JSAP-OSA Joint Symposia 2014

Program at a Glance

Sept. 17 (Wed.)			
Room	C1	C3	C4
AM		10:15-12:30 18.8 Carbon Photonics	9:15-12:30 18.7 Laser Photonics
Lunch		12:30-13:45	12:30-13:45
13:45-14:45	OSA President Special Lecture (Room C4)		
PM		15:00-17:30 18.8 Carbon Photonics	15:00-17:45 18.7 Laser Photonics
Sept. 18 (Thu.)			
Room	C1	C3	C4
AM		9:00-12:30 18.4 Optical Microsensing, Manipulation and Fabrication	9:30-12:30 18.2 Bio- and Medical Photonics
Lunch		12:30-14:00	12:30-13:45
PM		14:00-17:15 18.4 Optical Microsensing, Manipulation and Fabrication	13:45-17:30 18.2 Bio- and Medical Photonics
Sept. 19 (Fri.)			
Room	C1	C3	C4
AM		9:00-12:30 18.1 Plasmonics	9:30-12:30 18.2 Bio- and Medical Photonics
Lunch		12:30-14:00	12:30-13:30
PM		14:00-18:00 18.1 Plasmonics	13:30-17:00 18.3 Laser Manufacturing
Sept. 20 (Sat.)			
Room	C1	C3	C4
AM	9:15-12:00 18.5 Opto-electoronics	9:00-12:30 18.1 Plasmonics	9:00-11:45 18.6 Information Photonics
Lunch	12:00-13:00		11:45-12:45
PM	13:00-15:00 18.5 Opto-electoronics		12:45-15:00 18.6 Information Photonics

7 CDV 成長グラフェンを用いたウェハスケールのトランジスタ作製
物材機構 WPI-MANA[1]，産総研 GNC[2]，産総研ナノエレ部門[3]
○中払　周[1,2]，飯島智彦[3]，小川真一[3]，八木克典[2]，原田直樹[2]，林賢二郎[2]，近藤大雄[2]，高橋　慎[2]，黎　松林[1]，塚越一仁[1]，佐藤信太郎[2]，横山直樹[2]

△ 8 グラフェン /n-SiC コンタクトの電気的特性のゲート電圧変調効果
東工大精研[1]，北陸先端大 GDRC[2]　○(D)永久雄一[1]，徳光永輔[1,2]

9 高光応答性を有するグラフェン・Si ショットキー接合の作製
名古屋工大　○Golap Kalita，Ayahn Muhammed，種村眞幸

△10 非平衡グリーン関数を用いたグラフェンナノリボン配線伝導特性へのエッジ揺らぎ効果の第一原理計算
慶大理工[1]，LEAP[2]　○籔崎勝也[1]，Mohamad Aizuddin[1]，酒井忠司[2]，栗野祐二[1]

昼　食　　11:45 ～ 13:15

17p-B1 - 1 ～ 3

1 Al_2O_3絶縁膜を用いたトップゲート型 MoS_2 FET の試作
横国大院工[1]，産総研[2]，物材機構[3]　○二之宮成樹[1,2]，森　貴洋[2]，内田紀行[2]，渡辺英一郎[3]，津谷大樹[3]，森山悟士[3]，田中正俊[1]，安藤　淳[2]

2 MoS_2 FET における金属－チャネル界面領域での電荷移動観察
東北大通研[1]，東北大多元研[2]，東大放射光連携研究機構[3]　○(M2)須藤亮太[1]，田島圭一郎[1]，安川奈那[1]，北田祐太[2]，永村直佳[2]，本間　格[2]，堀場弘司[3]，尾嶋正治[3]，吹留博一[1]，末光眞希[1]

3 大面積 WSe2 薄膜を用いた Flexible logic circuits
早大応物[1]，Academia Sinica[2]，東大工[3]，理研 CEMS[4]，早大材研[5]
○舟橋一真[1]，蒲　　江[1]，Lain-Jong Li[2]，岩佐義宏[3,4]，竹延大志[1,5]

4 ～ 15　14:00 ～ 17:15（17.2 構造制御・プロセス）

17.4 デバイス応用

9 月 19 日　9:15 ～ 11:45

19a-B1 - 1 ～ 9

▲ 1 CNT microelectrodes for flexible electrochemical sensor applications
Dept. Quantum Eng., Nagoya Univ.　○Xuan Viet Nguyen，Kishimoto Shigeru，Ohno Yutaka

2 n 型カーボンナノチューブ薄膜トランジスタのしきい値ばらつきの評価
名大工　○安西智洋，岸本　茂，大野雄高

3 版を用いない印刷・塗布法で作製した CNT 薄膜トランジスタアレイ
TASC[1]，AIST[2]，NEC[3]　○沼田秀昭[1,3]，佐々木扶紗子[1]，斎藤　毅[1,2]，二瓶史行[3]

4 ナノ浮遊ドットを有するカーボンナノチューブ単電子トランジスタ
阪大産研　○清家康平，金井　康，大野恭秀，前橋兼三，井上恒一，松本和彦

休　憩　　10:15 ～ 10:30

△ 5 印刷技術を用いた歪みセンサアレイによる人工電子ウィスカー
大阪府大　○原田真吾，本田　航，有江隆之，秋田成司，竹井邦晴

△ 6 高配向半導体カーボンナノチューブ薄膜を用いた太陽電池の創製
東北大院工　○赤間俊紀，加藤俊顕，金子俊郎

△ 7 SiC 上に形成した稠密カーボンナノチューブフォレストの面内方向伝導性評価
早大理工[1]，名大エコトピア研[2]　○稲葉優文[1]，李　智宇[1]，鈴木和真[1]，渋谷　恵[1]，明道三穂[1]，平野　優[1]，平岩　篤[1]，乗松　航[2]，楠美智子[2]，川原田洋[1]

8 電着法による炭素材料への Pt-Ru 金属ナノ粒子の担持およびメタノール酸化活性評価 (II)
法政大院理工[1]，信州大工[2]　○吉竹晴彦[1]，早瀬勝平[1]，王　志朋[2]，緒方啓典[1]

