupler in Photonic Circuit using an External Etching Mask

Hyeong-Soon Jang (KIST, Korea), Sangin Kim (Ajou Univ., Korea), Hyounghan Kwon, Sang-Wook Han, and Hojoong Jung (KIST, Korea)

[We2D-3] 11:30-11:45

A Compact Low-crosstalk Silicon Waveguide Array Based on Floquet Theory

Yu Chen, XiaogenYi, Hengjie Zhan, and Ciyuan Qiu (Shanghai Jiao Tong Univ., China)

[We2D-4] 11:45-12:00

Broadband Phase-polarization Co-modulated Dielectric Metasurface for Polarization-independent LCoS Device

Jiaqi Li, Xin Gu, Zhaoxiang Zhu, Zhouxin Liang, Yuhang Lin, Bo Wang, and Yujie Chen (Sun Yat-sen Univ., China)

[We2D-5] 12:00-12:15

Photonic Frequency Space Simulation of Tight-Binding Lattices Using Integrated LNOI Ring Resonators

Armandas Balčytis, Hiep Dinh (RMIT Univ., Australia), Tomoki Ozawa (Tohoku Univ., Japan), Yasutomo Ota (Keio Univ., Japan), Toshihiko Baba (Yokohama Nat'l Univ., Japan), Satoshi Iwamoto (The Univ. of Tokyo, Japan), Arnan Mitchell, and Thach G. Nguyen (RMIT Univ.,

Australia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2E] Novel Fiber Devices I
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room E (114)
Session Chair(s)	Prof. Kwang Yong Song (Chung-Ang Univ., Korea)

[We2E-1] [Invited] 10:45-11:15

Scaling Fiber Mode Counts to 100 and Beyond: Light Guidance via Topological Confinement

Siddharth Ramachandran (Boston Univ., USA)

[We2E-2] 11:15-11:30

Ultrahigh Mode-selectivity Photonic Lantern based on Asymmetric Multicore Fiber Tapering

Cong Zhang, Yuwen Qin, and Songnian Fu (Guangdong Univ. of Tech., China)

[We2E-3] 11:30-11:45

Chip-integrated Optical Fiber Bending Sensing System

Fan Shi, Chengxiang Jiang, Li Fang, Jiabin Yan, and Yongjin Wang (Nanjing Univ. of Posts and Telecommunications, China)

[We2E-4] 11:45-12:00

Fiber Interferometry 3D Imaging based on Wavelength Multiplexing Beam Steering

Huiyeon Kim, Min Uk Jung, Sang Min Park, and Chang-Seok Kim (Pusan Nat'l Univ., Korea)

[We2E-5] 12:00-12:15

Cavity Alteration of Whispering-Gallery Mode Optical Fibre Microresonators with High Precision CO_2 Laser

Mohd Narizee Mohd Nasir (The Nat'l Univ. of Malaysia, Malaysia), Ganapathy Senthil Murugan, and Michalis N. Zervas (Univ. of Southampton, UK)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2F] Nanolaser II
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:00
Session Room:	Room F (115)
Session Chair(s)	Prof. Min-Soo Hwang (Hanyang Univ., Korea), Prof. Kyoung-Ho Kim (Chungbuk Nat'l Univ., Korea)

[We2F-1] [Tutorial] 10:45-11:30

Fundamentals and Applications Enabled by Photonic Crystals

Heonsu Jeon (Seoul Nat'l Univ., Korea)

[We2F-2] 11:30-11:45

Laser Oscillation of Circular Defect in 2D Photonic Crystal (CirD) Laser with Convex Edge Structure

Rubing Zuo, Yuki Adachi, Yuto Kudo, Hanqiao Ye, Tetsuya Yagi, Masato Morifuji, Hirotake Kajii, Akihiro Maruta, and Masahiko Kondow (Osaka Univ., Japan)

[We2F-3] 11:45-12:00

Characterization of 940 nm PCSEL Under Nanosecond Pulsed Operation with Peak Power of up to 3.12 W

Jun-Yuan Lim, Te-Hua Liu (Nat'l Taiwan Univ., Taiwan), Yu-Heng Hong (Hon Hai Research Inst. Taiwan), Hao-Chung Kuo (Nat'l Yang Ming Chiao Tung Univ., Taiwan), and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2G] Advanced Microscopy
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room G (116)
Session Chair(s)	Prof. Chao Zuo (Nanjing Univ. of Science and Tech., China)

[We2G-1] [Invited] 10:45-11:15

Extended Depth-of-field microscopy via Learning-based Implementation of Axisymmetric Binary Phase Filter and Image Deconvolution

Baekcheon Seong, Woovin Kim, Younghun Kim, and Chulmin Joo (Yonsei Univ., Korea)

[We2G-2] 11:15-11:30

Semi-Supervised Virtual Staining for High-Throughput and Label-Free Histopathology

Kyung Chul Lee, Hyesuk Che, Jongho Kim, Donggeon Bae (Yonsei Univ., Korea), Roarke Horstmeyer (Duke Univ., USA), and Seung Ah Lee (Yonsei Univ., Korea)

[We2G-3] 11:30-11:45

Fluorescence Excitation-emission-matrix Hyperspectral Imaging for Microscopy

Sarah-Johanna Klose, Emma Abbey, Yasaman Shahrestani (Univ. of Victoria, Canada), Travis Ferguson (Queen's Univ., Canada), and Hans-Peter Loock (Univ. of Victoria, Canada)

[We2G-4] 11:45-12:00

Super-resolved 3D Wide-field Fluorescence Imaging with Reflection-assisted Speckle Illumination

Hajun Yoo, Kwanhwi Ko, Sukhyeon Ka, Gwiyeong Moon, Hyunwoong Lee, Seongmin Im, and Donghyun Kim (Yonsei Univ., Korea)

[We2G-5] 12:00-12:15

Structured Illumination using Modified Bessel Beams with Reduced Sidelobes

Jerin Geogy George, Shanti Bhattacharya (Indian Inst. of Tech. Madras, India), and Kishan Dholakia (The Univ. of Adelaide, Australia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2H] Photonic Integrated Circuit for Microwave Photonics
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room H (117)
Session Chair(s)	Prof. Benjamin J. Eggleton (The Univ. of Sydney, Australia)

[We2H-1] [Invited] 10:45-11:15

Evolution of Photonics Integrated Circuits for Microwave Photonics Applications

Jianping Yao (Univ. of Ottawa, Canada)

[We2H-2] 11:15-11:30

Integrated Photonics True-time Delay Signal Processor

Pablo Martínez-Carrasco (Universitat Politecnica de Valencia, Spain), Tan Huy (Huawei Technologies Canada Co., Ltd., Canada), and José Capmany (Universitat Politecnica de Valencia, Spain)

[We2H-3] 11:30-11:45

On-chip Passband-switchable and Frequency-tunable Multiband Microwave Photonic Filter

Yuwen Xu, Bin Wang, and Weifeng Zhang (Beijing Inst. of Tech., China)

[We2H-4] 11:45-12:00

High-Sensitivity and High-Resolution Microwave Photonic Radar Based on Optical Coherent Receiving

Linfeng Du, Bin Wang, and Weifeng Zhang (Beijing Inst. of Tech., China)

[We2H-5] 12:00-12:15

Flat-top Beam Shaping for Long-distance Optical Wireless Power Transmission

Natsuha Ochiai, Yohei Toriumi, Yukiko Suzuki, Kazuto Kashiwakura, and Toru Tanaka (NTT Space Environment and Energy Laboratories, Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2I] Carbon Device Fabrication via Femtosecond Laser Processing
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room I (118)
Session Chair(s)	Dr. Han Ku Nam (KAIST, Korea)

[We2I-1] [Invited] 10:45-11:15

Fabrication of Carbon Devices with Femtosecond Laser Pulses

Mitsuhiro Terakawa (Keio Univ., Japan)

[We2I-2] 11:15-11:30

Fabrication of Hydrogel-based Microstrip Patch Antenna by Laser-induced Graphitization

Y. Hattori, A. Ito, H. Onoe, and M. Terakawa (Keio Univ., Japan)

[We2I-3] 11:30-11:45

Graphene E-textile Enabled by Femtosecond Laser Pulses Irradiation

Dongwook Yang, Han Ku Nam, Younggeun Lee, Hyeonwoo Kim, and Young-Jin Kim (KAIST, Korea)

[We2I-4] 11:45-12:00

Smart Home Technologies Enabled by Femtosecond Laser-Induced Graphene on Wooden Materials

Han Ku Nam, Tongmei Jing, Dongwook Yang, Younggeun Lee (KAIST, Korea), Manping Wang (China Univ. of Petroleum, China), and Young-Jin Kim (KAIST, Korea)

[We2I-5] 12:00-12:15

Optimised Diamond to Graphite Conversion via a Metastable sp^1-bonded Carbon Chain Formation under an Ultra-short Femtosecond (30 *fs*) Laser Irradiation

Bakhtiar Ali, Han Xu, Robert T. Sang, Maksym Rybachuk, and Igor V. Litvinyuk (Griffith Univ., Australia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2J] Metasurface Ⅲ
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Inki Kim (Sungkyunkwan Univ., Korea)

[We2J-1] 10:45-11:00

Bandgap-engineered Hydrogenated Amorphous Silicon for Efficient Metasurfaces Working at the Visible and Near-Infrared

Younghwan Yang (POSTECH, Korea), Gwanho Yoon (Seoul Nat'l Univ. of Science and Tech., Korea), Minkyung Kim (GIST, Korea), Dasol Lee (Yonsei Univ., Korea), and Junsuk Rho (POSTECH, Korea)

[We2J-2] 11:00-11:15

Color-sorting Metalens Array for High-sensitivity RGB-NIR Image Sensing

Masashi Miyata and Toshikazu Hashimoto (NTT Corp., Japan)

[We2J-3] 11:15-11:30

Chemically Programmable Photopolymers for Humidity-Triggered Multi-Image Displays

Chunghwan Jung, Jongsun Yoon, Hyomin Lee, and Junsuk Rho (POSTECH, Korea)

[We2J-4] 11:30-11:45

Dynamic Optical MEMS Metasurfaces

Fei Ding (Univ. of Southern Denmark, Denmark)

[We2J-5] 11:45-12:00

Hafnium Oxide Metasurfaces for Flat-top Beam Shaping in the Ultraviolet

Hao Gao, Zhelin Lin, and Cheng Zhang (Huazhong Univ. of Science and Tech., China)

[We2J-6] 12:00-12:15

Nonradiative Cooling

Wakana KUBO (Tokyo Univ. of Agriculture and Tech., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2K] Free-Space Optical Transmission Systems
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room K (204-205)
Session Chair(s)	Prof. Hyunchae Chun (Incheon Nat'l Univ., Korea)

[We2K-1] [Invited] 10:45-11:15

Adaptive Beam Control Technique for Inter-Satellite Laser Links

Hoon Kim (KAIST, Korea)

[We2K-2] 11:15-11:30

Dual-Mode OAM-OTFS for RIS-assisted FSO Communication Systems

Shuang Tang, Jianhua Pei, Weijie Dai, Jian Song, and Yuhan Dong (Tsinghua Univ., China)

[We2K-3] 11:30-11:45

Hybrid Acquisition and Pointing System Based on 500-nm Visible Light and 1550-nm Laser Using QAM-OFDM

Xuan Huang (China Telecom Research Inst., China), Zhibo Wang (Huawei Technologies Co., Ltd., China), Xu Xia, and Peng Chen (China Telecom Research Inst., China)

[We2K-4] 11:45-12:00

Over 100 Gbps 5 Meter Underwater Visible Light Communication System Employing OAM Multiplexing based on Tricolor Laser Transmitter

Haoyu Zhang, Jifan Cai, Li Yao, Yuning Zhou (Fudan Univ., China), Xiaolan Wang (Nanchang Univ., China), Yingjun Zhou, and Nan Chi (Fudan Univ., China)

[We2K-5] 12:00-12:15

Two-Way Optical Wireless Communication Systems for Transmitting 5G MMW Signals Using Two RSOAs

Tsai-Man Wu, Chih-Hong Lin, Yan-Zhen Xu, Jia-Lian Jin, Wei-Xiang Chen, and Hai-Han Lu (Nat'l Taipei Univ. of Tech., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We2L] THz Metasurfaces
Session Date:	August 7 (Wed.), 2024
Session Time:	10:45-12:15
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Hyeyoung Ahn (Nat'l Yang Ming Chiao Tung, Taiwan)

[We2L-1] [Invited] 10:45-11:15

Non-Hermitian Metasurfaces for Sensitive THz Systems

Teun-Teun Kim (Univ. of Ulsan, Korea)

[We2L-2] [Invited] 11:15-11:45

Magnetically Tuned Multi-Mode Terahertz Metasurfaces

Nityananda Acharyya, Soumyajyoti Mallick, Shreeya Rane, and Dibakar Roy Chowdhury (Mahindra Univ., India)

[We2L-3] 11:45-12:00

Graphene-Enabled Reconfigurable Terahertz Wavefront Modulator Enhanced by BICs

Jianzhou Huang, Zongyuan Wang, and Bin Hu (Beijing Inst. of Tech., China)

[We2L-4] 12:00-12:15

Unveiling Complex Catalytic Reaction via Multifunctional THz Nanostructure

Geon Lee, Jinwoo Lee, Jongsu Lee (KIST, Korea), Yong-Sang Ryu (Korea Univ., Korea), and Minah Seo (KIST, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3A] Novel Fiber Devices II
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Chang-Seok Kim (Pusan Nat'l Univ., Korea), Prof. Siddharth Ramachandran (Boston Univ., USA)

[We3A-1] [Invited] 15:45-16:15

Optimizing Laser Diode Integration with Hollow Core Fiber for Enhanced Efficiency

Yongmin Jung, Jing Meng (Univ. of Southampton, UK), Kerrianne Harrington (Univ. of Bath, UK), Hesham Sakr (Microsoft (Lumenisity), UK), Ian A. Davidson, Sijing Liang, Gregory Jaison, Francesco Poletti (Univ. of Southampton, UK), and David J. Richardsona (Microsoft (Lumenisity), UK)

[We3A-2] 16:15-16:30

Efficient Direct Interconnection Between 405 nm Laser Diode and Hollow Core Fiber

Jing Meng, Sijing Liang, Ian A. Davidson, Gregory Jaison, Natalie Wheeler, Francesco Poletti, Lin Xu, David J. Richardson, and Yongmin Jung (Univ. of Southampton, UK)

[We3A-3] 16:30-16:45

Poling-Free and Polarization-Independent Quasi-Phase Matching Using Radially Polarized Fiber

Takuma Nakamura, Nobuaki Terakado, and Takumi Fujiwara (Tohoku Univ., Japan)

[We3A-4] 16:45-17:00

Bicolour Pulse Encoding in a Polarization-Maintaining Laser by a Twistable Tapered-Fiber Lyot Filter

Bowen Liu, Maolin Dai, Yifan Ma, Shinji Yamashita, and Sze Yun Set (The Univ. of Tokyo, Japan)

[We3A-5] 17:00-17:15

Highly Sensitive Refractive Index Sensor based on In-fiber Optofluidic Fabry–Pérot Interferometer

Wenyu Wang, Lingyi Xiong, Shaoxiang Duan, Bo Liu, Hao Zhang, Haifeng Liu, and Wei Lin (Nankai Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3B] Nonlinear Phenomena in the Mid-Infrared
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Jongwon Lee (UNIST, Korea)

[We3B-1] [Invited] 15:45-16:15

Brillouin Lasing and Dispersive Wave Generation in the Mid-IR Using On-chip Chalcogenide Glass Platforms

Hansuek Lee, Daewon Suk, Kiyoung Ko, Soobong Park, Dohyeong Kim, Seong Cheol Lee (KAIST, Korea), Rongping Wang (Ningbo Univ., China), Kwang-Hoon Ko (KAERI, Korea), Fabian Rotermund (KAIST, Korea), and Duk-Yong Choi (The Australian Nat'l Univ., Australia)

[We3B-2] 16:15-16:30

Efficient Mid-Infrared Dispersive Wave Generation at 3 μm in the Dispersion Engineered Side-slotted Ridge Silicon Waveguide

Ruifeng Chen, Feng Ye, Jiayao Huang, and Qian Li (Peking Univ., China)

[We3B-3] 16:30-16:45

High-Energy Mid-Infrared Femtosecond Pulse Generation via Four-Wave Mixing in Gas-Filled Hollow-Core Fiber

Ruhai Bai, Trivikramarao Gavara, Yuxi Wang, Daiqi Xiong, Ang Deng, Kevin Hean, Shuaihao Ji, Xu Wu, and Wonkeun Chang (Nanyang Technological Univ., Singapore)

[We3B-4] 16:45-17:00

Mid-IR Supercontinuum Source on a Chip with Tailored Dispersive Waves for Target Gas Sensing

Soobong Park, Seong Cheol Lee, Daewon Suk (KAIST, Korea), Won Bae Cho (ETRI, Korea), Duk-Yong Choi (The Australian Nat'l Univ., Australia), Kwang-Hoon Ko (KAERI, Korea), Fabian Rotermund, and Hansuek Lee (KAIST, Korea)

[We3B-5] 17:00-17:15

Multi-Quantum Stretching and Rotating Excitation of Carbon Dioxide via Intense Mid-Infrared Laser Pulses

Ikki Morichika, Hiroki Tsusaka, and Satoshi Ashihara (The Univ. of Tokyo, Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3C] Cold Atoms II
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room C (107-109)
Session Chair(s)	Prof. David Hutchinson (Univ. of Otago, New Zealand)

[We3C-1] [Invited] 15:45-16:15

Toward Large Scalable Quantum Computing with Mixed-species Atom Array

Xiao-Dong He (Innovation Academy for Precision Measurement Science and Tech., Chinese Academy of Sciences, China)

[We3C-2] 16:15-16:30

Long-lived Collective Rydberg Excitations in Atomic Gas via Ac-Stark Lattice Modulation

Stanis ł aw Kurzyna, Bartosz Niewelt, Mateusz Mazelanik, Wojciech Wasilewski, and Micha ł Parniak (Univ. of Warsaw, Poland)

[We3C-3] 16:30-16:45

State – Insensitive Magnetic Field Trap for Ground and Rydberg State ^{87}Rb Atom Produced by Optical Nanofiber

Alexey Vylegzhanin, Dylan Brown (Okinawa Inst. of Science and Tech., Japan), Danil F. Kornovan (Aarhus Univ., Denmark), and Síle Nic Chormaic (Okinawa Inst. of Science and Tech., Japan)

[We3C-4] 16:45-17:00

Trapping a Free-propagating Single-photon into an Atomic Ensemble as a Quantum Stationary Light Pulse

U-Shin Kim (POSTECH, Korea), Yong Sup Ihn (Agency for Defense Development, Korea), Chung-Hyun Lee, and Yoon-Ho Kim (POSTECH, Korea)