9 イオン照射した炭素材料への Pt ナノ粒子の担持およびメタノール酸化活性評価
法政大院[1]，法政大イオン研[2]，信州大[3]　○早瀬勝平[1]，吉竹晴彦[1]，西村智朗[2]，王　志朋[3]，緒方啓典[1]

18　JSAP-OSA Joint Symposia

OSA President Special Lecture

9 月 17 日　13:45 ～ 14:45

17p-C4 - 1

Quantum Control in Strong Laser Fields（60min.）
Stanford University　○Philip Bucksbaum

18.1 Plasmonics

9 月 19 日　9:00 ～ 18:00

19a-C3 - 1 ～ 11

▲ 1 **[INVITED] Metamaterials: From 3D Plasmonic Nanostructure to Reflective Metasurface（30min.）**
Department of Physics, National Taiwan University[1]，Research Center for Applied Sciences, Academia Sinica[2]，Optoelectronics Research Centre and Centre for Photonic Metamaterials, University of Southampton[3]，Department of Physics, University of Massachusetts Boston, Boston, Massachusetts 02125, USA.[4]，Department of Optical Science and Engineering, Fudan University[5]，School of Electrical and Electronic Engineering, Nanyang Technological University[6]　○Din Ping Tsai[1,2]，Wei Ting Chen[1]，Yao-Wei Huang[1]，Pin Chieh Wu[1]，Chun Yen Liao[1]，Kuang-Yu Yang[2]，Ai Qun Liu[6]，Vassili Fedotov[3]，Greg Sun[4]，Lei Zhou[5]

▲ 2 Fano resonance in surface plasmon polariton mediated extraordinary optical transmission
Institute of Physics, Chinese Academy of Sciences[1]，Department of Physics, University of Texas at Austin[2]　○Qiu Xianggang[1]，Li Bohong[1]，Cheng Fei[1]，Sanders Charlotte[2]，Shvets Gennady[2]，Shih Chih-Kang[2]

▲ 3 Reflective Metasurface and Plasmonic Hologram Application
Department of Physics, National Taiwan University[1]，Research Center for Applied Sciences, Academia Sinica[2]，Institute of Opto-electronic Engineering, National Dong Hwa University[3]，Department of Physics, University of Massachusetts Boston[4]，Department of Optical Science and Engineering, Fudan University[5]，State Key Laboratory of Surface Physics and Key Laboratory of Micro and Nano Photonic Structures (Ministry of Education), Fudan University[6]，School of Electrical and Electronic Engineering, Nanyang Technological University[7]　○Yao-Wei Huang[1]，Wei Ting Chen[1]，Kuang-Yu Yang[2]，Chih-Ming Wang[3]，Greg Sun[4]，Shulin Sun[5]，Lei Zhou[6]，Ai Qun Liu[7]，Din Ping Tsai[1,2]

▲ 4 Isotropic perfect absorber in optical frequencies using vertical split-ring resonator
National Taiwan University (NTU)　○Hao-Tsun Lin，Pin Chieh Wu，Din Ping Tsai

▲ 5 Visualization of Plasmonic Coupled mode of Gold Curvilinear Nanorods and Straight Nanorods by Photoemission Electron Microscopy
Metamaterials Lab., RIKEN[1]，RIES Hokkaido Univ.[2]　○Yukie Yokota[1]，Quan Sun[2]，Kosei Ueno[2]，Yasutaka Matuo[2]，Hiroaki Misawa[2]，Takuo Tanaka[1,2]

Break　　10:30 ～ 10:45

▲ 6 **[INVITED] Thermal Radiation Control by Plasmonic Structures: from Metasurface to Metafilament（30min.）**
PARC[1]，Graduate School of Eng.[2]　○Junichi Takahara[1,2]，Yosuke Ueba[2]

▲ 7 Graphene Metasurface for THz Wavefront Control
△ Okayama Univ.　○Takumi Yatooshi，Atsushi Ishikawa，Kenji Tsuruta

▲ 8 Large Area, Aluminum Metal-Insulator-Metal Infrared Perfect Absorber
△ International Center for Materials Nanoarchitectonics, National Institute for Materials Science (NIMS)[1]，CREST, Japan Science and Technology Agency[2]，Graduate School of Materials Science, Nara Institute of Science and Technology[3]　○Thang Dao[1,2,3]，Kai Chen[1,2]，Ishii Satoshi[1,2]，Lakshminarayana Gandham[1,2]，Ohi Akihiko[1,2]，Nabatame Toshihide[1,2]，Nagao Tadaaki[1,2]

▲ 9 Large-area Tunable Al Plasmonic Substrate for Infrared Spectroscopy
MANA, NIMS[1]，CREST, Japan Science and Technology Agency[2]，Graduate School of Materials Science, NIST[3]　○Kai Chen[1,2]，Thang Duy Dao[1,2,3]，Lakshminarayana Gandham[1,2]，Tadaaki Nagao[1,2]

▲10 Plasmon hybridization in 3D magnetic metamolecules
NTU (Taiwan)[1]，NTU (Singapore)[2]，UMB[3]　○(D)Wei-Lun Hsu[1]，Pin Chieh Wu[1]，Wei Ting Chen[1]，Yao-Wei Huang[1]，Chun Yen Liao[1]，Ai Qun Liu[2]，Greg Sun[3]，Din Ping Tsai[1]

▲11 Vertical split-ring resonator based nanoplasmonic sensor
Department of Physics, National Taiwan University[1]，Department of Physics, University of Massachusetts Boston[2]，Institute of Optoelectronic Sciences, National Taiwan Ocean University[3]，Research Center for Applied Sciences, Academia Sinica[4]，Institute of Physics, Academia Sinica[5]　○Pin Chieh Wu[1]，Greg Sun[2]，Wei Ting Chen[1]，Yao-Wei Huang[1]，Hsiang Lin Huang[3]，Hai Pang Chiang[3, 4, 5]，Din Ping Tsai[1, 4]