[We3C-5] 17:00-17:15

Chronocyclic Processing Using a Multimode Atomic Quantum Memory

Mateusz Mazelanik, Bartosz Niewelt, Marcin Jastrzębski, Stanis ł aw Kurzyna, Jan Nowosielski, Wojciech Wasilewsk, and Micha ł Parniak (Univ. of Warsaw, Poland)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3D] Novel Passive Devices 3
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room D (113)
Session Chair(s)	Prof. Heedeuk Shin (POSTECH, Korea)

[We3D-1] [Invited] 15:45-16:15

Optimal Optical Interface for Fiber-integrated Quantum Photonics

Woong Bae Jeon, Jong Sung Moon, Kyu-Young Kim, and Je-Hyung Kim (UNIST, Korea)

[We3D-2] 16:15-16:30

Dual-ring Super-mode Modulator with a High Modulation Extinction Ratio

Xinxi Zhu, Shihuan Ran, Yu Li, Liangjun Lu (Shanghai Jiao Tong Univ., China), Ningfeng Tang, Faju Liu (ZTE Corp., China), Jianping Chen, and Linjie Zhou (Shanghai Jiao Tong Univ., China)

[We3D-3] 16:30-16:45

Ultralow-Los Silicon Nitride Microresonators using Room-Temperature Sputtering

Shuangyou Zhang, Toby Bi, Irina Harder, Olga Ohletz, Florentina Gannott, Alexander Gumann, Eduard Butzen, Yaojing Zhang, and Pascal Del'Haye (Max Planck Inst. for the Science of Light, Germany)

[We3D-4] 16:45-17:00

Study of Nonlinear Silicon Nitride Waveguides Loss with Deuterated Silicon Dioxide Cladding

Yinchen Xie, Jiaqi Li, Yanfeng Zhang, and Siyuan Yu (Sun Yat-sen Univ., China)

[We3D-5] 17:00-17:15

Germanium-on-silicon Coupling and Routing Devices Operating at 8 μm

Hongjun Cai, Wei Qi, Zhijuan Gu, Xinliang Zhang, and Yu Yu (Huazhong Univ. of Science and Tech., China)

CLEO PacificRim 2024
August 4-9, 2024
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Session Title:	[We3E] Nonlinear Frequency Conversion
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room E (114)
Session Chair(s)	Dr. Hiromitsu Kiriyama (Nat'l Institutes for Quantum Science and Tech., Japan)

[We3E-1] [Invited] 15:45-16:15

Sub-150 J/10 Hz DPSS Pulsed Laser Bivoj with 2nd and 3rd Harmonic Frequency Conversion

Martin Smrz, Martin Divoky, Jan Pilar, Ondrej Slezak, David Vojna, Martin Hanus, Petr Navratil, Ondrej Denk, Patricie Severová, Tomas Paliesek (HiLASE Centre, Czech Republic), Paul Mason, Jonathan Phillips, Dave Clarke, Thomas Butcher, Saumyabrata Banerjee, Mariastefania De Vido (Rutherford Appleton Lab., UK), and Tomas Mocek (HiLASE Centre, Czech Republic)

[We3E-2] 16:15-16:30

Experimental Demonstration of a KW-Class Multispectral Hollow-Core Fiber Raman Laser

Matthew A. Cooper, Timothy Bate (Univ. of Central Florida, USA), Selim Habib (Florida Inst. of Tech., USA), Joseph Wahlen, J. Enrique Antonio-Lopez, Axel Schülzgen, and Rodrigo Amezcua Correa (Univ. of Central Florida, USA)

[We3E-3] 16:30-16:45

Collinear Raman Amplifier Based on Diamond

Hao Zheng, Xin Hao, Boyuan Zhang, Xiaoyu Chang, Hui Chen, Yulei Wang, Zhenxu Bai, and Zhiwei Lu (Hebei Univ. of Tech., China)

[We3E-4] 16:45-17:00

Investigations on Scattering Centers in $CsLiB_6O_{10}$ Crystals

Yoshihiro Kataoka, Yuto Matsumi (Osaka Univ., Japan), Ryota Murai, Yoshinori Takahashi (SOSHO CHOKO Inc., Japan), Hideo Takazawa, Shigeyoshi Usami, Masayuki Imanishi, Mihoko Maruyama, Yusuke Mori (Osaka Univ., Japan), and Masashi Yoshimura (SOSHO CHOKO Inc., Japan)

[We3E-5] 17:00-17:15

Effect of Water Reabsorption in $CsLiB_6O_{10}$ on Picosecond Deep-Ultraviolet Pulse Generation

Kyosuke Shimada, Nagi Yamamoto (Osaka Univ., Japan), Ryota Murai, Yoshinori Takahashi

(SOSHO CHOKO Inc., Japan), George Okada (Spectronix, Japan), Shigeyoshi Usami, Masayuki Imanishi, Mihoko Maruyama, Yusuke Mori (Osaka Univ., Japan), and Masashi Yoshimura (SOSHO CHOKO Inc., Japan)

Session Title:	[We3F] Low-dimensional Photonics II
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:00
Session Room:	Room F (115)
Session Chair(s)	Dr. Son Tung Ha (A*STAR, Singapore)

[We3F-1] [Invited] 15:45-16:15

Strain-exciton Coupling in Two-dimensional Materials

SungWoo Nam (Univ. of California, Irvine, USA)

[We3F-2] 16:15-16:30

Enhancing Guided Exciton-Polariton Performance in Multilayered WS_2 through hBN Encapsulation

Ho Seung Lee, Junghyun Sung, Dong-Jin Shin, and Su-Hyun Gong (Korea Univ., Korea)

[We3F-3] 16:30-16:45

Optimising Diamond Pillar Geometry for Enhanced NV Fluorescence Emission

S. Baghapour, Wen Qi Zhang (Univ. of South Australia, Australia), M. Capelli, S. Li, B. C. Johnson, A. Greentree, P. Reineck (RMIT Univ., Australia), D. A. Simpson (The Univ. of Melbourne, Australia), H. Ebendroff-Heidepriem (The Univ. of Adelaide, Australia), B. C. Gibson (RMIT Univ., Australia), S.C. Warren-Smith, and S. Afshar Vahid (Univ. of South Australia, Australia)

[We3F-4] 16:45-17:00

Self-Limited Thinning Approach for Strictly Monlayer 2D Materials

Shi Wun Tong and Dongzhi Chi (Inst. of Materials Research and Engineering, A*STAR, Singapore)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3G] Advanced Imaging
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room G (116)
Session Chair(s)	Prof. Jiamin Wu (Tsinghua Univ., China)

[We3G-1] [Invited] 15:45-16:15

High-speed 3D Imaging and Metrology: From Classical Fringe Projection to Deep Learning Approaches

Wenwu Chen, Jiaming Qian, Shijie Feng, and Chao Zuo (Nanjing Univ. of Science and Tech., China)

[We3G-2] 16:15-16:30

Coherent Diffractive Imaging with Yb:KGW fs Laser-driven High Order Harmonic Generation Sources

Jin Niu, Kui Li, Ruixuan Li, Guangyin Zhang, Jiyue Tang, Yongjun Ma, Changjun Ke, Hao Xu, Yutong Wang, Xiaoshi Zhang, and Jie Li (Aerospace Information Research Inst., Chinese Academy of Sciences, China)

[We3G-3] 16:30-16:45

3D Lensless Camera for Extended Depth Range with Multiple Point Spread Functions

Taeyoung Kim, Yujin Lee, Jaewoo Jung, Kyung Chul Lee, and Seung Ah Lee (Yonsei Univ., Korea)

[We3G-4] 16:45-17:00

High-speed Miniaturized Microscope Integrated with Biologically-inspired Ultrafast Microlens Array Camera

Hyun-Kyung Kim, Young-Gil Cha, Jae-Myeong Kwon, and Ki-Hun Jeong (KAIST, Korea)

[We3G-5] 17:00-17:15

Research Progress in Narrow-band Imaging of Capsule Endoscopes Based on Hyperspectral Image Conversion Technology

Song-Cun Lu, Arvind Mukundan, Riya Karmakar, Yu-Ming Tsao, Hong-Thai Nguyen, and Hsiang-Cheng Wang (Nat'l Chung Cheng Univ., Taiwan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3H] Applications of Photonic Signal Processing
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room H (117)
Session Chair(s)	Dr. Pham Tien Dat (Nat'l Inst. of Information and Communications Tech., Japan)

[We3H-1] [Invited] 15:45-16:15

Biomimetics in Photonic Systems

Mable P. Fok (Univ. of Georgia, USA)

[We3H-2] 16:15-16:30

A High-speed Stable Polarization Encoder for Quantum Key Distribution

Ju Li, Zexu Wang (Beijing Univ. of Posts and Telecommunications, China), Changlei Wang (China Academy of Electronics and Information Tech., China), Feifei Yin, Kun Xu (Beijing Univ. of Posts and Telecommunications, China), Huaxing Xu (China Academy of Electronics and Information Tech., China), and Yitang Dai (Beijing Univ. of Posts and Telecommunications, China)

[We3H-3] 16:30-16:45

Parallelization of Temporally Multiplexed Matrix Vector Multiplication with Rayleigh Backscattering in an Optical Fiber via Wavelength-division Multiplexing

Daichi Hitotsumatsu, Kaoru Minoshima, and Naoya Kuse (Tokushima Univ., Japan)

[We3H-4] 16:45-17:00

Highly Stable and Low-Phase-Noise Chirped Waveforms Generation Based on an Injection-Locked and Actively Stabilized Opto-Electronic Oscillator

Qianlong Zhang, Jiangyi Tong, Bin Wang, and Weifeng Zhang (Beijing Inst. of Tech., China)

[We3H-5] 17:00-17:15

Single-Wavelength Multi-Tap Time Delay Line over a Multimode Fibre Towards Microwave Photonic Filters

Shouju Liu, Yuanli Yue (Univ. of Kent, UK), Mingzhu Shi (Tianjin Normal Univ., China), Ailing Zhang (Tianjin Univ. of Tech., China), and Chao Wang (Univ. of Kent, UK)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3I] Laser Assisted Novel Device Fabrication
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room I (118)
Session Chair(s)	Prof. Ya Cheng (Chinese Academy of Sciences, China)

[We3I-1] [Invited] 15:45-16:15

Amplifying the Gas Sensing Sensitivity with Femtosecond Laser Irradiation

Hyoungwon Park (Fraunhofer Inst. for Ceramic Technologies and Systems, Germany)

[We3I-2] 16:15-16:30

Ultra-Bright Blue-Shifted Emission from Photo-Polymers via Femtosecond Pulsed Laser Processing

Hui Zhang, Simone Lamon, Weizhao Gu, Qiming Zhang, Min Gu (Univ. of Shanghai for Science and Tech., China)

[We3I-3] 16:30-16:45

Laser-Induced Graphene (LIG) Based Diffraction Optical Systems and Implementation of Higher Precision Attitude Measurement Sensor.

Younggeun Lee, Dongwook Yang, Hyeokin Kang, Hyogeun Han, Han Ku Nam, Taewon Kim, Hyeonwoo Kim, Hyosang Yoon (KAIST, Korea), Joohyung Lee (Seoul Nat'l Univ. of Science and Tech., Korea), and Young-Jin Kim (KAIST, Korea)

[We3I-4] 16:45-17:00

Optical Fourier Volume Defined by Holographic Recording of Photopolymers and Nanoparticles

Dongjae Baek (Korea Univ., Korea), Jun Choi (POSTECH, Korea), Jaepil Jo (KAIST, Korea), Yongjun Lim (Korea Univ., Korea), Unyong Jeong (POSTECH, Korea), Yongkeun Park (KAIST, Korea), and Seungwoo Lee (Korea Univ., Korea)

[We3I-5] 17:00-17:15

A Study on Nanosecond Laser Interaction Characteristics of Polyimide Tape for Metal Battery

H. Kim, M. Seong, M. Park, and D. Lee (Kongju Nat'l Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3J] Plasmonics I
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:00
Session Room:	Room J (201-202)
Session Chair(s)	Dr. Minah Seo (KIST, Korea), Prof. Hyeon-Ho Jeong (GIST, Korea)

[We3J-1] [Invited] 15:45-16:15

Optimal Near-Field Antennas

Owen D. Miller (Yale Univ., USA)

[We3J-2] 16:15-16:30

Polarization-Selective Mode-Coupling in Hyperbolic Nanoparticles

Tomasz J. Antosiewicz, Krzysztof M. Czajkowski, Maria Bancerek, Arumona E. Arumona, and Olga A. Kochanowska (Univ. of Warsaw, Poland)

[We3J-3] 16:30-16:45

Enhancement of Plasmon Resonance Energy Transfer (PRET) for Molecular Sensing

Jaewon Lee, Hayun Ahn, and Seungwoo Lee (Korea Univ., Korea)

[We3J-4] 16:45-17:00

Embedded Plasmonics Modified-Modified Lithium Niobate Thin Films for Photodetection

Xiaoli Sun (Shandong Univ., China), Yan Sheng (The Australian Nat'l Univ., Australia), Feng Ren (Wuhan Univ., China), Yuechen Jia, and Feng Chen (Shandong Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3K] Coherent Transmission
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room K (204-205)
Session Chair(s)	Prof. Tianwai Bo (Beijing Inst. of Tech., China)

[We3K-1] [Invited] 15:45-16:15

Robust Timing Recovery Algorithms for Nyquist Digital-Multi-band Optical Coherent Systems

Jian Zhao, Ziheng Zhang, Wanzhen Guo (South China Univ. of Tech., China), Jiating Luo, and Bofang Zheng (Huawei Technologies Co., Ltd., China)

[We3K-2] 16:15-16:30

Novel Data-aided Timing Error Detector for One Sample per Symbol Nyquist Optical Communication Systems

Yue Wang, Meng Qiao, Zhaohui Li, and Dawei Wang (Sun Yat-sen Univ., China)

[We3K-3] 16:30-16:45

Experimental Study on Coherent Receiver Sensitivity for Binary Phase Shift Keying based Time-Domain Index Modulation Signals

Daichi Aoki, Ichiro Matui, and Wataru Imajuku (Kindai Univ., Japan)

[We3K-4] 16:45-17:00

Weighted K-means Clustering-enhanced Minimum Phase Signal Transmission at Lower CSPR Condition

Yuyang Liu, Xishuo Wang, Anxu Zhang, Lipeng Feng, Kai Lv, Hao Liu, Xia Sheng, and Xiaoli Huo (China Telecom Research Inst., China)

[We3K-5] 17:00-17:15

Phase Locking of a Compact Tuneable Laser to Optical Frequency Comb with Low Frequency Error

Win Indra, Zitong Feng, Josef Vojtěch, Meng Ding, and Radan Slavík (Univ. of Southampton, UK)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[We3L] Biophotonic Enabling Technologies II
Session Date:	August 7 (Wed.), 2024
Session Time:	15:45-17:15
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Ki Hean Kim (POSTECH, Korea)

[We3L-1] [Invited] 15:45-16:15

Toward Peta-scale Microscopy and Image Analytics

Kevin Kin-Man Tsia (The Univ. of Hong Kong, Hong Kong S.A.R)

[We3L-2] 16:15-16:30

Phenotype Screening of Zebrafish with Deep Learning and Flatten Scanner

Hyunmo Yang (UNIST, Korea), Unbeom Shin (IBS, Korea), Geosung Na (UNIST, Korea), Hwasoo Ko (IBS, Korea), Taejoon Kwon (UNIST, Korea), Yoonsung Lee (Kyung Hee Univ., Korea), and Woonggyu Jung (UNIST, Korea)

[We3L-3] 16:30-16:45

Evaluation of Photocurrent and Thermal Effects on Photosynthetic Microbes under Multiple Optical Condensation

Ryuki Hotta, Kota Hayashi, Anna Honda, Mamoru Tamura, Takuya Iida, and Shiho Tokonami (Osaka Metropolitan Univ., Japan)

[We3L-4] 16:45-17:00

Hand-held Scanning Oblique Plane Microscopy with Flexible Fiber Bundle Relay

Seonghan Kim, Jisang Lee, Arnab Shil, ALI Ahmad, and Ki Hean Kim (POSTECH, Korea)

[We3L-5] 17:00-17:15

Sensitive and Rapid Detection of Cancer Biomarkers with Microflow Light-induced Acceleration System

Takuya Iida, Yumiko Takagi, Mami Katsumata, Kana Fujiwara, Mamoru Tamura, Ikuhiko Nakase, Shiho Tokonami (Osaka Metropolitan Univ., Japan), and Ayumu Taguchi (Aichi Cancer Center, Japan)

Session Title:	[PDP] Post-deadline Papers Session
Session Date:	August 7 (Wed.), 2024
Session Time:	17:30-18:50
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Hyunyong Choi (Seoul Nat'l Univ., Korea)

[PDP-1] 17:30-17:40

Efficient High-power Diffraction-limited Fibre Laser with a Record Low Quantum Defect of 1.7%

Monica T. Kalichevsky-Dong, Samuel Bingham, Thomas W. Hwakins, Bailey Meeham (Clemson Univ., USA), Peter Dragic (Univ. of Illinois Urbana-Champaign, USA), John Ballato, and Liang Dong (Clemson Univ., USA)

[PDP-2] 17:40-17:50

Electroluminescence from Isolated Color Centers in Hexagonal Boron Nitride

Gyuna Park (POSTECH, Korea), Ivan Zhigulin (Univ. of Tech. Sydney, Australia), Hoyoung Jung (POSTECH, Korea), Jake Horder, Karin Yamamura (Univ. of Tech. Sydney, Australia), Yerin Han, Hyunje Cho, Hyeon-Woo Jeong (POSTECH, Korea), Kenji Watanabe, Takashi Taniguchi (Nat'l Inst. for Materials Science, Japan), Myungchul Oh, Gil-Ho Lee, Moon-Ho Jo (POSTECH, Korea), Igor Aharonovich (Univ. of Tech. Sydney, Australia), and Jonghwan Kim (POSTECH, Korea)

[PDP-3] 17:50-18:00

Taking a Snapshot of a Laser Waveform Using Plasma Fluorescence in Ambient Air

Kyunghoon Yeom Wosik Cho, Jeong-uk Shin, Bin Kim, Sung In Hwang, Jae Hee Sung, and Kyung Taec Kim (GIST, Korea)

[PDP-4] 18:00-18:10

Ultrafast Nonlocal Effects in a BIC Metasurface Revealed by Spatially Selective Femtosecond Pumping

Daniil A. Shilkin, Son Tung Ha, Ramon Paniagua-Dominguez, and Arseniy I. Kuznetsov (A*STAR, Singapore)

[PDP-5] 18:10-18:20

First Field Trial of Hybrid Fiber Sensing with Data Transmission Resulting in Enhanced Sensing Sensitivity and Spatial Resolution