Lunch　　12:30 ～ 14:00

19p-C3 - 1 ～ 13

▲ 1 **[INVITED] Visualizing plasmons by near-field spectroscopy（30min.）**
Waseda Univ.　○Kohei Imura

▲ 2 Three dimensional light manipulation for full-color nano-projector
National Taiwan University[1], Nanyang Technological University[2], Academia Sinica[3] ○Mu Ku Chen[1], Chia Min Chang[1], Ming Lun Tseng[1], Din Ping Tsai[1], Ai Qun Liu[2], Ding-Wei Huang[1], Yung Chiang Lan[2], Bo Han Cheng[3], I-Da Chiang[1]

▲ 3 Modification of Point-Spread Function in Confocal Microscopy by
△ Nonlinear Plasmonic Light Scattering
Dept. of Applied Physics, Osaka University[1], Dept. of Physics, National Taiwan University[2] ○Ryosuke Oketani[1], Hsueh-Yu Wu[2], Hsuan Lee[2], Yen-Ta Huang[2], Yasuo Yonemaru[1], Tung-Yu Su[2], Satoshi Kawata[1], Shi-Wei Chu[2], Katsumasa Fujita[1]

▲ 4 Sharp resonances in waveguide-coupled surface plasmon sensors for super-resolution sensing
MASCIR[1], Kobe Univ.[2], Univ. Mohamed V-Agdal[3], Osaka Univ.[4] ○Shinji Hayashi[1,2], Dmitry Nesterenko[1], Zouheir Sekkat[1,3], Yasushi Inoue[4], Satoshi Kawata[4]

▲ 5 Metal-insulator-metal structures for high-resolution sensing
MASCIR[1], Kobe Univ.[2], Univ. Mohammed V-Agdal[3], Osaka Univ.[4] ○Siham Refki[1,3], Shinji Hayashi[1,2], Dmitry Nesterenko[1], Zouheri Sekkat[1,3], Yasushi Inoue[4], Satoshi Kawata[4]

Break 15:30 ～ 15:45

▲ 6 **[INVITED] Plasmonic Hot Electron Induced Structural Phase Transition in Monolayer MoS_2 (30min.)**
School of Physics, Peking University Yimin Kang, ○Zheyu Fang

▲ 7 Plasmonic Photocatalyst for Degradation with Spinning Optical Disk Reactor
Department of Physics,NTU[1], Graduate Institute of Applied Physics,NTU[2], Department of Chemistry,NTU[3], Instrument Technology Research Center, NARL[4], Research Center for Applied Sciences, Academia Sinica[5] ○(M1)Wenting Hsieh[1], Yulim Chen[1], Ida Chiang[1], Lichung Kuo[1], Min Lun Tseng[2], Hao Ming Chen[3], Chih Kai Chen[3], Hung Ji Huang[4], Ru Shi Liu[3], Din Ping Tsai[5]

▲ 8 Directional coupling of plasmonic disk modes to an edge waveguide
Institute of Physics, University of Graz[1], FELMI, Graz University of Technology, 8010 Graz, Austria[2] ○Harald Ditlbacher[1], Franz Schmidt[1,2], Ulrich Hohenester[1], Joachim R. Krenn[1]

▲ 9 Imaging of Localized Plasmon Polaritons by Apertureless Scanning Near-
△ field Optical Microscopy
Nagaoka University of Technology ○Soushi Ikeda, Yongfu Cai, Qianwen Meng, Taichi Yokoyama, Kenji Shinozaki, Takayuki Komatsu, Takayuki Ishibashi

▲10 Cathodoluminescence of 2D plasmonic crystals with hexagonal lattice
Tokyo Institute of Tech.[1], JST-CREST[2] ○Hikaru Saito[1], Naoki Yamamoto[1,2]

▲11 Surface plasmons and Mott transition in strongly-correlated oxide VO_2
The Univ. of Tokyo[1], ISIR-Sanken, Osaka University[2] ○Matsui Hiroaki[1], Kanki Teruo[2], Tanaka Hidekazu[2], Delaunay Jean-Jacques[1], Tabata Hitoshi[1]

▲12 Electromagnetic Modelling of Metal-Dielectric Multi-Nanolayer Structure Supporting Surface Plasmons
State Engineering University of Armenia[1], National Institute of Telecommunication, Poland[2], Kielce University of Technology, Poland[3] ○Marian Marciniak[2,3], Hovik Baghdasaryan[1], Tamara Knyazyan[1], Tamara Hovhannisyan[1]

▲13 Optical constants of gold-silver-copper alloy system
Yokohama National University[1], Swinburne University of Technology[2] ○Yoshikazu Hashimoto[1], Yoshiaki Nishijima[1], Seniutinas Gediminas[2], Rosa Lorenzo[2], Juodkazis Saulius[2]

18.1 Plasmonics

9月20日 9:00 ～ 12:30
20a-C3 - 1 ～ 11

▲ 1 **[INVITED] Plasmonic applications of lossy transition metals (30min.)**
Hokkaido Univ.[1], JST-PRESTO[2] ○Katsuyoshi Ikeda[1,2]

▲ 2 Polarization analysis of near-field probe for top-enhanced Raman imaging
Department of Applied Physics, Osaka University ○Toshihiro Mino, Yuika Saito, Prabhat Verma

▲ 3 Active gold nanoshells for surface enhanced Raman scattering
Faculty of science, Jiangsu University[1], School of Physics, Nanjing University[2] Jiang Shumin[1], ○Wu Dajian[1], Cheng Ying[2], Liu Xiaojun[2]

▲ 4 Metamaterial-Enhanced Infrared Absorption Spectroscopy
Okayama Univ.[1], RIKEN[2], Hokkaido Univ.[3] ○Atsushi Ishikawa[1,2], Takuo Tanaka[2,3]

▲ 5 Indium for deep-UV plasmonics: Surface-enhanced Raman scattering
△ RIKEN[1], Osaka Univ.[2] ○Yasuaki Kumamoto[1], Yuika Saito[2], Atsushi Taguchi[1,2], Mitsuhiro Honda[1], Koichi Watanabe[1], Satoshi Kawata[1,2]

Break 10:30 ～ 11:00

▲ 6 Grain structure for TERS microscopy
Osaka University[1], RIKEN[2] ○Atsushi Taguchi[1, 2], Satoshi Kawata[1, 2]

▲ 7 Nanoantenna on remote plasmonic excitation nanostructures
NTU ○(M2)Liang Yen-Hsiang, Chen Shih-Wen, Hsueh Chun-Hway, Li Jia-Han

▲ 8 Enhanced Nano-size Circularly Polarized Light Generated by Cross
△ V-groove Aperture Antenna
Nagaoka Univ. of Tech.[1], Nihon Univ.[2], NHK[3] ○(DC)Yongfu Cai[1], Katsuji Nakagawa[2], Hiroshi Kikuchi[3], Naoki Shimidzu[3], Takayuki Ishibashi[1]

▲ 9 Optimization of Sensitivity and Electric Field Enhancement for Bowtie
△ Nanoring Nanoantenna Arrays
NTU ○(D)Li-Wei Nien, Bo-Kai Chao, Jia-Han Li, Chun-Hway Hsueh

▲10 Effects of Nanoprism Rotation-angle on Surface Plasmon Coupling in
△ Gold Bowtie Nanoantennas
Department of Materials Science and Engineering, NTU[1], Department of Engineering Science and Ocean Engineering, NTU[2] ○Miao-Hsuan Chien[1], Li-Wei Nien[1], Bo-Kai Chao[1], Jia-Han Li[2], Chun-Hway Hsueh[1]

▲11 Characterization of plasmonic nano-antennas by cathodoluminescence
Tokyo Tech[1], JST-CREST[2], NIMS[3] ○Nishio Natsuki[1,2], Naoki Yamamoto[1,2], Dao Duy Thang[3], Chung Vu Hoang[3], Tadaaki Nagao[3]

18.2 Bio- and Medical Photonics

9月18日 9:30 ～ 17:30
18a-C4 - 1 ～ 10

▲ 1 **[INVITED] Optical Bio-Microrheology (30min.)**
Institute of Biophotonics, National Yang-Ming University[1], Biophotonics & Molecular Imaging Research Center (BMIRC), National Yang-Ming University[2] Yin-Quan Chen[1], ○Arthur Chiou[1, 2]

▲ 2 Super-resolution Microscope Based on Laser Scanning and a Microsphere Lens
Department of Physics, National Taiwan University[1], Center for Condensed Matter Sciences, National Taiwan University[2], Institute of Physics, Academia Sinica[3], Molecular Imaging Center, National Taiwan University[4] ○Kuan-Yu Li[1], Yun-Ju Liu[1], Yang Tsao[1,2], Kung-Hsuan Lin[3], Chih-Wei Chang[1,2], Shi-Wei Chu[1,4]

▲ 3 Tunable Fano resonance in two-layer gold nanoslit array and its application for highly sensitive biosensors
research center for applied sciences, academia sinica ○pei-kuen Wei

▲ 4 Label-free measurement of cell-electrode cleft gap distance with a high spatial resolution surface plasmon microscopy
Institute of Bioelectronics (ICS-8/PGI-8), Forschungszentrum Juelich GmbH[1], Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University[2], Division of Information and Electronic Engineering, Muroran Institute of Technology[3] ○Koji Toma[1,2], Hiroshi Kano[3], Andreas Offenhaeusser[1]

▲ 5 Dual SPR-SERS Sensors Using Gold Nanoslits and Oblique Angle Deposition
Academia Sinica[1], National Yang-Ming University[2], National Taiwan Ocean University[3] ○Kuang-Li Lee[1], Chao-Hsien Cheng[2], Wei-Yi Chang[1], Pei-Kuen Wei[1,2,3]

Break 11:00 ～ 11:15

▲ 6 Single Molecule FRET Combined with Defocus Imaging
△ Dept. Appl. Phys., Osaka Univ.[1], Frontier Biosci., Osaka Univ.[2] ○Somekawa Kazuma[1], Ishitobi Hidekazu[1,2], Inouye Yasushi[1,2]

▲ 7 The Stimulated Emission Depletion Properties of Spiro-BTA
Department of Physics, National Taiwan University[1], Department of Chemistry, National Taiwan University[2], National Taiwan University Molecular Imaging Center[3] ○Wei-Kuan Lin[1], Jian-Zhang Cheng[2], Si-Han Wu[2], Hsueh-Yu Wu[1], Po-Fu Chen[1], Yun-Ju Liu[1], Ken-Tsung Wong[2], Chung-Yuan Mou[2], Shi-Wei Chu[1,3]

▲ 8 Photoisomerization of azobenzene derivative combined liposome suing a two-photon UV-Blue pulsed laser
Photonics Control Technology Team, RIKEN ○Shengyong Geng, Syuuichi Kanno, Yasuhiro Maeda, Satoshi Wada

▲ 9 Development of a Fluorescent Probe Providing Nonlinear Response through Intramolecular Electron Transfer
Department of Applied Physics, Graduate school of Engineering, Osaka University[1], Division of Advanced Science and Biotechnology, Graduate school of Engineering, Osaka University[2], FUJIFILM corporation[3], Biophotonics Laboratory., IFReC, Osaka University[4] ○Kentaro Mochizuki[1], Lanting Shi[1], Susumu Mizukami[2], Masahito Yamanaka[1], Mamoru Tanabe[3], Wei-Tao Gong[2], Shogo Kawano[1], Nicholas Isaac Smith[4], Satoshi Kawata[1], Kazuya Kikuchi[2]