Ming-Fang Huang, Ezra Ip, Yue-Kai Huang, Shaobo Han, Junqiang Hu (NEC Labs America, USA), Eduardo Mateo (NEC Corp., Japan), Ting Wang (NEC Labs America, USA), Tiejun J. Xia, Glenn A. Wellbrock (Verizon, USA), Yoshiaki Aono, and Koji Asahi (NEC Corp., Japan)

[PDP-6] 18:20-18:30

Field Trial on Photonic THz Real-Time Transmission of 50Gbit/s over 1km Wireless Link

Zhidong Lyu, Lu Zhang (Zhejiang Univ., China), Chanming Zhang (Zhejiang Lab, China), Zuoming Yang, Xing Fang, Qiuzhuo Deng, Kangpeng Ye, Zhe Ding, Tianyu Li (Zhejiang Univ., China), Oskars Ozolins (KTH Royal Inst. of Tech., Sweden), Guangyi Liu (China Mobile Communication Research Inst., China), Xiaodan Pang (KTH Royal Inst. of Tech., Sweden), and Xianbin Yu (Zhejiang Univ., China)

[PDP-7] 18:30-18:40

On-chip Spectrometer with Reconfigurable Performance and Very-low Power Consumption

Xiaozhuo Zhao, Shilong Pan, and Ang Li (Nanjing Univ. of Aeronautics and Astronautics, China)

[PDP-8] 18:40-18:50

Ultra-narrow-linewidth High-power Hybrid Integrated Self-injection Locking Laser on the Silicon Platform

Xinhang Li, Yuyao Guo, Siyu E, Yihao Fan, Chuxin Liu, Minhui Jin, Weihan Xu, Liangjun Lu, Yu Li, Jianping Chen, and Linjie Zhou (Shanghai Jiao Tong Univ., China)

Session Title:	[Th1A] Imaging with Deep Learning
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:00
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Jonghwa Shin (KAIST, Korea)

[Th1A-1] 11:00-11:15

U^2-Net Architecture Contingent Intelligent Depth Map Extraction Method Using Light Field Images

F M Fahmid Hossain, Shariar Md Imtiaz, Md. Biddut Hossain, Hui-Ying Wu, Ki-Chul Kwon (Chungbuk Nat'l Univ., Korea), Kwon-Yeon Lee (Sunchon Nat'l Univ., Korea), and Nam Kim (Chungbuk Nat'l Univ., Korea)

[Th1A-2] 11:15-11:30

Noise-resilient Ptychographic Imaging with Deep Learning

Han Yue, Yun Xie (Fudan Univ., China), Xin Lou (ShanghaiTech Univ., China), Jun Cheng (Inst. for Infocomm Research, A*STAR, Singapore), Yu-Xuan Ren (Fudan Univ., China), and Feng Shu (The Univ. of Sydney, Australia)

[Th1A-3] 11:30-11:45

Identification of Early Mycosis Fungoides by Hyperspectral Imaging

Hong-Thai Nguyen Arvind Mukundan, Riya Karmakar, Yu-Ming Tsao, Song-Cun Lu, and Hsiang-Wang Cheng (Nat'l Chung Cheng Univ., Taiwan)

[Th1A-4] 11:45-12:00

Learning-Based Vein Image Segmentation under Variable Ambient Lighting Conditions and Sensor Noise

Satya Prasanna Mallick, Prasanth Tata, Shubham Makwana (Indian Inst. of Tech. Hyderabad, India), Ram Gopal (Tata Inst. of Fundamental Research Hyderabad, India), and Vandana Sharma (Indian Inst. of Tech. Hyderabad, India)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1B] Strong Field Driven Light Matter Interaction
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Kyung Taec Kim (GIST, Korea)

[Th1B-1] [Invited] 11:00-11:30

Attosecond Pulses Generated from Relativistically Driven Plasma

Yang Hwan Kim, Hyeon Kim, Seong Cheol Park, Yongjin Kwon, Kyunghoon Yeom, Wosik Cho, Taeyong Kwon, Hyeok Yun, Jae Hee Sung, Seong Ku Lee (GIST, Korea), Tran Trung Luu (The Univ. of Hong Kong, Hong Kong S.A.R), Chang Hee Nam, and Kyung Taec Kim (GIST, Korea)

[Th1B-2] 11:30-11:45

Laguerre Gaussian Laser Filamentation for the Control of Electric Discharges in Air

Silin Fu, Leonid Arantchouk, Magali Lozano, André Mysyrowicz (Institut Polytechnique de Paris, France), Arnaud Couairon (Centre de Physique Theorique, France), and Aurélien Houard (Institut Polytechnique de Paris, France)

[Th1B-3] 11:45-12:00

Improved Performance of Few-TW Laser Wakefield Acceleration with a sub-mm Gas Jet of an Asymmetric Density Profile

Po-Wei Lai, Dang Khoa Tran (Nat'l Tsing Hua Univ., Taiwan), Shou-Wei Chou, Chih-Hao Pai, Hsu-Hsin Chu, Shih-Hung Chen (Nat'l Central Univ., Taiwan), Jyhpyng Wang (Academia Sinica, Taiwan), and Ming-Wei Lin (Nat'l Tsing Hua Univ., Taiwan)

[Th1B-4] 12:00-12:15

Optical Nonlinearity of Free Electrons

H. Hu (Istituto Italiano di Tecnologia, Italy), A. Rossetti (Univ. of Luxembourg, Luxembourg), T. Venanzi (Istituto Italiano di Tecnologia, Italy), A. Bousseksou (Univ. of Paris-Saclay, France), F. De Luca (City Univ. of New York, USA), T. Deckert (Univ. of Luxembourg, Luxembourg), V. Giliberti (Istituto Italiano di Tecnologia, Italy), I. Sagnes, G. Beaudoin (Universite Paris-Saclay, France), D. Brida (Univ. of Luxembourg, Luxembourg), R. Colombelli (Universite Paris-Saclay, France), M. Ortolani (Sapienza Univ. of Rome, Italy), J. Rho (POSTECH, Korea), and C. Ciracì (Istituto Italiano di Tecnologia, Italy)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

[Th1B-5] 12:15-12:30

Extending Femtosecond Laser Superfilamentation in Air with a Multifocal Phase Mask

Silin Fu, Leonid Arantchouk, André Mysyrowicz, and Aurélien Houard (Institut Polytechnique de Paris, France)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1C] Quantum Optics and Application I
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:00
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Gyu-Boong Jo (The Hong Kong Univ. of Science and Tech., Hong Kong S.A.R)

[Th1C-1] [Invited] 11:00-11:30

The Anderson Transition in Two-Dimensional Ultracold Gases

D. A. W. Hutchinson, E. Arabahmadi, D. Schumayer (Univ. of Otago, New Zealand), M. Hoogerland (Univ. of Auckland, New Zealand), B. Grémaud (Aix Marseille Univ., France), and C. Miniatura (Nat'l Univ. of Singapore, Singapore)

[Th1C-2] 11:30-11:45

Exciton-Polariton in Single-Walled Carbon Nanotubes with Different Microcavity Structures

HeeBong Yang and Na Young Kim (Univ. of Waterloo, Canada)

[Th1C-3] 11:45-12:00

Quantum Dots on an Optical Nanofiber Tip for Quantum Photonics

Resmi M, Elaganuru Bashaiah, and Ramachandrarao Yalla (Univ. of Hyderabad, India)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1D] Photonic Integrated Circuits 1
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room D (113)
Session Chair(s)	Prof. Il-Sug Chung (UNIST, Korea)

[Th1D-1] [Invited] 11:00-11:30

On-Chip LiDAR with Slow-Light Beam Scanner and Wavelength-Swept Source

Toshihiko Baba and Takemasa Tamanuki (Yokohama Nat'l Univ., Japan)

[Th1D-2] 11:30-11:45

Chip-scale Confocal Laser-scanning Microscope Based on Optical Phased Array

Ju-Wei Wang, Hsin-Hung Lin, Sheng-I Kuo (Nat'l Yang Ming Chiao Tung Univ., Taiwan), Zohauddin Ahmad (Nat'l Central Univ., Taiwan), Ping-Yen Hsieh, Chung-Yu Hsu (Nat'l Yang Ming Chiao Tung Univ., Taiwan), Jin-Wei Shi (Nat'l Central Univ., Taiwan), and You-Chia Chang (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

[Th1D-3] 11:45-12:00

Classical and Quantum Experiments using Hybrid Si_3N_4-$LiNbO_3$ Quantum Photonic Chip

Kiwon Kwon (POSTECH, Korea), HyungJun Heo, Donghwa Lee, Hyeong-Soon Jang (KIST, Korea), Sangin Kim (Ajou Univ., Korea), Heedeuk Shin (POSTECH, Korea), Yong-Su Kim, Sang-Wook Han, and Hojoong Jung (KIST, Korea)

[Th1D-4] [Invited] 12:00-12:30

Photonic Integrated Circuits for Radar

Chul-Soon Im, Junhyung Cho, Seonu Baek, Ji-Yeong Gwon, Seungeui Lee (Hanwha Systems, Korea), and Youngseok Bae (Agency for Defense Development, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1E] Dimensional Metrology V
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:00
Session Room:	Room E (114)
Session Chair(s)	Dr. Jungjae Park (KRISS, Korea), Dr. June Park (KOPTI, Korea)

[Th1E-1] [Invited] 11:00-11:30

An Optical Measuring Method for Three-dimensional Surface Profile Using Hyperspectrometer

Heulbi Ahn and Jonghan Jin (KRISS, Korea)

[Th1E-2] 11:30-11:45

Real-time Hz-level Broadband Spectrometer

Shuangyou Zhang, Toby Bi, and Pascal Del'Haye (Max Planck Inst. for the Science of Light, Germany)

[Th1E-3] 11:45-12:00

Line Spectral Reflectometry for High-speed, Large-area Thickness Measurement

Minchol Lee (Seoul Nat'l Univ., Korea), Jaehyun Park (Korea Inst. of Industrial Tech., Korea), and Jeongmin Kim (Seoul Nat'l Univ., Korea)

Session Title:	[Th1F] Waveguide Photonics I
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room F (115)
Session Chair(s)	Dr. Myoung Jin Kim (KOPTI, Korea)

[Th1F-1] [Invited] 11:00-11:30

3D Transparent Optical Display based on Periodically Poled Lithium Niobate

Peter G.R. Smith, Goronwy Tawy, Rex H. Bannerman, and Corin B.E. Gawith (Univ. of Southampton, UK)

[Th1F-2] 11:30-11:45

SiN Strip-loaded Chemical Beam Vapour Deposited $LiNbO_3$ on Sapphire Waveguides

Marina Raevskaia, Rahma Moalla (Institut des Nanotechnologies de Lyon, France), Alban Gassenq, Antoine Bernard (The Inst. of Light and Matter, France), Aziz Benamrouche, Sébastien Cueff (Institut des Nanotechnologies de Lyon, France), Giacomo Benvenuti, Thanh Bui, Estelle Wagner, William Maudez (3D-Oxides, France), Bruno Masenelli (Institut des Nanotechnologies de Lyon, France), Andreas Boes (The Univ. of Adelaide, Australia), Christian Grillet (Institut des Nanotechnologies de Lyon, France), Arnan Mitchell (RMIT Univ., Australia), and Christelle Monat (Institut des Nanotechnologies de Lyon, France)

[Th1F-3] 11:45-12:00

Dispersion Engineered Silicon Photonic Micro-Ring Resonator by Subwavelength Waveguiding Structures

Yi-Min Wang, Yi-Jang Hsu, Yu-Wei Liu, and Yinchieh Lai (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

[Th1F-4] 12:00-12:15

Fabrication of Ultra-high-Q Ta_2O_5 Microdisk by Photolithography Assisted Chemo-mechanical Etching

Renhong Gao (East China Normal Univ., China), Minghui Li, Guanghui Zhao, Jintian Lin (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Jianglin Guan, Chuntao Li, Min Wang (East China Normal Univ., China), Lingling Qiao, and Ya Cheng (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

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[Th1F-5] 12:15-12:30

A Highly-Sensitive Biosensor based on a Long-period Polymer Waveguide Grating Structure

Krishnendu Dandapat and Varun Raghunathan (Indian Inst. of Science, India)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1G] Imaging Techniques for Scattering Media
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room G (116)
Session Chair(s)	Prof. Seung Ah Lee (Yonsei Univ., Korea)

[Th1G-1] [Invited] 11:00-11:30

Wavefront Shaping at 10 MHz Refresh Rate by Exploiting the Scan Speed of a Resonant Scanner

Atsushi Shibukawa (Hokkaido Univ., Japan), Yuki Sudo (Okayama Univ., Japan), Hideharu Mikami (Hokkaido Univ., Japan), and Mooseok Jang (KAIST, Korea)

[Th1G-2] 11:30-11:45

Deep-Tissue Optical Focusing with Phase Conjugation based on Nonlinear Acousto-Optic Modulation

Jaeyeon Oh, Hakseok Ko, Gookho Song, Seungmin Lee, and Mooseok Jang (KAIST, Korea)

[Th1G-3] 11:45-12:00

High-Resolution Ghost Imaging in Dynamic Scattering Environments with Gaussian Correction

Yang Peng and Wen Chen (The Hong Kong Polytechnic Univ., Hong Kong S.A.R)

[Th1G-4] 12:00-12:15

Time-resolved Digital Optical Phase Conjugation for Spatiotemporal Focusing of Ultrafast Laser Pulse Through Turbid Media

Seungmin Lee and Mooseok Jang (KAIST, Korea)

[Th1G-5] 12:15-12:30

Efficient Single-Pixel Imaging and Transmission in Scattering Media with Compressive Sensing

Yining Hao and Wen Chen (The Hong Kong Polytechnic Univ., Hong Kong S.A.R)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1H] Comb Lasers
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room H (117)
Session Chair(s)	Prof. Chao-Kuei Lee (Nat'l Sun Yat-sen Univ., Taiwan)

[Th1H-1] [Invited] 11:00-11:30

Advances in Fiber-based Dual-comb Laser and Its Applications

Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Th1H-2] 11:30-11:45

Real-time Self-healing Dynamics of a Brillouin-Kerr Comb in a FP Microresonator-filtered Laser

Junting Du, Wenxuan lian, Zhangru Shi (Univ. of Electronic Science and Tech. of China, China), Kunpeng Jia, Zhenda Xie (Nanjing Univ., China), Mingming Nie (Univ. of Colorado Boulder, USA), and Bowen Li (Univ. of Electronic Science and Tech. of China, China, China)

[Th1H-3] 11:45-12:00

Optical Frequency Comb for Universal Clock-laser Comparisons Enabled by Ultrabroadband Spectral Purity Transfer

Pu Zou, Michele Giunta, Marc Fischer, and Ronald Holzwarth (Menlo Systems, Germany)

[Th1H-4] 12:00-12:15

Generation of Short Optical Pulses at a 25-GHz Repetition Rate in Telecommunications Wavelengths by Using an Optical Frequency Comb with Silicon Modulators

Ryouyu Hirose (Nihon Univ., Japan), Yugo Kikkawa (Tokyo Denki Univ., Japan), Guangwei Cong, Rai Kou (AIST, Japan), Xuejun Xu, Kenichi Hitachi (NTT Basic Research Laboratories, Japan), Yamato Kitamura, Haruki Yaguchi (Nihon Univ., Japan), Noritsugu Yamamoto (AIST, Japan), Tadashi Nishikawa (Tokyo Denki Univ., Japan), Koji Yamada (AIST, Japan), Haruki Sanada, Katsuya Oguri (NTT Basic Research Laboratories, Japan), and Atsushi Ishizawa (Nihon Univ., Japan)

[Th1H-5] 12:15-12:30

Yb-doped fiber laser frequency comb on silica in 1 GHz line spacing

Ruoao Yang, Ya Wang, Zhendong Chen, Duo Pan, Jingbiao Chen, Aimin Wang, and Zhigang

Zhang (Peking Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1I] Laser 3D Printing
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:00
Session Room:	Room I (118)
Session Chair(s)	Dr. Hyoungwon Park (Fraunhofer Inst. for Ceramic Technologies and Systems, Germany)

[Th1I-1] 11:00-11:15

High-precision Direct Print of Biomaterials by Optical Vortex Forward Transfer

Kaito Sato, Tetsuya Fukuda, Ken-ichi Yuyama, Mitsumasa Hanaoka (Chiba Univ., Japan), Katsuhiko Miyamoto (Osaka Metropolitan Univ., Japan), and Takashige Omatsu (Chiba Univ., Japan)

[Th1I-2] 11:15-11:30

Fabrication of 3D Microfluidic Biochip using Two Photon Polymerized Mold for High-resolution Live Bioimaging

Kotaro Obata, Mirai Hanzawa, Felix Sima, Hiroyuki Kawano, Kazunari Ozasa (RIKEN Center for Advanced Photonics, Japan), Yasutaka Hanada (Hirosaki Univ., Japan), Godai Miyaji (Tokyo Univ. of Agriculture and Tech., Japan), Atsushi Miyawaki, and Koji Sugioka (RIKEN Center for Advanced Photonics, Japan)

[Th1I-3] 11:30-11:45

Optical Skyrmionic Hopfion Induced Surface Structures in Azopolymers via Photo-induced Mass Transport

Rihito Tamura (Chiba Univ., Japan), Praveen Kumar (Indian Inst. of Tech. Bhilai, India), A. Srinivasa Rao (Chiba Univ., Japan), Natalia M. Litchinitser (Duke Univ., USA), and Takashige Omatsu (Chiba Univ., Japan)

[Th1I-4] 11:45-12:00

Direct Laser Printing of Non-photosensitive Bioceramics Using Photoreduction-triggered Microbubble Generation

Hiroaki Nishiyama, Shogo Nara, and Haruka Kawabe (Yamagata Univ., Japan)

Session Title:	[Th1J] Plasmonics II
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Ji-Hyeok Huh (Hanyang Univ., Korea), Prof. Jongwon Lee (UNIST, Korea)

[Th1J-1] [Invited] 11:00-11:30

Proving the Mechanism of Plasmon-Assisted Photo Catalysis with Anti-Stokes SERS Spectroscopy

Zee Hwan Kim (Seoul Nat'l Univ., Korea)

[Th1J-2] 11:30-11:45

Surface Enhanced Raman Scattering on Plasmonic Nanostructures Using Cell Manipulation

Kwanhwi Ko, Hajun Yoo, Hyunwoong Lee, Young Hee Seo, Sangheon Han, Won Seok Chang, and Donghyun Kim (Yonsei Univ., Korea)

[Th1J-3] 11:45-12:00

Simultaneous Measurement of Light Absorption and Near-field Enhancement Based on Angle-resolved Nanospectroscopy

Seongmin Im, Hongki Lee, Changhun Lee, Hyunwoong Lee (Yonsei Univ., Korea), Shi-Wei Chu (Nat'l Taiwan Univ., Taiwan), Aaron Ho-Pui Ho (The Chinese Univ. of Hong Kong, Hong Kong S.A.R), and Donghyun Kim (Yonsei Univ., Korea)

[Th1J-4] 12:00-12:15

Au Supraball for Plasmonic Sensing

Kyung Hun Rho, Jaewon Lee, and Seungwoo Lee (Korea Univ., Korea)

[Th1J-5] 12:15-12:30

Enhanced Cherenkov Radiation from the Topology Transition

Juan-Feng Zhu (Singapore Univ. of Tech. and Design, Singapore), Zi-Wen Zhang (Peking Univ., China), and Lin Wu (Singapore Univ. of Tech. and Design, Singapore)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1K] Modulation Format
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:30
Session Room:	Room K (204-205)
Session Chair(s)	Prof. Hoon Kim (KAIST, Korea)

[Th1K-1] [Invited] 11:00-11:30

Advanced Modulation and Coding for Optical Communications

Junho Cho (Infinera Corp., USA)

[Th1K-2] 11:30-11:45

Endless Spatial Optical Phase Modulation by Complex Vector Synthesis Using LCoS

Seitaro Tani, Yuma Sato, Shun Harada, Zheqing Sun, Shuhei Otsuka, Tatsuki Ishijima, and Takahide Sakamoto (Tokyo Metropolitan Univ., Japan)

[Th1K-3] 11:45-12:00

Nonlinearity Mitigation with Comparing Probability Shaping-Based APSK and QAM in Visible Light Laser Communication System

ZhitengLuo, Xianhao Lin, Wenqing Niu, Yingjun Zhou (Fudan Univ., China), Xiaolan Wang (Nanchang Univ., China), and Nan Chi (Fudan Univ., China)

[Th1K-4] 12:00-12:15

Bounds on the Receiver Sensitivity of PPM Signals Having Finite Extinction Ratios

Jihoon Lee and Hoon Kim (KAIST, Korea)

[Th1K-5] 12:15-12:30

Enhanced Pulse-Position Optical Modulation based on Optical Delay Interferometer for Satellite Optical Communication

Young-Jin Hyun, Hyemin Park, and Sang-Kook Han (Yonsei Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th1L] Nano-Biophotonics
Session Date:	August 8 (Thu.), 2024
Session Time:	11:00-12:00
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Chang-Seok Kim (Pusan Nat'l Univ., Korea)

[Th1L-1] 11:00-11:15

Imaging Buffer For STORM with Standard Immersion Oil Refractive Index

Youngseop Lee, Yeunho Lee, Minchol Lee, Donghoon Koo, Dongwoo Kim, Hongrae Kim, Kangwon Lee, and Jeongmin Kim (Seoul Nat'l Univ., Korea)

[Th1L-2] 11:15-11:30

DMD-based Beam Modulation for Sensing Plasmonic Enhanced Beam Shift

Shaodi Zhu (The Chinese Univ. of Hong Kong, Hong Kong S.A.R), Shuwen Zeng (Univ. of Tech. of Troye, France), Wu Yuan, and Ho-Pui Ho (The Chinese Univ. of Hong Kong, Hong Kong S.A.R)

[Th1L-3] 11:30-11:45

Multifunctionalities of Nanodiamonds as a Neuritogenic Promoter and dSTORM Super-resolution Optical Imaging Probe

Jaeheung Kim, Moon Sung Kang, Dong-Wook Han, and Chang-Seok Kim (Pusan Nat'l Univ., Korea)

[Th1L-4] 11:45-12:00

Specific Detection of Virus S-protein in Real Samples with Nano-bowl Substrate

Masatoshi Kanoda, Kota Hayashi, Yumiko Takagi, Mamoru Tamura, Shiho Tokonami, and Takuya Iida (Osaka Metropolitan Univ., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th2A] Machine Learning for Light Wave Technology
Session Date:	August 8 (Thu.), 2024
Session Time:	16:00-17:30
Session Room:	Room A (102-103)
Session Chair(s)	Prof. Hwi Kim (Korea Univ., Korea)

[Th2A-1] [Invited] 16:00-16:30

Exploring Wave Phenomena with Various Neural Network Models

Jonghwa Shin, Myungjoon Kim, and Arthur Baucour (KAIST, Korea)

[Th2A-2] 16:30-16:45

Generation of a Synthetic Database for Dual-point Fiber Sensor based on a Machine Learning Algorithm

Jonathan Esquivel-Hernández, Rodolfo Martínez-Manuel, and Luis M. Valentín-Coronado (Centro de Investigaciones en Óptica, Mexico)

[Th2A-3] 16:45-17:00

Optimization of Few-Mode Nanostructured Fibers with Generative Inverse Design Networks

Maciej Napiorkowski (Lukasiewicz Research Network, Poland), Rafal Kasztelanic, and Ryszard Buczynski (Wroclaw Univ. of Science and Tech., Poland)

[Th2A-4] 17:00-17:15

High Accuracy Vibration Sensing by using Random Interval Forest Classifier based Distributed Fiber Sensing

Brian Pamukti, Wang Zi, Shien-Kuei Liaw (Nat'l Taiwan Univ. of Science and Tech., Taiwan), Ya-Mei Yang (Industrial Tech. Research Inst., Taiwan), Totok Soehartanto, and Agus Muhamad Hatta (Institut Teknologi Sepuluh Nopember, Indonesia)

[Th2A-5] 17:15-17:30

Image Reconstruction on Electromagnetic Simulation by Using a Recurrent Neural Network

Hiroshi Fukuda (Chitose Inst. of Science and Tech., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th2B] Nonlinear Phenomena and Applications I
Session Date:	August 8 (Thu.), 2024
Session Time:	16:00-17:00
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Young-Mi Bahk (Incheon Nat'l Univ., Korea)

[Th2B-1] 16:00-16:15

Efficient Third Harmonic Generation in Frequency Tripling Mirrors

David Zuber (Leibniz Univ. Hannover, Germany), Sebastian Balendat, Holger Badorreck, Marco Jupe (Laser Zentrum Hannover e.V., Germany), Detlev Ristau, and Uwe Morgner (Leibniz Univ. Hannover, Germany)

[Th2B-2] 16:15-16:30

Resonance Shrinkage in Time-Varying Metasurfaces

A. Chernyak, A. Musorin (Lomonosov Moscow State Univ., Russia), A. Tognazzi, P. Franceschini, C. De Angelis (Nat'l Inst. of Optics – Nat'l Research Council (INO-CNR), Italy), and A. Fedyanin (Lomonosov Moscow State Univ., Russia)

[Th2B-3] 16:30-16:45

Efficient High Order Mode Supercontinuum Generation via Shortcut to Adiabaticity Coupling in Communication Band

Guan-Hong Li, Feng-Jung Kao, Zi-De Xie (Nat'l Sun Yat-sen Univ., Taiwan), Min-Hsiung Shih, Hao-Chung Kuo (Nat'l Yang Ming Chiao Tung Univ., Taiwan), Shuo-Yen Tseng (Nat'l Cheng Kung Univ., Taiwan), Yi-Jen Chiu, and Chao-Kuei Lee (Nat'l Sun Yat-sen Univ., Taiwan)

[Th2B-4] 16:45-17:00

Enhanced Supercontinuum Generation in a Cascaded Lithium Niobate Waveguide

Jiajia Zhao, Feng Ye, You Wu, and Qian Li (Peking Univ., China)

Session Title:	[Th2C] Quantum Optics and Application II
Session Date:	August 8 (Thu.), 2024
Session Time:	16:00-17:30
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Kihwan Kim (Tsinghua Univ., China), Prof. Yoko Miyamoto (The Univ. of Electro-Communications, Japan)

[Th2C-1] [Invited] 16:00-16:30

Quantum Enhanced Biotechnologies

Nicolas P. Mauranyapin, Alex Terrasson, Michael A. Taylor, and Warwick P. Bowen (The Univ. of Queensland, Australia)

[Th2C-2] 16:30-16:45

Generation of Ultra-Bright Polarization-Entangled Photon Pairs via Type II Noncritical Phase Matching

Ilhwan Kim (KIST, Korea), Yosep Kim (Korea Univ., Korea), Yong-Su Kim (Univ. of Science and Tech., Korea), Kwang Jo Lee (Kyung Hee Univ., Korea), and Hyang-Tag Lim (Univ. of Science and Tech., Korea)

[Th2C-3] 16:45-17:00

Time-Frequency Characterization of Ultrafast Quantum Entangled Biphotons Through Optical Frequency Comb Based Two-Color Asynchronous Optical Sampling

Prasad Koviri, Takahisa Kuwana, Hajime Komori, Takashi Kato, Akifumi Asahara (The Univ. of Electro-Communications, Japan), Thomas R. Schibli (Univ. of Colorado, USA), Ryosuke Shimizu, and Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Th2C-4] 17:00-17:15

A Temperature-Insensitive Photon Buffer for Temporal Multiplexing and Hong-Ou-Mandel Interferometry

Eun Chae Ha, Young Hoon Kim (Chung-Ang Univ., Korea), Hee Su Park (KRISS, Korea), and Kwang Yong Song (Chung-Ang Univ., Korea)

[Th2C-5] 17:15-17:30

Coherent Two-photon LIDAR with Incoherent Thermal Light

Chung-Hyun Lee, Yosep Kim, Dong-Gil Im, U-Shin Kim, Vincenzo Tamma, and Yoon-Ho Kim

(POSTECH, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th2D] Photonic Integrated Circuits 2
Session Date:	August 8 (Thu.), 2024
Session Time:	16:00-17:30
Session Room:	Room D (113)
Session Chair(s)	Prof. Il-Sug Chung (UNIST, Korea)

[Th2D-1] [Invited] 16:00-16:30

Space Photonics Roadmap: Current and Future Challenges

L. Rinaldi, F. Scotti (CNIT, Italy), V. Gemmato, C. Porzi (TeCIP Inst., Italy), G. Roelkens, J. Zhang (UGent-imec, Belgium), N. Vaissiere, D. Neel, J. Ramirez, J. Decobert (III-V Lab, France), M. Scaffardi, P. Ghelfi, and A. Bogoni (CNIT, Italy)

[Th2D-2] 16:30-16:45

Integrated Silicon Nitride Waveguide Platform for Enhanced Fluorescence Detection: Out-of-Plane and In Plane Collection Strategies

Sushma Gali and Shankar Kumar Selvaraja (Indian Inst. of Science, India)

[Th2D-3] 16:45-17:00

Power Efficient Multimode Optical Switch Based on Inverse Design

Shangsen Sun, Weiyu Tong, and Jianji Dong (Huazhong Univ. of Science and Tech., China)

[Th2D-4] 17:00-17:15

Wideband Planar RF-Choke for Photodiode Packaging in Millimeter-Wave Applications

Mingwei Sun, Bing Xiong, Changzheng Sun, Zhibiao Hao, Jian Wang, Lai Wang, Yanjun Han, Hongtao Li, Lin Gan, and Yi Luo (Tsinghua Univ., China)

[Th2D-5] 17:15-17:30

Development of 808 nm Laser-Assisted-Bonding (LAB) for Photonic System-in-Package Integration

Kevin Shortiss, How Yuan Hwang, Josue Parra-Cetina (Tyndall Nat'l Inst., Ireland), Moritz Seyfried (ficonTEC Service GmbH, Germany), and Peter O'Brien (Tyndall Nat'l Inst., Ireland)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th2E] Waveguide Photonics II
Session Date:	August 8 (Thu.), 2024
Session Time:	16:00-17:30
Session Room:	Room E (114)
Session Chair(s)	Dr. Yuki Kawaguchi (Sumitomo Electric Industries Ltd., Japan)

[Th2E-1] 16:00-16:15

Analysis of Optical Properties of Thin Passivation Layers Using Ultra-High-Q Mid-IR Microresonators

Daewon Suk, Kiyoung Ko, Jingyu Kim, Sang-Hee Ko Park (KAIST, Korea), Rongping Wang, Duk-Yong Choi (The Australian Nat'l Univ., Austraila), and Hansuek Lee (KAIST, Korea)

[Th2E-2] 16:15-16:30

Dual-comb Pump-probe Characterization of Ultrafast Nonlinear Dynamics of Silicon Photonic Waveguides

Yifan Zhang, Xinxuan Ma, Yuhang Wan, Xin Zhao, and Zheng Zheng (Beihang Univ., China)

[Th2E-3] 16:30-16:45

High-Q Nanograting Ring Resonator Coupled with Grating Waveguides

Anh Igarashi (Tohoku Univ., Japan), Yasuo Ohtera (Toyama Prefectural Univ., Japan), and Hirohito Yamada (Tohoku Univ., Japan)

[Th2E-4] 16:45-17:00

Inverse Design of a Strip-slot Waveguide Mode Converter for Enhancing Nonlinear Performance

Ji-Hwan Park (Defense Agency for Tech. and Quality, Korea), Jae-Yong Kim, Seokjin Hong, Berkay Neseli, and Hamza Kurt (KAIST, Korea)

[Th2E-5] [Invited] 17:00-17:30

Advanced Applications of Kerr Micro-combs

Jiayang Wu, Yang Sun, Yang Li (Swinburne Univ. of Tech., Australia), Mengxi Tan (Beihang Univ., China), Xingyuan Xu (Beijing Univ. of Posts and Telecommunications, China), Sai T. Chu (City Univ. of Hong Kong, Hong Kong S.A.R), Brent E. Little (Chinese Academy of Sciences, China), Roberto Morandotti (INRS-Énergie, Canada), Arnan Mitchell (RMIT Univ., Australia), and David J. Moss (Swinburne Univ. of Tech., Australia)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Th2F] Nanophotonic Devices
Session Date:	August 8 (Thu.), 2024
Session Time:	16:00-17:45
Session Room:	Room F (115)
Session Chair(s)	Prof. Sun Kyung Kim (Kyung Hee Univ, Korea), Prof. Kwang-Yong Jeong (Chungnam Nat'l Univ., Korea)

[Th2F-1] [Invited] 16:00-16:30

Creating the Next Generation of Nanostructured Optical Elements for Emerging Light-enabled Technologies

Jung-Hwan Song (Nat'l Univ. of Singapore, Singapore), Jorik van de Groep (Univ. of Amsterdam, The Netherlands), Qitong Li, Fenghao Xu, and Mark L. Brongersma (Stanford Univ., USA)

[Th2F-2] 16:30-16:45

Flexible Cavity based on Phase Dislocations in the Amorphous Photonic Lattice

Bofeng Zhu, Qi Jie Wang, and Yi Dong Chong (Nanyang Technological Univ., Singapore)

[Th2F-3] 16:45-17:00

High-rate High-efficiency Upconversion Emission Modulation by Tuning Absorption of Photo-polymers

Weizhao Gu, Simone Lamon, Haoyi Yu, Min Gu, and Qiming Zhang (Univ. of Shanghai for Science and Tech., China)

[Th2F-4] 17:00-17:15

Design of a Si Carrier-Depletion-Type Mach-Zehnder Modulator with Ultra-Compact Photonic Crystal Slow-Light Phase Shifter

Deji Li, Takaaki Kakitsuka, and Kiyoto Takahata (Waseda Univ., Japan)

[Th2F-5] 17:15-17:30

Probing Physical Parameters of Low-dimensional Semiconductor Devices by Analytical Photoresponse Theory

Kai Li and Yaping Dan (Shanghai Jiao Tong Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

[Th2F-6] 17:30-17:45

Passive Cooling Films with Modulated Visible Transparency

Jae-Seon Yu, Jae-Hyun Kim, and Sun-Kyung Kim (Kyung Hee Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1A] Machine Learning for Beam Synthesis and Analysis
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-09:45
Session Room:	Room A (102-103)
Session Chair(s)	Dr. Chang Hyun Kim (KIST, Korea)

[Fr1A-1] 09:00-09:15

Low-complexity Optical-mode Decomposition through Vector-eigenmode pursuing Residual Network (VE-ResNet) by only Intensity-domain Information

Jianjun Li, Rui Zhang (Univ. of Electronic Science and Tech. of China, China), Feng Yang (Marolabs Co., Ltd., China), Baojian Wu, Kun Qiu, and Feng Wen (Univ. of Electronic Science and Tech. of China, China)

[Fr1A-2] 09:15-09:30

Differential Evolution Algorithm for Compact and Highly Accurate Photonic Extreme Learning Machines

Jose Roberto Rausell-Campo (Universitat Politecnica de Valencia, Spain), Daniel Pérez-López (iPronics Programmable Photonics, Spain), Antonio Hurtado (Univ. of Strathclyde, UK), and José Capmany (Universitat Politecnica de Valencia, Spain)

[Fr1A-3] 09:30-09:45

Accelerating Orbital Angular Momentum Complex Spectrum Analysis via Deep Learning

Shiyun Zhou, Chunqing Gao, and Shiyao Fu (Beijing Inst. of Tech., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1B] Nonlinear Phenomena and Applications II
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room B (104-106)
Session Chair(s)	Dr. Nobuhisa Ishii (Nat'l Institutes for Quantum Science and Tech., Japan)

[Fr1B-1] [Invited] 09:00-09:30

Isolated 64-attosecond Pulses Driven by a Postcompressed Yb-laser

Yu-En Chien, Ming-Shian Tsai, An-Yuan Liang, and Ming-Chang Chen (Nat'l Tsing Hua Univ., Taiwan)

[Fr1B-2] 09:30-09:45

Femtosecond Short Wavelength Infrared Laser System Based on Tm:Tb:ZBLAN Fibers

Kaito Okada, Dina Grace Banguilan, and Takao Fuji (Toyota Technological Inst., Japan)

[Fr1B-3] 09:45-10:00

20 m-long Permanent Air Waveguide Produced by Filamentation of a Collimated Laguerre-Gauss Beam at 1030 nm

Silin Fu, Benoit Mahieu, Magali Lozano, Laurent Bizet, Fatima Alahyane, André Mysyrowicz, and Aurélien Houard (Institut Polytechnique de Paris, France)

[Fr1B-4] 10:00-10:15

A Stable Femtosecond Semiconductor Laser Based on Fiber Nonlinearity

Wu Jiayu, Zhang Yi, Hou Yubin, Zhang Qian, Song Weihua, Xia Tong, Xi Wang, and Wang Pu (Beijing Univ. of Tech., China)

[Fr1B-5] 10:15-10:30

Spatial-Spectral Complexity in Kerr Beam Self-Cleaning

Moshe Labaz and Pavel Sidorenko (Technion - Israel Inst. of Tech., Israel)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1C] Quantum Communication
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Takuya Hirano (Gakushuin Univ., Japan), Prof. Heedeuk Shin (POSTECH, Korea)

[Fr1C-1] [Invited] 09:00-09:30

Quantum Networks and Edge Computation

Kae Nemoto (Okinawa Inst. of Science and Tech., Japan)