▲10 Simultaneous single and two-photon excitation of fluorescent proteins for multicolor imaging of cellular structures
Dept of Applied Physics, Osaka Univ.[1], Dept of Quantum Engineering, Nagoya Univ.[2], Inst of Scientific Industrial Research, Osaka Univ.[3], Immunology Frontier Research Center, Osaka Univ.[4]
○Kumiko Uegaki[1], Masahito Yamanaka[2], Kenta Saito[3], Nicholas Smith[4], Yoshiyuki Arai[3], Satoshi Kawata[1], Takeharu Nagai[3], Katsumasa Fujita[1]

Lunch 12:30 ～ 13:45

18p-C4 - 1 ～ 12

▲ 1 **[INVITED] A composite-type optical fiberscope system with hybrid functions of diagnosis and medical treatment (30min.)**
Japan Atomic Energy Agency[1], Akita University[2]
○Oka Kiyoshi[1], Seki Takeshi[2]

▲ 2 Fluorescence-Raman (Dual-modal) Endoscopic System for Real-time *in vivo* Multiplexed Molecular Diagnosis
Departmenet of Chemistry Education, SNU[1], Department of Nuclear Medicine, College of Medicine, SNU[2], School of Chemical and Biological Engineering, SNU[3] ○Sinyoung Jeong[1], Yong-il Kim[2], Homan Kang[3], Gunsung Kim[1], Myeong Geun Cha[1], Hyejin Chang[1], Yoon-Sik Lee[3], Dong Soo Lee[2], Dae Hong Jeong[1]

▲ 3 *In vivo* photothermal optical coherence tomography for non-invasive endogenous absorption agent imaging
Computational Optics Group in University of Tsukuba
○Shuichi Makita, Young-Joo Hong, Yoshiaki Yasuno

▲ 4 △ Functional optical coherence tomography (fOCT) based on biospeckle to monitor environmental stresses on plants
Saitama Univ.[1], Ruhuna Univ., Sri Lanka[2]
○(D)Thanuja Srimal[1,2], Hirofumi Kadono[1]

▲ 5 Ultra-short term plant growth dynamics under cadmium stressusing Statistical Interferometry Technique
Saitama Univ.[1], Saitama Univ.[2] ○Satoru Sekine[1], Hirofumi Kadono[2]

▲ 6 △ Temporal observation of osteoblastic mineralization by Raman imaging
Department of applied physics, Graduate School of Engineering, Osaka University[1], Department of Periodontology, Graduate School of Dentistry, Osaka University[2], Department of Physics, Faculty of Science, East China University of Science and Technology[3], Photonics Advanced Research Center, Osaka University[4]
○Aya Hashimoto[1], Liang-da Chiu[1], Tomohiko Ikeuchi[1], Katsumasa Fujita[1], Masahide Takedachi[2], Yoshinori Yamaguchi[1,3], Satoshi Kawata[1,4], Shinya Murakami[2], Eiichi Tamiya[1,4]

Break 15:30 ～ 15:45

▲ 7 **[INVITED] Light-neuron interactions: Key to understanding the brain (30min.)**
The Australian National University ○Vincent Daria

▲ 8 *In vivo* imaging of the absorption and scattering properties of exposed rat brain by using multi-spectral diffuse reflectance images
Tokyo University of Agriculture and Technology BASE[1], National Defense Medical College Research Institute[2], Yamagata University[3] Tomohiro Ishizuka[1], Keiichiro Yoshida[1], ○Izumi Nishidate[1], Satoko Kawauchi[2], Shunichi Sato[2], Manabu Sato[3]

▲ 9 Hyperspectral holographic imaging of brain tissues using swept-source diffraction phase microscopy
Korea Advanced Institute of Science and Technology (KAIST)
○Lee Shinwha, Lee Eeksung, Jeong Jaehwang, Park Hyungjoo, Jeong Yong, Park Yongkeun

▲10 Large Area Raman Spectroscopic Imaging of Unstained Mouse Brain Slice with Sub-micron Spatial Resolution
Photonics Advanced Research Center, Osaka University[1], Department of Applied Physics, Osaka University[2], Graduate School of Pharmaceutical Sciences, Osaka University[3], Institute for Academic Initiatives, Osaka University[4], United Graduate School of Child Development, Osaka University[5]
○Almar Palonpon[1,2], Atsushi Kasai[3,4], Satoshi Kawata[1,2], Hitoshi Hashimoto[3,5], Katsumasa Fujita[2]

▲11 Spectroscopic Study of Second Harmonic Generation Chiral Microscopy in Type I Collagen
Department of Physics, National Taiwan University[1], Institute of Photonics Technologies, National TsingHua University[2], Department of Electrical Engineering, National TsingHua University[3], Molecular Imaging Center, National Taiwan University[4] ○(D)Mei-Yu Chen[1], Che-Wei Kan[1], Yen-Yin Lin[2,3], Shi-Wei Chu[1,4]

▲12 Live Dynamics on Femtoinjection of GFP-Tagged Nucleosome Chaperones into HeLa Cell
RcMcD, Hiroshima Univ.[1], Tokyo Univ. Agri. Tech.[2]
○Tomohide Takami[1], Jun-ichi Uewaki[1], Hiroshi Ochiai[1], Masato Koyama[2], Yoshihide Ogawa[2], Mikako Saito[2], Hideaki Matsuoka[2], Shin-ichi Tate[1]

18.2 Bio- and Medical Photonics

9月19日 9:30 ～ 12:30

19a-C4 - 1 ～ 10

▲ 1 **[INVITED] Adaptive optics and its application to bioimaging.(30min.)**
Subaru Telescope, National Astronomical Observatory of Japan[1], Division of Evolutionaly Biology, National Instutute for Basic Biology[2], Spectrography and Bioimaging Facility, National Instutute for Basic Biology[3] ○Yutaka Hayano[1], Yosuke Tamada[2], Masayuki Hattori[3], Shin Oya[1], Yasuhiro Kamei[3], Takashi Murata[2], Mitsuyasu Hasebe[2]