[Fr1C-2] 09:30-09:45

668-kbps Quantum Key Distribution over 100-km Dispersion Shifted Fiber with 10 GHz Clock

Yasuyuki Sanari, Atsushi Taniguchi, Momoko Miura, Hirokazu Takahashi, Koichi Takasugi (NTT Network Innovation Laboratories, Japan), Hsin-Pin Lo, Takuya Ikuta, Toshimori Honjo, and Hiroki Takesue (NTT Basic Research Laboratories, Japan)

[Fr1C-3] 09:45-10:00

Analyzing Overlapping Pulse Effects and Phase Modulation Distortion in DPS Quantum Key Distribution

Wei-Rong Zhuo, Ming-Sheng Chen, and Yuh-Renn Wu (Nat'l Taiwan Univ., Taiwan)

[Fr1C-4] 10:00-10:15

Low-Loss Polarization-Maintaining Optical Routing for Photonic Quantum Applications

Pengfei Wang, Soyoung Baek, Keiichi Edamatsu, and Fumihiro Kaneda (Tohoku Univ., Korea)

[Fr1C-5] 10:15-10:30

Coupling of Single Photons into Guided Modes of an Optical Capillary Fiber with a Nanohole

Elaganuru Bashaiah, Resmi M, and Ramachandrarao Yalla (Univ. of Hyderabad, India)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1D] Heterogeneous Integration 2
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room D (113)
Session Chair(s)	Dr. Jae-Hoon Han (KIST, Korea),

[Fr1D-1] [Invited] 09:00-09:30

Silicon-based Integrated Magneto-optical Isolator with Direct Bonding

Yuya Shoji (Tokyo Inst. of Tech., Japan)

[Fr1D-2] 09:30-09:45

Electrically Pumped SiGeSn/GeSn Heterostructures Micro-rings Lasers

Teren Liu (Peter Gruenberg Inst., Germany), Lukas Seidel (Univ. of Stuttgart, Germany), Omar Concepcion (Peter Gruenberg Inst., Germany), Jeremy Witzens (RWTH Aachen Univ., Germany), Giovanni Capellini (Leibniz Inst. for High Performance Microelectronics, Germany), Michael Oehme (Univ. of Stuttgart, Germany), Detlev Grützmacher, and Dan Buca (Peter Gruenberg Inst., Germany)

[Fr1D-3] 09:45-10:00

Reconfigurable Dispersion Engineering in Silicon Nitride Microring with Partial Gratings

Jiaqi Li, Shuqing Lin, Yanfeng Zhang, and Siyuan Yu (Sun Yat-sen Univ., China)

[Fr1D-4] [Invited] 10:00-10:30

III-V-on-Silicon-Nitride Mode-Locked Lasers

Stijn Cuyvers, Stijn Poelman, Tom Reep, Artur Hermans, Camiel Op de Beeck, Gunther Roelkens, Maximilien Billet, and Bart Kuyken (UGent-imec, Belgium)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1E] Optical Sensor
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:00
Session Room:	Room E (114)
Session Chair(s)	Dr. Jonghan Jin (KRISS, Korea), Dr. Kwanil Lee (KIST, Korea)

[Fr1E-1] 09:00-09:15

Coherent Extreme-ultraviolet Spatial Manipulation in Solid Harmonic Generation via Dynamic Wavefront Modulation of Near-infrared Driving Beams

Seungjai Won, Taewon Kim, Seungman Choi, Byunggi Kim, Jungyoon Kim, Seung-Woo Kim, and Young-Jin Kim (KAIST, Korea)

[Fr1E-2] 09:15-09:30

Distributed Thermal Monitoring of Lithium Polymer Battery with Fiber Optic Sensor

Wookjin Jeong, Gyu-Tae Kim (Korea Univ., Korea), and Kwanil Lee (KIST, Korea)

[Fr1E-3] 09:30-09:45

All-optical Rydberg-atom Superheterodyne Microwave and THz Sensor

Sebastian Borówka, Wiktor Krokosz, Mateusz Mazelanik, Wojciech Wasilewski, and Michał Parniak (Univ. of Warsaw, Poland)

[Fr1E-4] 09:45-10:00

Cavity-enhanced Spectroscopy of H_2 in a Deep Cyogenic Regime

K. Stankiewicz, M. Makowski, M. Slowinski, K. L. Soltys, B. Bednarski, H. Jozwiak, N. Stolarczyk, S. Wojtewicz, A. Cygan, G. Kowzan, P. Masłowski, M. Piwinski, D. Lisak, and P. Wcislo (Nicolaus Copernicus Univ. in Torun, Poland)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1F] Photoresponse
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room F (115)
Session Chair(s)	Prof. Jung Hwan Song (Nat'l Univ. of Singapore, Singapore)

[Fr1F-1] [Invited] 09:00-09:30

Micro-area Ultrafast Spectroscopy and the Application

Xinfeng Liu (Nat'l Center for Nanoscience and Tech., China)

[Fr1F-2] [Invited] 09:30-10:00

Tuning Light-Induced Ultrafast Responses of Plasmonic Nanostructures through Structural Design

Andrew S. Kim (Seoul Nat'l Univ., Korea), Mohammad Taghinejad (Stanford Univ., USA), Anjan Goswami, and Wenshan Cai (Georgia Inst. of Tech., USA)

[Fr1F-3] 10:00-10:15

Temperature-dependent Photocarrier Dynamics in Graphene/InAs Quantum Dot Heterostructures for Light-emitting Diode

Rafael Jumar Chu, Quang Nhat Dang Lung, Tsimafei Laryn, Won Jun Choi, and Daehwan Jung (KIST, Korea)

[Fr1F-4] 10:15-10:30

Analytical Photoresponses of 2D Semiconducting Photodetectors

Jianyong Wei, Rui Yang, and Yaping Dan (Shanghai Jiao Tong Univ., China)

Session Title:	[Fr1G] Display Technology I
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room G (116)
Session Chair(s)	Dr. Changwon Jang (Meta Reality Labs Research, USA)

[Fr1G-1] [Invited] 09:00-09:30

Femtosecond Laser Generated Aerial Graphics

Yoshio Hayasaki, Tatsuki Mori, and Kota Kumagai (Utsunomiya Univ., Japan)

[Fr1G-2] [Invited] 09:30-10:00

Deep Learning Based Three-dimensional Computer Holography from Stereo/Single Images

Chenliang Chang, Bo Dai, Songlin Zhuang, and Dawei Zhang (Univ. of Shanghai for Science and Tech., China)

[Fr1G-3] 10:00-10:15

Artificial Focusing Method of 3D CGH based on Eye Tracking Controller for Holographic Display.

Tuvshinjargal Amgalan, Munkh-Uchral Erdenebat, Anar Khuderchuluun (Chungbuk Nat'l Univ., Korea), Jong-Rae Jung (Suwon Science College, Korea), Sang-Keun Gil (The Univ. of Suwon, Korea), and Nam-Kim (Chungbuk Nat'l Univ., Korea)

[Fr1G-4] 10:15-10:30

Direct-view Type Super Multi-View Near-eye Display Using Point Light Source Array

Minseong Kim (Inha Univ., Korea) and Jae-Hyeung Park (Seoul Nat'l Univ., Korea)

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Session Title:	[Fr1H] Emerging Laser Technologies
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room H (117)
Session Chair(s)	Prof. Andy Chong (Pusan Nat'l Univ., Korea)

[Fr1H-1] 09:00-09:15

Sub-2 Cycle Pulse Compression of a 2mJ, 80W, 338fs Yb-laser

Maksym Ivanov, Marco Scaglia, Étienne Doiron, Pedram Abdolghader, Gabriel Tempea (few-cycle Inc., Canada), François Légaré, Luca Razzari (Inst. Nat'l de la recherche scientifique, Canada), Giulio Vampa (Univ. of Ottawa, Canada), and Bruno E Schmidt (few-cycle Inc., Canada)

[Fr1H-2] 09:15-09:30

Modulation Free All Optical Error Signal Generation for Divided Pulse Amplification

Haruyuki Miyake, Kazuki Yoshizawa (The Univ. of Electro-Communications, Japan), Henrik Tünnermann (Deutsches Elektronen-Synchrotron, Germany), and Akira Shirakawa (The Univ. of Electro-Communications, Japan)

[Fr1H-3] [Invited] 09:30-10:00

High-brightness Scalable Continuous-wave Single-mode Photonic-crystal Laser (PCSEL)

Susumu Noda (Kyoto Univ., Japan)

[Fr1H-4] 10:00-10:15

Utilizing FPGA-Generated Noise for Laser Phase Modulation to Achieve Linewidth Tuning

Chen Zheng, Yu Zhou (Waseda Univ., Japan), Keizo Inagaki (Nat'l Inst. of Information and Communications Tech., Japan), and Tetsuya Kawanishi (Waseda Univ., Japan)

[Fr1H-5] 10:15-10:30

Order Controllable Brillouin Laser in Diamond

Zhenxu Bai, Hui Chen, Boyuan Zhang, Xiaoyu Chang, Yulei Wang, and Zhiwei Lu (Hebei Univ. of Tech., China)

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Session Title:	[Fr1I] AI and Monitoring in Laser Processing
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room I (118)
Session Chair(s)	Prof. Joonghan Shin (Kongju Nat'l Univ., Korea)

[Fr1I-1] 09:00-09:15

Photonic Neural Network Fabricated on Thin Film Lithium Niobate for High-Fidelity and Power-Efficient Matrix Computation

Yong Zheng, Rongbo Wu, Yuan Ren, Rui Bao, Jian Liu (East China Normal Univ., China), Yu Ma (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Min Wang, and Ya Cheng (East China Normal Univ., China)

[Fr1I-2] 09:15-09:30

Real-time Spectroscopic Monitoring of Continuous-flow Synthesis in Femtosecond Laser Fabricated 3D Microfluidic Chip with Integrated On-chip Fiber Probe Array

Miao Wu, Xin Li (East China Normal Univ., China), Di-Feng Yin (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Wei Chen, Jia Qi, Ming Hu, Jian Xu, and Ya Cheng (East China Normal Univ., China)

[Fr1I-3] 09:30-09:45

Deep Learning-based Laser Spectroscopy for Inline Process Monitoring

Soojin Choi, Jiyeon Choi, and Jiwhan Noh (Korea Inst. of Machinery & Materials, Korea)

[Fr1I-4] 09:45-10:00

Weld Shape Monitoring Using a Deep Neural Network (DNN) in Dissimilar Al/Cu Laser Welding

SeungGu Kang and Joonghan Shin (Kongju Nat'l Univ., Korea)

[Fr1I-5] 10:00-10:15

Wide-field Second Harmonic Microscopy for Non-destructive and Fast in line Analysis of Femtosecond Laser-induced Crystallization Phenomena

Seonwoo Lee (Ecole Polytechnique Federale de Lausanne, Switzerland), Tetsuo Kishi (Tokyo Inst. of Tech., Japan), and Yves Bellouard (Ecole Polytechnique Federale de Lausanne, Switzerland)

[Fr1I-6] 10:15-10:30

Integrated Multi-color Raman Microlasers at Low Pump Levels in High-Q Lithium Niobate Microdisks

Guanghui Zhao, Jintian Lin (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Renhong Gao (East China Normal Univ., China), and Ya Cheng (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr1J] Plasmonics Ⅲ
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:30
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Hyeong-Ryeol Park (UNIST, Korea)

[Fr1J-1] [Invited] 09:00-09:30

New Developments in Plasmonics and Metamaterials: Highly Efficient Light Emission and Full-Color Tuning

Koichi Okamoto (Osaka Metropolitan Univ., Japan)

[Fr1J-2] 09:30-09:45

Theory for Spectral Analysis of Photo-induced Force Microscopy of Single Molecule

Mamoru Tamura (Osaka Univ., Japan), Hidemasa Yamane (Osaka Research Inst. of Industrial Science and Tech., Japan), and Hajime Ishihara (Osaka Univ., Japan)

[Fr1J-3] 09:45-10:00

Hyperspectral Plasmonic Imaging Sensor

Wong Chi Lok (Chang Gung Univ., Taiwan)

[Fr1J-4] 10:00-10:15

Frequency-comb-referenced Plasmonic Spectroscopy Based on Nano Cavity for High Precision Bio-sensor.

Young Ho Park, Dae Hee Kim, Jun Hyung Park, Huy Hoang Chu, Seung-Woo Kim, and Young-Jin Kim (KAIST, Korea)

[Fr1J-5] 10:15-10:30

Exploring Charge Transfer in Plasmonic Gold Dimers: Reliable Tomographic Reconstructions of (sub)-nm Gaps for Correlation to Optical Properties

Francesca Scalerandi (AMOLF, The Netherlands), Alexander Skorikov (Centrum Wiskunde & Informatica, The Netherlands), Nathalie Claes, Sara Bals (NANOlab Center of Excellence, Univ. of Antwerp, Belgium), and Wiebke Albrecht (AMOLF, The Netherlands)

Session Title:	[Fr1L] THz Technologies
Session Date:	August 9 (Fri.), 2024
Session Time:	09:00-10:00
Session Room:	Room L (206-207)
Session Chair(s)	Prof. Tae-In Jeon (Korea Maritime & Ocean Univ., Korea)

[Fr1L-1] 09:00-09:15

Epitaxial Growth of High-quality GaSb/Si Virtual Substrate with AlSb Defect Filter Layers for High-performance MWIR Laser Diode

Eungbeom Yeon, Seungwan Woo (KIST, Korea), In-Hwan Lee (Korea Univ., Korea), Daehwan Jung, and Won Jun Choi (KIST, Korea)

[Fr1L-2] 09:15-09:30

Ultrafast Circular Photon Drag Current in Multilayer $PtSe_2$ Revealed via Terahertz Emission

Dong-Wen Zhang, Long-Hui Zhang, Xu Sun, Hai-Zhong Wu, Zhi-hui Lyu, Xiao-Wei Wang, Zeng-Xiu Zhao, and Jian-Min Yuan (Nat'l Univ. of Defense Tech., China)

[Fr1L-3] 09:30-09:45

Long Distance Transfer of Frequency-comb-rooted THz-waves

Jaeyoon Kim, Guseon Kang (KAIST, Korea), Joohyung Lee (Seoul Nat'l Univ. of Science and Tech., Korea), Seung-Woo Kim, and Young-Jin Kim (KAIST, Korea)

[Fr1L-4] 09:45-10:00

Terahertz Parametric Upconversion Detection based on a $KTiOAsO_4$ Crystal

Na Ming, Shuzhen Fan, Xingyu Zhang, Xiaohan Chen, Zhenhua Cong, Zhaojun Liu, Quanxin Guo, Liyuan Guo, Binzhe Jiao, Jiasheng Yuan, Kaiyu Wang, and Naichang Liu (Shandong Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2B] Ultrafast and Nonlinear Optional Analysis
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room B (104-106)
Session Chair(s)	Prof. Ming-Chang Chen (Nat'l Tsing Hua Univ., Taiwan)

[Fr2B-1] [Invited] 10:45-11:15

Probing Deep-ultraviolet Optoelectronic Processes in Hexagonal Boron Nitride

Jonghwan Kim (POSTECH , Korea)

[Fr2B-2] 11:15-11:30

Post-Compression of Femtosecond Pulse at the Gigawatt Level in a Solid-State Multi-Pass Cell

LIYA SHEN, JIAJUN SONG, YUJIE PENG, GUANGXIN LUO, YINFEI LIU, JIANYU SUN, and YUXIN LENG (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[Fr2B-3] 11:30-11:45

Development of an Intense Few-Cycle Infrared Light Source and Its Application to High Harmonic Generation in the Water Window Region

Nobuhisa Ishii, Momoko Maruyama, and Ryuji Itakura (Nat'l Inst. for Quantum Science and Tech., Japan)

[Fr2B-4] 11:45-12:00

A Fully Automatic High-Resolution EUV Monochromator for EUV Metrology Applications

Junfeng Cui, Runyu Meng, Bianli Zhao, Hao Yang, Jianhui Chen, and Xiaoshi Zhang (Yunnan Univ., China)

[Fr2B-5] 12:00-12:15

Linear-Optics Time-Frequency Analysis of Multi-THz Bandwidth Pulses Over Sub-nanosecond Durations

Geunweon Lim, Benjamin Crockett, Majid Goodarzi, and José Azaña (Inst. Nat'l de la Recherche Scientifique, Canada)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2C] Optical Techniques for Quantum Sciences
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room C (107-109)
Session Chair(s)	Prof. Jiangrui Gao (Shanxi Univ., China)

[Fr2C-1] [Invited] 10:45-11:15

PPLN-based Optical Parametric Amplifiers for Continuous-variable Optical Quantum Computing

Takeshi Umeki, Takahiro Kashiwazaki, Asuka Inoue (NTT Device Tech. Laboratories, Japan), Mamoru Endo, and Akira Furusawa (The Univ. of Tokyo, Japan)

[Fr2C-2] 11:15-11:30

Unlocking Sub-Diffraction Spectral Resolution with Quantum-Enhanced Heterodyne Detection

Wiktor Krokosz, Mateusz Mazelanik, Michał Lipka, Marcin Jarzyna, Wojciech Wasilewski, Konrad Banaszek, and Michał Parniak (Univ. of Warsaw, Poland)

[Fr2C-3] 11:30-11:45

Visible Multi-Wavelength Combiner and Power Splitter for Optical Lattice Clocks with Silica Planar Lightwave Circuit

Shiori Konisho, Junji Sakamoto, Hiromitsu Imai, Tomoya Akatsuka (NTT Corp., Japan), Hidetoshi Katori (The Univ. of Tokyo, Japan), Katsuya Oguri, Toshikazu Hashimoto, and Tetsuomi Sogawa (NTT Corp., Japan)

[Fr2C-4] 11:45-12:00

Adaptively Gated Hybrid Single-photon Camera for High-dimensional Quantum Correlation Measurements

Sanjukta Kundu, Jerzy Szuniewicz, Grzegorz Firlik, Alexander Krupinski-Ptaszek, and Radek Lapkiewicz (Univ. of Warsaw, Poland)

[Fr2C-5] 12:00-12:15

Transfer-Printed Si Waveguides on Er:YSO Crystals toward Efficient Quantum Media Conversion

Taiyu Okajima (Keio Univ., Japan), Ryuichi Ohta (NTT Basic Research Laboratories, Japan),

Takumi Sato, Yuma Tachizaki (Keio Univ., Japan), Xuejun Xu, Hajime Okamoto (NTT Basic Research Laboratories, Japan), and Yasutomo Ota (Keio Univ., Japan)

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Session Title:	[Fr2D] Heterogeneous Integration 3
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room D (113)
Session Chair(s)	Dr. Daehwan Jung (KIST, Korea)

[Fr2D-1] [Invited] 10:45-11:15

III-V Membrane on Si Platform for Energy Efficient Photonic Devices

Koji Takeda and Shinji Matsuo (NTT Corp., Japan)

[Fr2D-2] 11:15-11:30

Heterogeneous III-V-On-Silicon-Nitride Mode-Locked Laser with Intra-Cavity Filter

Stijn Poelman, Tom Reep (UGent-imec, Belgium), Ana Lebanov, Xavier Rottenberg, Jon Kjellman (imec, Belgium), Maximilien Billet, and Bart Kuyken (UGent-imec, Belgium)

[Fr2D-3] 11:30-11:45

Characterisation of a Transfer-printed InP Saturable Absorber on a Silicon Platform

Tom Reep, Maximilien Billet, Dries Van Thourhout, and Bart Kuyken (UGent-imec, Belgium)

[Fr2D-4] [Invited] 11:45-12:15

Bufferless III-V Active Devices on SOI by Lateral Selective MOCVD

Kei May Lau (The Hong Kong Univ. of Science and Tech., Hong Kong S.A.R)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2E] Optical Metrology Ⅳ
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room E (114)
Session Chair(s)	Prof. Shinichi Watanabe (Keio Univ., Japan), Dr. In-Ho Bae (KRISS, Korea)

[Fr2E-1] [Invited] 10:45-11:15

Fourier Ptychography for Building High-Throughput, Portable and Smart Computational Microscopes

Kyungwon Lee, Kyung Chul Lee, Hyesuk Chae, Hansol Yoon, and Seung Ah Lee (Yonsei Univ., Korea)

[Fr2E-2] 11:15-11:30

Quantum Spectroscopy using 2D Spectrum of Telecom-band Frequency Entangled Photons for Real-World Fiber Network Applications

Masahiro Ishizeki, Yuki Okura, Akifumi Asahara, Ryosuke Shimizu, and Kaoru Minoshima (The Univ. of Electro-Communications, Japan)

[Fr2E-3] 11:30-11:45

10^{-15}-Level Laser Stabilization Using Fiber Delay-Based Self-Homodyne Detection

Igju Jeon, Changmin Ahn, Junyong Choi, and Jungwon Kim (KAIST, Korea)

[Fr2E-4] 11:45-12:00

Mid-infrared Frequency Comb-based Spectrometer for Molecular Spectroscopy in the 2.5-5 μm Range

Akiko Nishiyama, Grzegorz Kowzan, and Piotr Masłowski (Nicolaus Copernicus Univ. in Torun, Poland)

[Fr2E-5] 12:00-12:15

Visible Frequency Comb Generation Based on Spectral Expansion of a Frequency-referenced Er-fiber Comb

Yuta Takahashi, Takumi Yamamoto, Riku Shibata, Hajime Kumazaki, Shinichi Watanabe, and Shun Fujii (Keio Univ., Japan)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2F] Light Manipulation II
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room F (115)
Session Chair(s)	Prof. Kyoung-Ho Kim (Chungbuk Nat'l Univ., Korea)

[Fr2F-1] [Invited] 10:45-11:15

Tailoring Non-Hermitian States of Light in Photonic Crystals by Symmetry Breaking: Flatband, Exceptional Points, and Bound States in the Continuum

Paul Bouteyre, Ngoc Duc Le, Raphael Mermet-Lyaudoz, Florian Dubois, Ali Kheir-Aldine, Sébastien Cueff, Lydie Ferrier, Lotfi Berguiga, Christian Seassal, Xavier Letartre, Pierre Viktorovitch, Taha Benyattou, Hai Son Nguyen (Institut des Nanotechnologies de Lyon, France)

[Fr2F-2] 11:15-11:30

Measurement of Synthetic-Dimension Band Structures in Silicon Coupled Ring Resonators

Ruming Zhang (The Univ. of Tokyo, Japan), Liucun Li, Mikiya Kamata, Toshihiko Baba (Yokohama Nat'l Univ., Japan), Tomoki Ozawa (Tohoku Univ., Japan), Yasutomo Ota (Keio Univ., Japan), and Satoshi Iwamoto (The Univ. of Tokyo, Japan)

[Fr2F-3] 11:30-11:45

The Interaction of Electric and Magnetic Mie Modes in All-dielectric Metasurface with Anisotropic Lattice

Muhammad Sujak and Kyoung-Ho Kim (Chungbuk Nat'l Univ., Korea)

[Fr2F-4] 11:45-12:00

Embedding Diamond Pillars in Optical Fibers: A Numerical Approach to Optimize the Collection of NV^- emission

Wen Qi Zhang, S. Baghapour (Univ. of South Australia, Australia), M. Capell, S. Li, B. C. Johnson, A. Greentree, P. Reineck (RMIT Univ., Australia), D. A. Simpson (The Univ. of Melbourne, Australia), H. Ebendroff-Heidepriem (The Univ. of Adelaide, Australia), B. C. Gibson (RMIT Univ., Australia), and S. Afshar Vahid (Univ. of South Australia, Australia)

[Fr2F-5] 12:00-12:15

Three-Dimensional Photonic Crystal Phosphors for Highly Efficient Color Conversion

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Taehun Kim, Dongwon Kang, and Kyungtaek Min (Tech Univ. of Korea, Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2G] Display Technology II
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room G (116)
Session Chair(s)	Prof. Daewon Lee (Myongji Univ., Korea)

[Fr2G-1] [Invited] 10:45-11:15

Waveguide Holography: Modeling of Hologram Propagation in Waveguides

Changwon Jang and Douglas Lanman (Meta, USA)

[Fr2G-2] 11:15-11:30

Rewritable Optical Fourier Volumes for AR/VR Displays

Heeju Son (Korea Univ., Korea), Yongjun Lim, Seung Jae Hong (Korea Univ., Korea), Juheon Lee (KAIST, Korea), Joona Bang (Korea Univ., Korea), YongKeun Park (KAIST, Korea), and Seungwoo Lee (Korea Univ., Korea)

[Fr2G-3] 11:30-11:45

Unidirectional Viewing Angle Control Using Liquid Crystal Film on the Automotive Displays

Tae-Hoon Choi, Hyun Wook Lee, and Jin Uk Ha (Korea Automotive Tech. Inst., Korea)

[Fr2G-4] 11:45-12:00

Dual-microcavity Effect in Organic Light-emitting Diodes

Jun Yong Kim (Kyungpook Nat'l Univ., Korea), Sang Youn Lee, Kwan Hyun Cho (Korea Inst. of Industrial Tech., Korea), and Yun Seon Do (Kyungpook Nat'l Univ., Korea)

[Fr2G-5] 12:00-12:15

Dual-cavity Structures for Reflection Modulation with Fixed Transmission

Cheolhun Kang, Seongcheol Ju, Dohyun Kim, Donggyu Lim, Incheol Jung, Hyeonwoo Kim, Hojae Kwak, and Kyu-Tae Lee (Inha Univ., Korea)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2H] Pulsed Fiber Lasers
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room H (117)
Session Chair(s)	Prof. Yoonchan Jeong (Seoul Nat'l Univ., Korea)

[Fr2H-1] [Invited] 10:45-11:15

Spectral Filtering Effect in Mode-Locked Fiber Lasers

Andy Chong (Pusan Nat'l Univ., Korea)

[Fr2H-2] 11:15-11:30

Relative Intensity Noise Minimization in an All-polarization-maintaining Ultrafast Fibre Laser

Maolin Dai, Bowen Liu (The Univ. of Tokyo, Japan), Haochen Tian (Nat'l Inst. of Metrology, China), Takuma Shirahata, Naoki Yamaguchi, Sze Yun Set, and Shinji Yamashita (The Univ. of Tokyo, Japan)

[Fr2H-3] 11:30-11:45

Multicore Fiber Amplification of All Normal Dispersion Mode-locked Fiber Laser

Yasufumi Yogi and Akira Shirakawa (The Univ. of Electro-Communications, Japan)

[Fr2H-4] 11:45-12:00

Green, Orange and Red Optical Skyrmions Generation from Pr^{3+}-doped Fiber Laser

Yuto Yoneda (Chiba Univ., Japan), William R. Kerridge-Johns (Imperial College London, UK), Allam Srinivasa Rao (Chiba Univ., Japan), Yasushi Fujimoto (Chiba Inst. of Tech., Japan), and Takashige Omatsu (Chiba Univ., Japan)

[Fr2H-5] 12:00-12:15

37.5 kW Single-Frequency Nanosecond Fiber Laser with Transform-Limited Spectral Linewidth

Hao Tian, Shijie Fu, Quan Sheng, Wei Shi, and Jianquan Yao (Tianjin Univ., China)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[Fr2J] Plasmonics Ⅳ
Session Date:	August 9 (Fri.), 2024
Session Time:	10:45-12:15
Session Room:	Room J (201-202)
Session Chair(s)	Prof. Bumki Min (KAIST, Korea)

[Fr2J-1] 10:45-11:00

White Light-Driven Extraordinary Fluorescence from Monolayer of Semiconductor Nanoplatelets in Gap Plasmon

Deepshikha Arora, Nhung Vu Cam, Wenjie Zhou (Singapore Univ. of Tech. and Design, Singapore), Shijia Cheng, Akhil Syed, Emek Goksu Durmusoglu (Nanyang Technological Univ., Singapore), Parvathi Nair Suseela Nair, Thu Ha Do (A*STAR, Singapore), Golnoosh Zamiri (Singapore Univ. of Tech. and Design, Singapore), Ha Son Tung (A*STAR, Singapore), Volkan H.V. Demir (Nanyang Technological Univ., Singapore), and Joel K.W. Yang (Singapore Univ. of Tech. and Design, Singapore)

[Fr2J-2] 11:00-11:15

Nonlocal Response Theory for Enhanced Photoluminescence of Molecule Coupled with Plasmonic Nanocavity

Yoshitsugu Tomoshige, Mamoru Tamura, and Hajime Ishihara (Osaka Univ., Japan)

[Fr2J-3] 11:15-11:30

Plasmonic Arrayed Physical Unclonable Functions with Scalable Encoding Capacity

Juntao Duan, Yizhe Xiong (Harbin Inst. of Tech., China), Yuanzheng Ma, Xun Guan (Tsinghua Univ., China), and Jiawei Wang (Harbin Inst. of Tech., China)

[Fr2J-4] 11:30-11:45

Nonlocal Response Theory for Surface-Enhanced Raman Scattering with Metal Nanogap

H. Ikagawa, M. Tamura, and H. Ishihara (Osaka Univ., Japan)

[Fr2J-5] 11:45-12:00

Aluminium Nanohole Structure Based Photonic Physically Unclonable Function

Juhan Lee, Seokhyeon Hong, Youngsoo Kim, Seung Hyeon Hong, Bo Kyung Kim, and Soon-Hong Kwon (Chung-Ang Univ., Korea)

[Fr2J-6] 12:00-12:15

Optimized Near-IR Absorption Enhancement of All-Aluminium Photonic Crystals

Roy Avrahamy, Dror Cohen (Ben-Gurion Univ. of the Negev, Israel), Benny Milgrom (Jerusalem College of Tech., Israel), Ben Amir, Daniel Belker, Asi Solodar, Erez Golan, Oren Sadot, and Amiel A. Ishaaya (Ben-Gurion Univ. of the Negev, Israel)

CLEO PacificRim 2024 August 4-9, 2024 Songdo ConvensiA, Incheon, Korea

Session Title:	[P1] Poster Session 1
Session Date:	August 6 (Tue.), 2024
Session Time:	14:00-16:00
Session Room:	Premier Ballroom BC, 2F

[P1-002]

Digital Laser with Composite Resonator and its Application in Vortex Laser Generation

Yuan-Yao Lin and Yan-Jyun Wang (Nat'l Sun Yat-sen Univ., Taiwan)

[P1-003]

High Repetition Rate Mid-infrared Femtosecond Fiber Lasers based on Buffer Configuration

Qi Kang (Shenzhen Univ., China), Yihuan Shi (The Hong Kong Polytechnic Univ., Hong Kong S.A.R), Shunxiang Liu (Shenzhen Univ., China), Dongmei Huang (The Hong Kong Polytechnic Univ., Hong Kong S.A.R), Hongfu Huang, and Qiao Wen (Shenzhen Univ., China)

[P1-004]

Long-term Mode-hop-free Fiber Laser Based on Sub-cavity Tracking Feedback Control

Shiyou Xiao, Jianming Shang, Shangshu Ding, Tianwei Jiang, Bin Luo, and Song Yu (Beijing Univ. of Posts and Telecommunications, China)

[P1-005]

60 W Diamond Raman Laser at 607 nm

A Sharp, H. Jasbeer, R. Pahlavani, D. J. Spence (Macquarie Univ., Australia), X. Yang (Univ. of Chinese Academy of Sciences, China), and R. P. Mildren (Macquarie Univ., Australia)

[P1-007]

Passive Q-switched Microchip Er:Yb:glass Laser Toward Terahertz Parametric Generation

Yutaka Onodera, Ten Matano, and Kouji Nawata (Tohoku Inst. of Tech., Japan)

[P1-008]

738 nm Deep-red Pulse Laser based on Stimulated Raman Scattering in H_2-filled Hollow-core Fiber

Luohao Lei, Zhiyue Zhou, Zhixian Li, Meng Wang, Hu Xiao, Zilun Chen, Zefeng Wang, and Jinbao Chen (Nat'l Univ. of Defense Tech., China)

[P1-009]

Broadband Erbium Doped Aluminium Oxide Waveguide Amplifier in Thin Film Lithium Niobate

Renfei Kuang, Ling Luo, Xifa Liang, and Qingming Chen (Sun Yat-Sen Univ., China)

[P1-010]

Experimental Observation of Bright Pulses Embedded with Dark Solitons

Dian Duan and Xuewen Shu (Huazhong Univ. of Science and Tech., China)

[P1-011]

Generation of Structured 1 GHz Femtosecond Laser Pulses

Byungjoo Kim, Dohyun Kim, Yeong Gyu Kim, Ha-My Hoang, Jiyeon Choi, and Sanghoon Ahn (KIMM, Korea)

[P1-012]

630 nm High-Power Pulsed Fiber Laser Based on Raman Amplification and Second Harmonic Generation

Dal Yong Lee, Kyungseung Kim, Chungman Lee (GIST, Korea), Jongwan Kim, Changjun Yoon (Hanwha Systems, Korea), and Changsu Jun (GIST, Korea)

[P1-013]

A Waveguide Laser with a Quantum Efficiency of 99%

Harsh Vaid, Sharashti Saxena (Indian Inst. of Tech. Delhi, India), Pradeesh Kannan (Government Victoria College, India), and Amol Choudhary (Indian Inst. of Tech. Delhi, India)

[P1-014]

Research on Multiwavelength High-performance Cascade Diamond Raman Lasers

Jie Ding (Hebei Univ. of Tech., China)

[P1-015]

Experimental Investigation of Stable Self-Q-switched Operation in a Diode-pumped Alexandrite Laser

Atsushi Sato (Tohoku Inst. of Tech., Japan)

[P1-016]

1.4 W Narrow-linewidth Raman Laser in Methane-filled Hollow-core Fiber Operating at 1.5 μm

Wenxi Pei, Zhiyue Zhou, Zhixian Li, Meng Wang, Hu Xiao Zilun Chen, and Zefeng Wang (Nat'l Univ. of Defense Tech., China)

[P1-017]

All-PM Yb Fiber Mode-locked Femtosecond Lasers with a Nonlinear Amplifying Loop Mirror

Eun Kyoung Park, In Chul Park (Hanyang Univ., Korea), Jun Wan Kim, Ju Hee Yang (KERI, Korea), Hoon Jeong (Korea Inst. of Industrial Tech., Korea), and Ji Won Kim (Hanyang Univ., Korea)

[P1-018]

Frequency-Tripling of ns Pulsed Tm-Doped All-Fiber Laser for Multi-Watt Red Emission

Jinju Kim (KAERI, Korea), Woosang Yu (Univ. of Science and Tech., Korea), Kwang-Hoon Ko, and Yongho Cha (KAERI, Korea)

[P1-019]

High-Power Single-Frequency Nanosecond Pulsed All-Fiber Lasers for Coherent Beam Combination

Woosang Yu (Univ. of Science and Tech., Korea), Jinju Kim, Yong-Ho Cha, and Kwang-Hoon Ko (KAERI, Korea)

[P1-020]

NALM-based Figure-8 All-PM Yb-doped Fiber Laser

Junyeong Sung, Byungjoo Kim, Yeonggyu Kim, Jiyeon Choi, and Dohyun Kim (KIMM, Korea)

[P1-021]

Sub-kHz Linewidth Single-Longitudinal-Mode Fiber Laser by Using Triple-Subring Resonators

Zi Wang, Brian Pamukti, Shien-Kuei Liaw, Shih-Hsiang Hsu (Nat'l Taiwan Univ. of Science and Tech., Taiwan), and Hsiou-Hsin Tsai (Taipei Medical Univ., Taiwan)

[P1-023]

Development of Ultrafast Laser System with Fixed CFBG and CVBG for Preclinical Study of Pigmented Lesions

Jun Wan Kim, Seolwon Park, Guang-Hoon Kim, and Juhee Yang (KERI, Korea)

[P1-024]

Bifurcate Transformation Path in an Ytterbium-doped Fiber Laser with Two Mode-locking Pulse States

Xinxu Duan, Yuantong Liu, Zhengxin Gao, Hongbo Jiang, Xiaoyun Tang, and Lei Jin (Harbin Engineering Univ., China)

[P1-025]

738 nm Deep-red Pulse Laser Based on Stimulated Raman Scattering in H_2-filled Hollow-core Fiber

Luohao Lei, Xuanxi Li, Wenxi Pei, Jing Shi, Zhiyue Zhou, Zefeng Wang, and Jinbao Chen (Nat'l Univ. of Defense Tech., China)

[P1-026]

Astigmatism Measurement Based on the Emergence of Structured Laser Beams

X. L. ZHENG, M. X. HSIEH, and Y. F. CHEN (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

[P1-028]

Simulation Study of a 〉14 W, 420 nm Laser Based on Second-harmonic Generation and Sum-frequency Generation

Chungman Lee, Dalyong Lee, Kyoung-Seung Kim, and Changsu Jun (GIST, Korea)

[P1-029]

Manipulation of Sub-pulse Sequence and High-order Vortex Beams for Actively Q-switched Pr:YLF Visible Lasers

Shengbo Xu, Yunru Chen, Ran Xia, Yifang Li, Yu Xiao, Xiahui Tang, and Gang Xu (Huazhong Univ. of Science and Tech., China)

[P1-030]

Dual-Wavelength Intracavity Diamond Raman Laser with High Peak Power

Hui Chen, Xiaowei Li, Yufan Cui, Yulei Wang, Zhiwei Lu, and Zhenxu Bai (Hebei Univ. of Tech., China)

[P1-031]