▲ 2 Imaging Analysis of the Target inside Turbid Media in Volume Holographic Imaging System
Center for Optoelectronic Medicine, National Taiwan University[1], Molecular Imaging Center, National Taiwan University[2]
○Chen Yen Lin[1], Yuan Luo[1,2]

▲ 3 Video-rate spectral imaging with fiber-laser-based stimulated Raman scattering microscope
Canon[1], Tokyo Univ.[2] ○Naoki Kohara[1], Michio Ishikawa[1], Yuki Yonetani[1], Chidane Ouchi[1], Yasuyuki Ozeki[2]

▲ 4 △ Fiber-laser-based stimulated Raman scattering microscope in fingerprint region with a Neodymium doped fiber laser at 920 nm
Canon[1], Tokyo Univ.[2] ○Yuki Yonetani[1], Naoki Kohara[1], Michio Ishikawa[1], Chidane Ouchi[1], Yasuyuki Ozeki[2]

▲ 5 △ Coherent Anti-stokes Raman Spectroscopy with Dual-Wavelength Oscillation Electronically Tuned laser
Photonics Control Technology Team, RIKEN[1], Dept. of Bioscience, Graduate School of Science and technology, Kwansei Gakuin Univ.[2]
○Yasuhiro Maeda[1], Yusuke Nishimoto[2], Satoshi Wada[1], Hidetoshi Sato[2]

Break 11:00 ～ 11:15

▲ 6 Multimodal label-free imaging and complementary imaging pathways based on different scattering modes.
Biophotonics Laboratory, Immunology Frontier Research Center, Osaka University[1], Dept Applied Physics, Graduate School of Engineering, Osaka University[2] ○Nicholas Smith[1,2], Nicolas Pavillon[1], Alison Hobro[1], Katsumasa Fujita[2]

▲ 7 Multi-modality Super-resolution Optical Imaging of Living System
Peking Univ.[1], Chinese Acad Sci.[2] ○Chen Xuanze[1], Zhang Xi[2], Xu Pingyong[2], Xi Peng[1]

▲ 8 Label-free cell organelle imaging by D-EXA microscopy
Shizuoka Univ.[1], JSPS Research Fellow[2], JST CREST[3], Hamamatsu Univ. Sch. Med.[4] ○(PC) Yasunori Nawa[1,2], Wataru Inami[1,3], Atsushi Ono[1,3], Sheng Lin[1], Yoshimasa Kawata[1,3,4], Susumu Terakawa[3,4]

▲ 9 Tens nanometer scale cathodoluminescence bioimaging with rare-earth doped nanophosphors
Graduate School of Engineering Science, Osaka University[1], School of Engineering, The University of Shiga Prefecture[2]
○Shoichiro Fukushima[1], Hirohiko Niioka[1], Ichimiya Masayoshi[1,2], Miyake Jun[1], Ashida Masaaki[1], Araki Tsutomu[1], Hashimoto Mamoru[1]

▲10 Multimodal bioimaging probes based on lanthanide doped Gd2O3 nanophosphors
Grad. School of Eng. Sci. Osaka U[1], School of Eng., The U. of Shiga Prefecture[2] ○(D)T Kim Dung Doan[1], Shoichiro Fukushima[1], Hirohiko Niioka[1], Jun Miyake[1], Masayoshi Ichimiya[1,2], Masaaki Ashida[1], Tsutomu Araki[1], Mamoru Hashimoto[1]

18.3 Laser Manufacturing

9月19日 13:30 ～ 17:00

19p-C4 - 1 ～ 10

▲ 1 **[INVITED] Lastest laser technology and applications (30min.)**
TRUMPF Corporation ○Bastian Becker, Tsuyoshi Nakamura

▲ 2 **[INVITED] Single mode fiber laser and their process applications (30min.)**
Furukawa Electric CO.,LTD ○Akira Fujisaki

▲ 3 Highly Efficient Yb-doped Laser Fiber Synthesized by Vapor-phase Doping Technique
CSIR-CGCRI[1], IPHT[2] ○(D)Maitreyee Saha[1], Atasi Pal[1], Mrinmay Pal[1], Martin Leich[2], Jens Kobelke[2], Ranjan Sen[1]

▲ 4 △ The influence of particle diameter on the powder melting process by diode laser irradiation
Graduate school of engineering, Osaka University[1], Joining and Welding Research Institute, Osaka University[2], Osaka Fuji Corporation[3]
○(D)Tanigawa Daichi[1], Abe Nobuyuki[2], Tsukamoto Masahiro[2], Hayashi Yoshihiko[2], Yamazaki Hiroyuki[2], Tatsumi Yoshihiro[3], Yoneyama Mikio[3]

▲ 5 Fabrication of plasmonic cavity and indefinite metamaterial by laser-induced forward transfer
Department of Physics, National Taiwan University[1], National Center of Theoretical Sciences at Taipei, Physics Division, National Taiwan University[2], Graduate Institute of Photonics and Optoelectronics, National Taiwan University[3], State Key Laboratory of Surface Physics and Key Laboratory of Micro and Nano Photonic Structures (Ministry of Education), Fudan University[4], School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore 639798, Singapore.[5], Research Center for Applied Sciences, Academia Sinica[6] ○Yi-Teng Huang[1], Wei Ting Chen[1], Ming Lun Tseng[1], Chun Yen Liao[1], Pin Chieh Wu[1], Shulin Sun[1,2], Ai Qun Liu[5], Chia Min Chang[3], Lei Zhou[4], Din Ping Tsai[1,6]

Break 15:15 ～ 15:30

▲ 6 [INVITED] Micromachining of CFRP with Short Pulse Lasers (30min.)
ILT[1], Kinki Univ.[2], ILE, Osaka Univ.[3], Spectronix Co.[4] ○Masayuki Fujita[1], Hiroshi Ohkawa[2], Masataka Otsuka[2], Yoshinobu Maeda[2], Takaomi Matsutani[2], Noriaki Miyanaga[3], Yosuke Orii[4], Koji Inaba[4], George Okada[4]

▲ 7 Nanosecond laser induced carbon fiber reinforced plastic processing under Ar gas ambience for suppression HAZ
JWRI, Osaka Univ.[1], Graduate School of Enginerring, Osaka Univ.[2] ○(PC)Sato Yuji[1], Tsukamoto Masahiro[1], Matsuoka Fumihiro[2], Takahashi Kenjiro[1], Masuno Shinichiro[1]

▲ 8 Effective Scanning Condition of Laser CFRP Processing with High Power Pulsed Fiber Laser
Joining and Welding Research Institute, Osaka University[1], Institute of Laser Engineering, Osaka University[2], Institute of Laser Technology[3], Advanced Laser and Process Technology Research Association[4] ○(PC)Kenjiro Takahashi[1], Masahiro Tsukamoto[1], Shin-ichiro Masuno[1], Yuji Sato[1], Hidetsugu Yoshida[2], Koji Tsubakimoto[2], Hisanori Fujita[2], Noriaki Miyanaga[2], Masayuki Fujita[3], Hitoshi Ogata[4]

▲ 9 Periodic Nanostructures Formation for Creating New Functional Biomaterials
Joining and Welding Research Institute, Osaka University[1], Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University[2] ○Togo Shinonaga[1], Masahiro Tsukamoto[1], Peng Chen[2], Akiko Nagai[2], Takao Hanawa[2]

▲10 Crack formations inside a LiF single crystal by focusing a femtosecond laser pulse with controlled astigmatism
SACI, Kyoto Univ.[1], Grad. Sch. Eng, Kyoto Univ.[2] ○Sakakura Masaaki[1], Fujimatsu Yusei[2], Fukuda Naoaki[1], Shimotsuma Yasuhiko[2], Miura Kiyotaka[2]

18.4 Optical Micro-sensing, Manipulation, and Fabrications

9月18日 9:00 ～ 17:15

18a-C3 - 1 ～ 11

▲ 1 [INVITED] Optical Nanomanipulation Using Nanoshaped Plasmonic Fields (30min.)
RIES, Hokkaido Univ. ○Keiji Sasaki, Shutaro Ishida, Kyosuke Sakai, Yoshito Tanaka

▲ 2 Determination of thickness and refractive index of thin layers using dual plasmonic Fano resonances in gold nanogrids
Research Center for Applied Sciences, Academia Sinica[1], Institute of Photonics Technologies, National Tsing Hua University[2], Department of Optoelectronics, National Taiwan Ocean University[3], Department of Mechanical and Mechatronic Engineering, National Taiwan Ocean University[4] ○Ming-Yang Pan[1,2], Kuang-Li Lee[1], Likang Wang[2], Pei-Kun Wei[1,3,4]

▲ 3 Construction of photo-thermal voltaic system using black semiconductors
YNU for Yokohama National University[1], SUT for Swinburne University of Technology[2] ○Ryosuke Komatsu[1], Takuya Yamamura[1], Gediminas Seniutinas[2], Yoshiaki Nishijima[1], Saulius Juodkazis[2]

Break 10:00 ～ 10:15

▲ 4 [INVITED] 3D Light-driven Micro-tools with Nano-probes (30min.)
DTU Fotonik ○Jesper Gluckstad

▲ 5 SOI Slot Waveguide Based on-Chip Trace Gas Sensor in the Mid-IR
Physics Department, Indian Institute of Technology Delhi ○(D)Ajanta Barh, Babita Kumari, R. K. Varshney, B. P. Pal

▲ 6 Selective excitation of fundamental and zeroth-order vector beams in few-mode fiber for sensing application
Department of Physics, IIT Kharagpur ○Saba Khan, Sudip Kr Chatterjee, Partha Roy Chaudhuri

▲ 7 Unprecedented highest EO coefficient of 216 pm/V for electro-optic polymer/TiO2 multilayer slot waveguide modulators
KUT[1], UW[2] ○(P)Youssef Jouane[1], Yu Chi Chang[1], Dan Zhang[1], Hidehiro Nakamura[1], A. K-Y Jen[2], J Luo[2], Yasufumi Enami[1]

▲ 8 Response of nano Crystalline Cobalt-doped Nickel Ferrite Particles in Magnetic Field Detection Experiments
OSA ○Somarpita Pradhan, Kajal Mondal, Partha Roy Chaudhuri

▲ 9 Optical Detection of Defects on Porous Surfaces
△ Faculty of engineering, Ibaraki university ○Takemune Kiho, Katsuhiro Uno

▲10 Matched Spatial Filtering of phase objects with Liquid Crystal on Silicon
△ Device
Faculty of Engineering, Ibaraki University[1], Research Institute of Advanced Technology (RIAT)[2] ○Yuuta Kamikozawa[1], Isao Shimizu[2], Katsuhiro Uno[1]

▲11 Observation of anhydrated and hydrated DAST crystals using multiplex fourth order Raman microscope
Graduated School of Engeenering Science, Osaka University ○Chikako Ninagawa, Hirohiko Niioka, Tsutomu Araki, Mamoru Hashimoto

Lunch 12:30 ～ 14:00

18p-C3 - 1 ～ 9

▲ 1 [INVITED] Polarization Control over Deep Ultraviolet Light by Subwavelength Structures (30min.)
School of Optoelectronics, Beijing Institute of Technology ○Guoguo Kang, Xiaodi Tan

▲ 2 Dispersion through Optical Fibers under PEMC Boundary conditions
IMEN, UKM, Bangi selangor, Malaysia ○(D)Muhammad Abuzar Baqir, Pankaj Kumar Choudhury

▲ 3 Quantum size effects in the intrinsic third order nonlinear optical susceptibility of metal clusters: Ag nanospheres-silica glass composites
University of Tsukuba[1], Hokkaido University[2], National Institute for Materials Science[3] ○(D)Rodrigo Sato[1], Masato Ohnuma[2], Keiji Oyoshi[3], Yoshihiko Takeda[1,3]