Stabilization of Spatiotemporal Solitons in Multimode Fiber Femtosecond Lasers

Chenxin Gao, Chengjiu Wang, Zhenghao Jiao, Bo Cao, Chengying Bao, and Changxi Yang (Tsinghua Univ., China)

[P1-032]

Characteristics of Chaos in a Whispering-Gallery Mode Semiconductor Microlasers

Jin-Long Xiao, Chun-Guang Ma, Zhi-Xiong Xiao, Yue-De Yang, and Yong-Zhen Huang (Inst. of Semiconductors, Chinese Academy of Sciences, China)

[P1-033]

Experimental Study of Two-Photon Absorption in High-Q Germanium WGM Optical Microresonators at 2.68 μm

T.S. Tebeneva, V.E. Lobanov, D. A. Chermoshentsev, K.N. Min'kov (Russian Quantum Center, Russia), I.A. Kaplunov (Tver State Univ., Russia), I.I. Vinogradov (Space Research Inst. of the Russian Academy of Sciences, Russia), I.A. Bilenko, and A.E. Shitikov (Russian Quantum Center, Russia)

[P1-034]

Improvement of Fabrication Process for Highly Efficient Walk-off Compensated β-BaB_2O_4 Wavelength-Conversion Devices Using Room-temperature Bonding

Shion Naito, Tomoya Tanaka, and Ichiro Shoji (Chuo Univ., Japan)

[P1-035]

Betatron Radiation Based on Laser Plasma Acceleration for High-resolution Medical Images

Kyungnam Kim, Yonghun Hwangbo, Chur Kim, Seokgi Jeon, and Jaehoon Kim (KERI, Korea)

[P1-036]

Simultaneous Generation of Structured Dual-NIR Optical Parametric Oscillators on chi(2) Nonlinear Mode Converter

K.-H. Chang, J.-H. Lai, B.-W. Wu, T.-F. Pan, M.-S. Tsai, H.-H. Chiu, C.-C. Fan (Nat'l Taiwan Univ., Taiwan), S. Mohand Ousaid, A. Boudrioua (Universite Sorbonne Paris Nord, France), H. Yokoyama, E. Higurashi (Tohoku Univ., Japan), H. Akiyama (The Univ. of Tokyo, Japan), C.-M. Lai (Industrial Tech. Research Inst., Taiwan), and L.-H. Peng (Nat'l Taiwan Univ., Taiwan)

[P1-037]

Nondestructive Detection of Low Concentrations Glucose via Broadband Background-Free Mid-Infrared Absorption Spectroscopy

Shinta Ozawa, Neil Irvin Cabello (Toyota Technological Inst., Japan), Yue Zhao (Muroran Inst. of Tech., Japan), and Takao Fuji (Toyota Technological Inst., Japan)

[P1-038]

Investigation of Nonlinear Optical Responses in MBE Growth Thin Film Chromium Telluride

Mu-Hsuan Tsai, Jia-Chi Lan, Bo-Yi Chen (Nat'l Sun Yat-sen Univ., Taiwan), Tzu-Tai Huang, Jung-Chun-Andrew Huang (Nat'l Cheng Kung Univ., Taiwan), and Chao-Kuei Lee (Nat'l Sun Yat-sen Univ., Taiwan)

[P1-039]

Demonstration of All-optical Multi-order Differentiator for Femtosecond Chirped Pulses

Yijian Zhang, Xian Zhou (Univ. of Science and Tech. Beijing, China), Hong-Guang Duan (Ningbo Univ., China), and Chao Mei (Univ. of Science and Technology Beijing, China)

[P1-040]

Double Abrupt Foci from Second Harmonic Generation of Circle Pearcey Beams

Yongzheng Yang, Zhenhang Xu, Anqi Liang, and Dongmei Deng (South China Normal Univ., China)

[P1-041]

Coherent Control through High-Intensity Excitation: A Simulation of Two-Dimensional Coherent Spectroscopy

Rishabh Tripathi, Krishna Kumar Maurya, and Rohan Singh (Indian Inst. of Science Education and Research Bhopal, India)

[P1-042]

A Quantitative Study of Excitonic Interactions Using Phenomenological Models

Pradeep Kumar, Bhaskar De, Rishabh Tripath, and Rohan Singh (Indian Inst. of Science Education and Research Bhopal, India)

[P1-043]

Mid-Infrared Single-Photon Sources: The Potential of ZBLAN Glass Optical Fibers

Shruti Jain and Deepak Jain (Indian Inst. of Tech. Delhi, India)

[P1-044]

Time-Domain Characterization of Resonance-Band Dispersive Wave in an Ar-Filled Anti-Resonant Hollow-Core Fiber

Jinyu Pan, Zhiyuan Huang, Yifei Chen, Zhuozhao Luo (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Fei Yu, Dakun Wu (Univ. of Chinese Academy of Sciences, China), Tiandao Chen, Donghan Liu, Yue Yu (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Wenbin He, Xin Jiang (Univ. of Chinese Academy of Sciences, China), Meng Pang, Yuxin Leng, and Ruxin Li (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[P1-045]

GHz-rate, 56-fs Ultrafast Laser Generation based on Cascaded Nonlinear Pulse Compression

X. Zhang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), W. He (Russell Centre for Advanced Lightwave Science, China), X. Wang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), B. Wang, Q. Huang (Russell Centre for Advanced Lightwave Science, China), Y. Zheng (iFiber Optoelectronics Tech. Co., Ltd., China), R. Yin (Russell Centre for Advanced Lightwave Science, China), Z. Huang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), X. Jiang (Russell Centre for Advanced Lightwave Science, China), Y. Leng (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), and M. Pang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[P1-046]

Experimental Investigation of an All-PM Dispersion-compensated Phase-biased Thulium-doped Fiber Lase

Ni Feng, Huiting Tang, and Renlai Zhou (Harbin Engineering Univ., China)

[P1-047]

Experimental Analysis of Inter-pulse Phase and Timing Relation in GHz-rate Harmonically Mode-locked Fiber Laser Using Dispersive Time-delay Interferometry

B. Wang, X. Wang, W. He, X. Zhang, Q. Huang, Z. Huang, X. Jiang, and M. Pang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[P1-048]

Multiple Pulsing Bistability within Covalent Organic Framework (COF) Saturable Absorber-based Fiber Lasers

Hsuan-Sen Wang, Ahmed F. M. EL-Mahdy, Shiao-Wei Kuo (Nat'l Sun Yat-sen Univ., Taiwan), Gong-Ru Lin (Nat'l Taiwan Univ., Taiwan), Wen-Hsuan Kuan, Kuei Huei Lin (Univ. of Taipei, Taiwan), and Chao-Kuei Lee (Nat'l Sun Yat-sen Univ., Taiwan)

[P1-049]

Efficient Pulse Amplification and Temporal Compression in a 1790 nm Femtosecond Thulium Fiber Amplifier

Ibrahim H. Abughazaleh, Panuwat Srisamran, Matthew D. Gerard, Duanyang Xu, Yongmin Jung, David J. Richardson, and Lin Xu (Univ. of Southampton, UK)

[P1-050]

Observation of Breathing Solitons in a Three-dimensional Phase Space in a Mode-locked Fibre Laser

Q. Huang, W. He, X. Zhang. X. Wang, B. Wang, Z. Huang, X. Jiang, and M. Pang (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

[P1-051]

A Saturable Absorber Based on Nanomaterial Heterojunction and Its Application in Broadband Ultrafast Lasers

Tianguo Zhang (Nanjing Univ. of Information Science and Tech., China), Sibghat Ullah (Southeast Univ., China), Feng Zhang, and Xueming Liu (Nanjing Univ. of Information Science and Tech., China)

[P1-052]

Composition-dependent Charge Carrier Dynamics in Bulk $Mo_{1-x}WxSe_2$ Alloys

Junho Park, Seonggeon Gim, Yeongkwan Kim, and Fabian Rotermund (KAIST, Korea)

[P1-053]

Utilizing the Short-Pulsed Laser on Integrated Circuits to Induce Single-Event Transient Phenomena

Chien-Ping Hung, Chun-Hao Liang, Jia-Han Li, and Hsin-Shu Chen (Nat'l Taiwan Univ., Taiwan)

[P1-054]

Analysis of Shadowgram to Measure Sharp Density Profile for Laser Wakefield Accelerator

Yonghun Hwangbo, Kyungnam Kim, Chur Kim, Sukgi Jeon, and Jaehoon Kim (KERI, Korea)

[P1-055]

Independent Phase and Amplitude Control of Second Harmonic Generation by Nonlinear Polaritonic Metasurface

Jaesung Kim, Jaeyeon Yu (UNIST, Korea), Gerhard Boehm, Mikhail Belkin (Technical Univ. of Munich, Germany), and Jongwon Lee (UNIST, Korea)

[P1-056]

Two-Dimensional Coherent Spectroscopy Simulations with Arbitrary Inhomogeneous Distribution

Bhaskar De and Rohan Singh (Indian Inst. of Science Education and Research Bhopal, India)

[P1-057]

Drifting Platicons in Normal-Dispersion Kerr Microresonators

Valery E. Lobanov, Olga V. Borovkova, Alexander K. Vorobyev, Dmitry A. Chermoshentsev, and Igor A. Bilenko (Russian Quantum Center, Russia)

[P1-058]

Time-Resolved Faraday Rotation in Magnetophotonic Metasurfaces

A. I. Musorin, A. M. Chernyak, and A. A. Fedyanin (Lomonosov Moscow State Univ., Russia)

[P1-059]

Application of Nonlinear Microscopy for Investigation of Magnetic Inhomogeneities and Domain Wall Motion

Stepanov M.A., Guskov A.A., Mitetelo N.V., and Lavrov S.D. (MIREA – Russian Technological Univ., Russia)

[P1-060]

Elucidating Electronic States in Monolayer WS_2 Through Broadband Nonlinear Optical Spectroscopy

Jungseok Choi, Tayyaba Batool, Seungjae Lim, Jaeung Lee, and Dong-Il Yeom (Ajou Univ., Korea)

[P1-061]

70 nJ Kerr-lens Mode-locked Ti:Sapphire Oscillator with Herriott Multi-pass Cavity

Ki Han Lee, In Hyung Baek, Hyun Woo Kim, Key Young Oang, Jun Heo, Kyu-Ha Jang, Kitae Lee (KAERI, Korea), Kyung Wan Kim (Chungbuk Nat'l Univ., Korea), and Young Uk Jeong (KAERI, Korea)

[P1-062]

Fabry-Perot Resonance Enhanced Absorption of Hexagonal Boron Nitride

Seong Joon Jeon, Su Beom Song (POSTECH, Korea), Kenji Watanabe, Takashi Taniguchi (Nat'l Inst. for Materials Science, Japan), Moon-ho Jo, and Jonghwan Kim (POSTECH, Korea)

[P1-063]

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Haiju Li, Yang Lu, Shengao Zhou, Jing Wang (China Univ. of Petroleum, China), Min-Kyo Seo (KAIST, Korea), and Liandong Yu (China Univ. of Petroleum, China)

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Photon-counting Fluorescence Imaging of Tobacco Cultured Cells Through Scattering Medium Using Transport of Intensity Equation and Iterative Phase Retrieval Method

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Yu-Ju Chen, Jhih-Ren Ou, Ting-Hui Lee, and Yi-Shan Lee (Nat'l Tsing Hua Univ., Taiwan)

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Yanghe Yan, Kiron Ang, Karlsun Jennings, and Paul I. Ro (Baylor Univ., USA)

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Deep Pal and Amitesh Kumar (Indian Inst. of Tech. (Indian School of Mines) Dhanbad, India)

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Kunyang Li (Inst. of Advanced Science Facilities, Shenzhen, China), Shuying Deng (Sun Yat-sen Univ., China), Jinjiang Fu, Zhenjiang Xing (Inst. of Advanced Science Facilities, Shenzhen, China), and Zhou Zhou (Sun Yat-sen Univ., China)

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Lensless Camera for Single-Shot Depth Estimation Driven by Synthetic Dataset

Nakkyu Baek, Donggeon Bae, Kyung Chul Lee, Namhoon Kim, Taeyoung Kim, Muhyeon Kang, and Seung Ah Lee (Yonsei Univ., Korea)

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Fakhriyya Mammadova, Berkay Neseli, and Hamza Kurt (KAIST, Korea)

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CycleGAN Assisted Orbital Angular Momentum Mode Classification for Turbulence-Resilient Free-Space Communication

Ramzil Galiev, Ravi K. Saripalli, Mariam Alkhateri, Chaouki Kasmi, and Steevy J. Cordette (Tech. Innovation Inst., UAE)

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Phase Filter Design for Desired Beam Profile Using Deep Learning

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D3Net: Lensless Reconstruction via Deep Deconvolution Diffusion Network

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Electromagnetic Field Simulation for Large-scale Waveguide Combiner for Augmented Reality

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Holographic Caustic Optical Element Analysis based on Scalar Fourier Modal Method and Deep Neural Network

Youngjin Jeon and Hwi Kim (Korea Univ., Korea)

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Estimating Depth Map from Light Field Microscopic Images Using Attention UNET

Shariar Md Imtiaz, F. M. Fahmid Hossain, Nyamsuren Darkhanbaatar, Erkhembaatar Dashdavaa, Ki-Chul Kwon (Chungbuk Nat'l Univ., Korea), Seok-Hee Jeon (Incheon Nat'l Univ., Korea), and Nam Kim (Chungbuk Nat'l Univ., Korea)

[P2-143]

Rapid Inverse Design for Optimal Terahertz Nanophotonic Devices

Hyoung-Taek Lee, Jeonghoon Kim (UNIST, Korea), Joon Sue Lee (Univ. of Tennessee, Knoxville, USA), Mina Yoon (Oak Ridge Nat'l Lab., USA), and Hyeong-Ryeol Park (UNIST, Korea)

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A Scalable Multilayer Architecture for General Optical Transformation Matrix

Fldzhyan Suren A., Saygin Mikhail Yu., and Straupe Stanislav S. (Lomonosov Moscow State Univ., Russia)

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High-speed Multiwavelength Adjoint Optimization with Surrogate Solver

Joonhyuk Seo, Chanik Kang, Dongjin Seo, and Haejun Chung (Hanyang Univ., Korea)

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Adaptation of Deep Learning Speech Separator to Self-coupling Laser Microphone as Optical Noise Reducer

Takemasa OKITA, Norio TSUDA, and Daisuke MIZUSHIMA (Aichi Inst. of Tech., Japan)

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Dongjin Seo (Hanyang Univ., Korea), Soobin Um, Jong Chul Ye (KAIST, Korea), and Haejun Chung (Hanyang Univ., Korea)

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Efficient Bayesian Filtering Method for Frequency Comb Phase Noise Characterization

Jasper Riebesehl, Holger R. Heebøll, Aleksandr Razumov, Michael Galili, and Darko Zibar (Technical Univ. of Denmark, Denmark)

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Low-excitation Fluorescence Image Enhancement Using Transformer-based Structure Extraction

Zezheng Zhang and Kenneth K. Y. Wong (The Univ. of Hong Kong., Hong Kong S.A.R)

[P2-151]

Broadband Optical Activation Function Based on Injection-Locked Semiconductor Lasers

Guan-Ting Liu, Yi-Wei Shen, Rui-Qian Li, Jingyi Yu, Xuming He, and Cheng Wang (ShanghaiTech Univ., China)

[P2-152]

Frequency Multiplexed Photonic Reservoir Computing Using a Mach-Zehnder Interferometer

Jonathan Cuevas (Tokushima Univ., Japan), Atsushi Uchida (Saitama Univ., Japan), Kaoru Minoshima (The Univ. of Electro-Communications, Japan), and Naoya Kuse (Tokushima Univ., Japan)

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Quantifying Monomer Dimer Distribution and Gold Nanoparticle Uptake in Live Cells Using Deep Learning

Abu S. M. Mohsin and Shadab H. Choudhury (Brac Univ., Bangladesh)

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Hyperspectral Imaging Applied to Identify Early Esophageal Cancer

Yu-Ming Tsao, Arvind Mukundan, Riya Karmakar, Song-Cun Lu, Hong-Thai Nguyen, and Hsiang-Chen Wang (Nat'l Chung Cheng Univ., Taiwan)

[P2-157]

Design of W Band Frequency Selective Surface Using Digital Metasurface and Active Learning

Jaehyun Park, Young-Bin Kim, Sun-Kyung Kim, and Eungkyu Lee (Kyung Hee Univ., Korea)

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Structural and Optical Analysis of Samarium-Doped Novel Niobate-Based Phosphors for W-LED

Kanishk Poria (Panjab Univ., India), Nisha Deopa (Chaudhary Ranbir Singh Univ., India), and Jangvir Singh Shahi (Panjab Univ., India)

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Low-loss Lithium Niobate Integrated Photonic Devices Fabricated on Wafer-scale

Reinhard Geiss (Fraunhofer IOF, Germany), Mohammadreza Younesi, Johannes Mühlenstädt, Thomas Käsebier (Friedrich Schiller Univ. Jena, Germany), Frank Setzpfandt (Fraunhofer IOF, Germany), Thomas Siefke (Friedrich Schiller Univ. Jena, Germany), Thomas Pertsch, and Falk Eilenberger (Fraunhofer IOF, Germany)

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Responsivity Enhancement of Metal-Semiconductor-Metal Structure Using Surface Plasmon Effect

Tae-Hoon Sohn and Ki-Ju Yee (Chungnam Nat'l Univ., Korea)

[P3-004]

Low-loss Tantalum Pentoxide Photonics based on Damascene Process

Ruixuan Yi, Jinlong Lu, Xiaotong Zhang, and Xuetao Gan (Northwestern Polytechnical Univ., China)

[P3-005]

Theoretical and Experimental Investigation of Oscillations in The Laser Gain Medium

D. M. Sokol, D.A. Chermoshentsev, A.E. Shitikov, N.Yu. Dmitriev, V.E. Lobanov, A. V. Masalov, and I.A. Bilenko (Russian Quantum Center, Russia)

[P3-006]

On-chip Time Lens via the Optical Pushbroom Effect

Boyi Zhang, Maurice Pfeiffer (Hamburg Univ. of Tech., Germany), He Li, Xinlun Cai (Sun Yat-Sen Univ., China), Hagen Renner (Hamburg Univ. of Tech., Germany), Steevy Cordette (Tech. Innovation Inst., UAE), Juntao Li (Sun Yat-Sen Univ., China), Manfred Eich, Alexander Yu. Petrov (Hamburg Univ. of Tech., Germany), and Mahmoud A. Gaafar (Tech. Innovation Inst., UAE)

[P3-007]

Broadband Multimode Couplers for Micro-transfer Printed III-V-on-SiN Platform

Yihui Wei, Martijn J.R. Heck, and Yuqing Jiao (Eindhoven Univ. of Tech., The Netherlands)

[P3-008]

Electrical Evidence of Segregation and Recovery in Mixed Halide Perovskites

Apurva Yadav, Ayush Kumar Saxena, Srest Somay, Durgesh Banswar, Ankur Goswami, and Krishna B. Balasubramanian (Indian Inst. of Tech. Delhi, India)

[P3-009]

Robust, Compact Microring Resonator Based on Optimized N-adjustable Curvature

Wenhan Zhang, Debin Meng, Chujun Wu, Bin-Kai Liao, and Xiaoke Yi (The Univ. of Sydney, Australia)

[P3-010]

Quantum Anti-reflection for Electron Transport

Gwangjin Shin and Q-Han Park (Korea Univ., Korea)

[P3-011]

Laser Activated Streak Camera to Measure Bunch Length of Poly-energetic Electrons Source

Sonali Khanna (Tata Inst. of Fundamental Research Hyderabad, India), Deepak Kumar Sahu (Tata Inst. of Fundamental Research Mumbai, India), Sourabh Singh, Sagar Salve, Ram Gopal, and M Krishnamurthy (Tata Inst. of Fundamental Research Hyderabad, India)

[P3-012]

Scalable Silicon Nitride Planar Guided Mode Resonators for Enhanced Raman Spectroscopy

Sushma Gali (Indian Inst. of Science, India), Dipak Rout (Government College Sundargarh, India), and Shankar Kumar Selvaraja (Indian Inst. of Science, India)

[P3-014]

Pulse Shape and Width Dependent Amplification in Photonic Time Crystals

Snehashis Sadhukhan (Indian Inst. of Tech. Jodhpur, India), Piyali Biswas (Hanbat Nat'l Univ., Korea), and Somnath Ghosh (Indian Inst. of Tech. Jodhpur, India)

[P3-015]

Transmittance Spectrum Asymmetry by Photonic Crystals with Vertical Symmetry Breaking

Zhaoxiang Zhu, Jiaqi Li, Xin Gu, Zhouxin Liang, Bo Wang, Yuhang Lin, and Yujie Chen (Sun Yat-sen Univ., China)

[P3-016]

Racetrack Resonators Based III-V/Si Laser with Cu Metal Pad

Sushil Tandukar, Jaeseong Jeon, and Il-Sug Chung (UNIST, Korea)

[P3-017]

Rapid Adiabatic Couplers Based on Lithium Niobate-on-Insulator Platform

Sunghyun Moon, Jinil Lee, Youngseo Koh, Hyeong-Soon Jang, Hojoong Jung, and Hyounghan Kwon (KIST, Korea)

[P3-018]

Optimal Conditions for Squeezed States of Light Generation in Bichromatically Pumped Optical Microresonators

Nadezhda S. Tatarinova, Anatoly V. Masalov, Artem E. Shitikov, Igor A. Bilenko, Valery E. Lobanov, and Dmitry A. Chermoshentsev (Russian Quantum Center, Russia)

[P3-019]

Huge and Tunable Optoelectronic Chromatic Dispersion in PN and PIN Photodiodes

Ayuushi Dutta, Sapna Mudgal (Ariel Univ., Israel), Egor Liokumovitch (PerCiv Ltd., Isarel), Ziv Glasser, and Shmuel Sternklar (Ariel Univ., Israel)

[P3-020]

High-speed Electrical Control System for 532 nm Silicon Nitride Optical Phased Array

Xiaoqun Yu, Jiaqi Li, Zhaoyang Wu, Yanfeng Zhang, Xinlun Cai, and Siyuan Yu (Sun Yat-sen Univ., China)

[P3-021]

High-Q/V Lithium Niobate Photonic Crystal Nanobeam Cavity Using Focused Ion Beam

Joowon Lee, Sanghee Yun, Haneul Lee, Chun-Ho Lee, Han-Suek Lee, and Min-Kyo Seo (KAIST, Korea)

[P3-022]

Enhanced High Frequency Response of Long Ge-on-Si Waveguide PIN Photodetectors under Deep Saturation

Siyi Jiang, Yaxuan Zheng, Xinxuan Ma, Yuhang Wan, Xin Zhao, and Zheng Zhe (Beihang Univ., China)

[P3-023]

Graded GeSn based Vertical p-i-n Waveguide Photodetector Operating in Mid-Infrared Region.

Radhika Bansal and Guo-En Chang (Nat'l Chung Cheng Univ., Taiwan)

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Dual-Pumped Degenerate Optical Parametric On-Chip Oscillator

Alexander K. Vorobyev, Nikolay A. Kapridov, Timur R. Yunusov, Artem E. Shitikov, Dmitry A. Chermoshentsev, Valery E. Lobanov, and Igor A. Bilenko (Russian Quantum Center, Russia)

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On-chip Temperature Sensor Based on Waveguide Birefringence Effect

Zhijuan Gu, Jinling Guo, Hongjun Cai, and Yu Yu (Huazhong Univ. of Science and Tech., China)

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Monolithically Photoelectric Conversion Circuit Utilizing QW Heterojunction Phototransistors

Shu-Jui Hsu, Sung-Pu Yang, Yun-Jie Huang, Kuang-Yu Hsueh, Shu-Yun Ho, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[P3-027]

Measurement of AlGaInP-based Red Micro-LED Arrays with Surface Roughness for Light Extraction Efficiency

Chee-Keong Yee, Natchanon Prechatavanich, Ming-June Wu, Yi-Tzu Tseng, Theeradech Sutheebanjerd, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[P3-028]

Efficient Continuous-wave Wavelength Conversion in a Silicon Microring Resonator for the 2-μm Band

Zhiwei Yan, Qiyuan Yi, Qiyuan Li, Guanglian Cheng, Shuai Cui, Xinzhe Xiong, Zengfan Shen, Yuan Yu, and Li Shen (Huazhong Univ. of Science and Tech., China)

[P3-029]

Photon-pair Generation using Inverse-designed Thin-film Lithium Niobate Mode Converters

Kiwon Kwon (POSTECH, Korea), HyungJun Heo (KIST, Korea), Dongjin Lee, Hyeongpin Kim (POSTECH, Korea), Hyeong-Soon Jang (KIST, Korea), Woncheol Shin (POSTECH, Korea), Hyang-Tag Lim, Yong-Su Kim, Sang-Wook Han (KIST, Korea), Sangin Kim (Ajou Univ., Korea), Heedeuk Shin (POSTECH, Korea), Hyounghan Kwon, and Hojoong Jung (KIST, Korea)

[P3-030]

MHz to GHz Bandwidth Tunable Integrated Brillouin Microwave Photonic Filter

Reena Parihar (Indian Inst. of Tech., India), Choon Kong Lai, Ziqian Zhang (The Univ. of Sydney, Australia), Duk-Yong Choi, Stephen J. Madden (The Australian Nat'l Univ., Australia), Benjamin J. Eggleton, Moritz Merklein (The Univ. of Sydney, Australia), and Amol Choudhary (Indian Inst. of Tech., India)

[P3-031]

A Mach-Zehnder Modulator Based on Silicon Nitride Loaded Waveguide in Z-cut Thin Film Lithium Niobate

Xifa Liang, Zhekang Zhang, Ruqi Wang, Renfei Kuang, and Qingming Chen (Sun Yat-Sen Univ., China)

[P3-032]

Vector Beam Generation using On-chip Subwavelength Holographic Surface Grating

Caoyi Qian, Senyu Zhang, Tiange wu, Deming Liu, Shuang Zheng, and Minming Zhang (Huazhong Univ. of Science and Tech., China)

[P3-033]

Ultra-shallow Junctions for Deep UV Si Photodiodes by Atomic Layer Deposition and Flash Lamp Annealing

Shuwen Guo, Zhengfang Fan, Zhijuan Su, and Yaping Dan (Shanghai Jiao Tong Univ., China)

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All-dielectric Fiber Meta-tip for Generating Bessel and Airy Beams

Jinke Li, Hongliang Li, Xie Zou, and Sang-Shin Lee (Kwangwoon Univ., Korea)

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Design of Si-ITO Heterogeneously Integrated Microring Modulators on SOI Platform

Huayou Liu and Yaping Dan (Shanghai Jiao Tong Univ., China)

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Structured Light Projection Devices Based on Metasurface Optoelectronic Integration

Xianzi Pei, Lei Bao, Pan Fu, Bo Wu, and Yiyang Xie (Beijing Univ. of Tech., China)

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Solid-State Beam Steering using Optical Phased Array for LiDAR Applications

Toijam Sunder Meetei and Nan Ei Yu (GIST, Korea)

[P3-039]

Experimental and Numerical Evaluation of High Power Fabry-Perot Semiconductor Lasers with Considerations of Thermal Effects

Bo-Ming Huang, Chung-Chen Cheng, Yu-Xiang Chen, Chien-Yu Lu, and Chien-Chung Lin (Nat'l Taiwan Univ., Taiwan)

[P3-040]

Mode Stabilizing Mechanism in Anti-phase Wire-like Active-region Membrane Distributed Reflector Lasers

Chongrui Zhang, Kiyoto Takahata (Waseda Univ., Japan), Tatsurou Hiraki, Shinji Matsuo (NTT Corp., Japan), and Takaaki Kakitsuka (Waseda Univ., Japan)

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MMI-based Ge/Si Hybrid Compact Inline Optical Power Monitor

Xinxuan Ma, Yuhang Wan, and Zheng Zheng (Beihang Univ., China)

[P3-042]

Performance Comparison of Single-Photon Detection using InGaAs/InP APD under Geiger-Mode Operations through Sin-Wave-Gating and Pulse-Gating Techniques

Yen-Ting Cheng, Chi-Hung Lee, Lung-Chien Chen, and Wen-Jeng Ho (Nat'l Taipei Univ. of Tech., Taiwan)

[P3-043]

High-performance MoS_2 Photodetectors by Photogating

Seyed Saleh Mousavi Khaleghi, Jianyong Wei, Kenneth B. Crozier (The Univ. of Melbourne, Australia), and Yaping Dan (Univ. of Michigan-Shanghai Jiao Tong Univ. Joint Inst., China)

[P3-044]

Vertical-Cavity Laser with Integrated-Photonic External Mirror for Surface-Mount Packaging

Shogo Ura, Akari Watanabe, Shunsuke Teranishi, Keisuke Ozawa, Hongxu Chen, Junichi Inoue, Kenzo Nishio (Kyoto Inst. of Tech., Japan), and Kenji Kintaka (AIST, Japan)

[P3-045]

Inverse Design of Compact Multimode Waveguide Bends Leveraging Enhanced Bezier Curve Techniques

Jae-Yong Kim, Seokjin Hong, Jinhyeong Yoon, Hyo-Hoon Park, and Hamza Kurt (KAIST, Korea)

[P3-046]

Impact of Optical Loss on the Ground-state Power Quenching in Dual-state Lasing Epitaxial Quantum Dot Lasers on Silicon

Zihan He, Qi Chu, Zhiyong Jin, Feng He, Yong Yao, Xiaochuan Xu, and Jianan Duan (Harbin Inst. of Tech., China)

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Detection of Charged Particles in a Vacuum Using a Photonic Crystal Waveguide

Kosei Otsuka, Takeki Higashiguchi (Osaka Metropolitan Univ., Japan), Rikuto Hojo (Kyushu Inst. of Tech., Japan), Kazuya Kikunaga (AIST, Japan), Kazuhiro Toyoda (Kyushu Inst. of Tech., Japan), and Yasushi Takahashi (Osaka Metropolitan Univ., Japan)

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Miniaturizing Spectroscopy with “Undetected Photons”: Quantum Light Source Concept and First Results

P. Hildenstein, A. Maaβdorf, D. Feise, A. Sahm (Ferdinand-Braun-Institut, Germany), A. Sherwani, S. Ramelow (Humboldt-Universitat zu Berlin, Germany), G. Blume, and K. Paschke (Ferdinand-Braun-Institut, Germany)

[P3-049]

An Integrated Large Dispersion Optical Delay Line Based on Cladding-modulated Chirped Grating

Shuangqing Li, Yaoshuai Li, Chi Zhang, and Xinliang Zhang (Huazhong Univ. of Science and Tech., China)

[P3-050]

Low-Intensity Noise of Dual-State Quantum Dot Lasers with Optical Injection Locking

Qi Chu, Zhiyong Jin, Feng He, Jiawei Wang, Mingyu Zhang, Yong Yao, Xiaochuan Xu, and Jianan Duan (Harbin Inst. of Tech., China)

[P3-051]

MoS_2/Si Heterojunction Device Stacked Utilizing an All-Transfer-Printing Method

Pin-Ruei Huang, Bo-Yan Chen, Yi-Chieh Huang, Po-Cheng Kuo, Tsan-Wen Lu (Nat'l Yang Ming Chiao Tung Univ., Taiwan), Shih-Yen Lin (Academia Sinica, Taiwan), and Po-Tsung Lee (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

[P3-052]

Sub-Bandgap Si-Schottky Photodetectors with Cavity-Enhanced Pyramidal Absorbers

L. Augel (Brandenburg Univ. of Tech. Cottbus-Senftenberg, Germany) and J. Knobbe (Fraunhofer IPMS, Germany)

[P3-053]

620 nm Resonant-Cavity LEDs for High Color Purity and Light Output Power Enhancement

Natchanon Prechatavanich, Theeradech Sutheebanjerd, Yee Chee Keong, Ming-June Wu, Yi-Tzu Tseng, and Chao-Hsing Wu (Nat'l Taiwan Univ., Taiwan)

[P3-054]

The Accurate Determination of Grating Coupling Coefficient of DFB Lasers by a Novel Approach

Bo Chen, Xiguang Liang, and Yanchao Zhong (Pinghu Boke Lasers Co., Ltd., China)

[P3-055]

Study of Lateral Mesa Scaling and Contact Width of Light-Emitting Transistors with FEM Simulation

Lucas Yang, Yun-Jie Huang, Kuang-Yu Hsueh, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[P3-056]

An Ultra Compact Micro-ring Modulator with High Bandwidth and Large Free Spectral Range

Shiao Zhao, Xiaoyang Zhao, Zhipeng Ma, and Yu Zhang (Huazhong Univ. of Science and Tech., China)

[P3-057]

Large Free Spectral Range Optical Filtering with Engineered Multi-Mode Asymmetric Grating

Sourabh Jain (The Univ. of Texas at Austin, USA), Niraj Kumar (Inha Univ., Korea), Mukesh Kumar (Indian Inst. of Tech., India), and Ray T Chen (The Univ. of Texas at Austin, USA)

[P3-058]

Sampled Gratings on InP Membrane Platform for Tunable Narrow Linewidth Laser

Xiao Li, Aleksandr Zozulia, Sander Reniers, Kevin Williams (Eindhoven Univ. of Tech., The Netherlands), Sailing He (Zhejiang Univ., China), and Yuqing Jiao (Eindhoven Univ. of Tech., The Netherlands)

[P3-059]

Green Resonant-Cavity Light-Emitting Diodes Based on a GaN-on-Si Wafer

Yu-Hsiang Kao, Yu-Liang Hsia, Min-Hung Li, Che-Chia Chang, Pinghui Sophia Yeh, Jung-Chieh Su (Nat'l Taiwan Univ. of Science and Tech., Taiwan), and Sheng-Lung Huang (Nat'l Taiwan Univ., Taiwan)

[P3-060]

Erbium-Ytterbium Co-doped Tantalum Pentoxide as a Gain Material for Silicon-based Optoelectronics

Xiwen He (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), Zheng Zhang, Rongping Wang (Ningbo Univ., China), Weibiao Chen (Shanghai Inst. of Optics and Fine Mechanics, Chinese Academy of Sciences, China), and Zhiping Zhou (Peking Univ., China)

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Compact and Low-Loss Silicon Photonic Mode Demultiplexer Designed by Auto-Differentiation

Haruhisa Soda (Independent Consultant, Japan)

[P3-062]

High-Temperature 53.12 Gb/s PAM4 Transmission of 1.3-μm DFB Lasers for 400 GbE Optical Communication

Te-Hua Liu, Siang-Ting Huang, Yun-Cheng Yang, and Chao-Hsin Wu (Nat'l Taiwan Univ., Taiwan)

[P3-063]

Experimental Demonstration on the Feasibility of 800GHz-Spaced Bidirectional 100GBASE-ER1 Transceivers for X-Haul Application

Hao Liu, Xia Sheng (China Telecom Research Inst., China), Nengnian Zhu (ZTE Corp., China), Kai Lv, Lipeng Feng, Yuyang Liu, Xishuo Wang, Anxu Zhang (China Telecom Research Inst., China), Rui Zhang, Fei Xu, Xue Kang (ZTE Corp., China), and Xiaoli Huo (China Telecom Research Inst., China)

[P3-064]

Ultra-Wideband Edge Coupler Based on SubWavelength Grating Slot Waveguide (SWGS)

Yuanjian Wan, Yu Zhang, and Jian Wang (Huazhong Univ. of Science and Tech., China)

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O-Band Low Loss and Polarization Insensitivity Edge Coupler

Yuanjian Wan and Jian Wang (Huazhong Univ. of Science and Tech., China)

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Dual Wavelength Generation by Reflectivity Modification in Buried Heterostructure Laser

Soumi Pal, Arpit Khandelwal, and Nitin Bhatia (Indian Inst. of Tech. Jodhpur, India)

[P3-070]

THz to Optical Carrier Conversion Using Electro-optic Polymer Modulators and Optical Combs

Y. Matsumura, E. Hase, Y. Tokizane, N. Kuse, J. Fujikata, H. Kishikawa, M. Haraguchi, Y. Okamura (Tokushima Univ., Japan), T. Kaji , A. Otomo, I. Morohashi, A. Kanno (Nat'l Inst. of Information and Communications Tech., Japan), S. Hisatake (Gifu Univ., Japan), and T. Yasui (Tokushima Univ., Japan)

[P3-071]

A Phase Noise Optimizer for LFM Signal based on a Microwave Photonic Phase Detector

Penghui Gao, Kunlin Shao, Yamei Zhang, Jijun He, and Shilong Pan (Nanjing Univ. of Aeronautics and Astronautics, China)

[P3-072]

Baseband Modulation in Terahertz Wave Communication using Micro-optical Comb

T. Kikuhara, Y. Makimoto, Y. Tokizane, N. Kuse, E. Hase, Y. Matsumura, H. Kishikawa (Tokushima Univ., Japan), Y. Okamura (Univ. of Yamanashi, Japan), A. Kanno (Nagoya Inst. of Tech., Japan), S. Hisatake (Gifu Univ., Japan), and T. Yasui (Tokushima Univ., Japan)

[P3-073]

Soliton Comb Generation using a Small Prism Coupling Module

Yuta Mototani, Shun Fujii (Keio Univ., Japan), Shota Kimura, Yosuke Hashimoto (Japan Aerospace Exploration Agency, Japan), Tomoya Yamakawa, Riku Imamura, and Takasumi Tanabe (Keio Univ., Japan)

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