▲ 4 Thermal stability of ZrO_2 nanoparticle-polymer composite volume gratings incorporating multifunctional chain transfer agents
Department of Engineering Science, University of Electro-CommunicationsUniversity of Electro-Communications ○(P)Jinxin Guo, Ryuta Fujii, Takanori Ono, Yasuo Tomita

Break 15:15 ～ 15:30

▲ 5 [INVITED] Subwavelength light focusing and imaging via wavefront shaping in complex media (30min.)
Korea Advanced Institute of Science and Technology (KAIST) ○Park Yongkeun

▲ 6 Two color bandedge lasing from cholesteric liquid crystals in capillary
National Taipei University of Technology ○Kuan-Cheng Liao, Chun-Hao Chen, Li-Hao Jian, Ja-Hon Lin, Shwu-Yun Tsay, Yao-Hui Chen

▲ 7 Profile monitoring on surface relief gratings by spectroscopic ellipsometry
Nagaoka University of Technology[1], Charles University in Prague[2], University of Pardubice[3] ○Roman Antos[1,2], Martin Veis[2], Jan Mistrik[3], Martin Karlovec[3], Miroslav VIcek[3], Takayuki Ishibashi[1]

▲ 8 [INVITED] Helical lights twist materials to form chiral structures -Chiral Photonics- (30min.)
Chiba University ○Takashige Omatsu

▲ 9 Reversible deformation of photoresist structures fabricated by direct laser write technique
Shizuoka University ○Vygantas Mizeikis

18.5 Opto-electronics

9月20日 9:15 ～ 15:00

20a-C1 - 1 ～ 8

▲ 1 [INVITED] Functional Devices based on Photonic Crystal Waveguides (30min.)
Dept. of Electronic Engineering, Tsinghua Univ. ○Kaiyu Cui, Yidong Huang, Xue Feng, Fang Liu, Wei Zhang

▲ 2 Mach-Zehnder Interferometer Optical Modulator Using Cascaded p/n junctions and Photonic Crystal
RNBS, Hiroshima Univ. ○Amrita Kumar Sana, Yoshiteru Amemiya, Tetsuo Tabei, Shin Yokoyama

▲ 3 Low Energy 1D Silicon Photonic Crystal Electro-Optic Modulator
NTT Basic Research Laboratories[1], NTT Nanophotonics Center[2] ○Abdul Shakoor[1], Kengo Nozaki[1,2], Eiichi Kuramochi[1,2], Katsuhiko Nishiguchi[1], Akihiko Shinya[1,2], Masaya Notomi[1,2]

▲ 4 Electro-optic Polymer / Titanium Dioxide Hybrid Modulators
Kyushu University ○Qiu Feng, Yokoyama Shiyoshi

Break 10:30 ～ 10:45

▲ 5 Arbitrary Ratio Three Waveguide Beam Splitter using Shortcuts to Adiabaticity
Dept. of Photonics, NCKU, Taiwan Yu-Chen Chuang, ○Shuo-Yen Tseng

▲ 6 Metallic photo-monitors for optical waveguides at telecom wavelengths
△ NICT[1], MANA-NIMS[2] ○Satoshi Ishii[1,2], Shin-ichiro Inoue[1], Rieko Ueda[1], Akira Otomo[1]

▲ 7 Direct Current Modulation Response of Metal-Clad Semiconductor Nanolasers
Bangor University ○Alan Shore, Zubaida Sattar

▲ 8 **[INVITED] Optical Switches and Biosensors Using Silicon Photonics (30min.)**
Hiroshima Univ. ○Shin Yokoyama, Yoshiteru Amemiya, Tetsuo Tabei, Takeshi Ikeda, Akio Kuroda

Lunch 12:00 ～ 13:00

20p-C1 - 1 ～ 6

▲ 1 **[INVITED] Growth, Fabrication, and Characterization of GaN-based Columnar LEDs (30min.)**
Gwangju Institute of Science and Technology (GIST)[1], Nagoya University[2] Duk-Jo Kong[1], Chang-Mo Kang[1], Si-Young Bae[2], ○Dong-Seon Lee[1]

▲ 2 GaN-Based Blue Light Emitting Diodes Using Conducting Filament-Embedded Indium Tin Oxide Electrodes
Korea Univ. ○Tae-Ho Lee, Hee-Dong Kim, Kyeong Heon Kim, Su Jin Kim, Sukwon Kim, Min Ju Kim, Ju Hyun Park, Byeong Ryong Lee, Tae Geun Kim

▲ 3 Effect of Growth Temperature of GaAs/Al0.4Ga0.6As Lower Cladding Layer on the Photoluminescence Intensity of InAs/Sb:GaAs Quantum Dots Monolithically Grown on Ge/Si Substrate by MOCVD for Laser Application
NanoQuine, The University of Tokyo[1], PECST[2], PETRA[3], IIS, The University of Tokyo[4] ○Mohan Rajesh[1], Makoto Miura[2,3], Masao Nishioka[4], Yasuhiko Arakawa[1, 2,4]

▲ 4 Photoluminescence Study of Self-Assembled InGaAs Quantum Dot Structure Prepared by Ultrahigh-rate Molecular Beam Epitaxial Growth Technique
Tokyo Metro. Univ.[1], Univ. of Fukui[2], NICT[3] ○Hiroharu Sugawara[1], Fumihiko Tanoue[1], Shigehiro Kitamura[2], Toshio Katsuyama[2], Kouichi Akahane[3], Naokatsu Yamamoto[3]

▲ 5 Ultra-fast Compact Modulator-Integrated-VCSEL for Highly Efficient Millimeter-wave Modulation
Tokyo Institute of Technology ○Hamed Dalir, Fumio Koyama

▲ 6 **[INVITED] Beam Steering, Beam Shaping and Intensity Modulation Based on Bragg Reflector Waveguides (30min.)**
Tokyo Institute of Technology ○Fumio Koyama

18.6 Information Photonics

9月20日 9:00 ～ 15:00

20a-C4 - 1 ～ 8

▲ 1 **[INVITED] Multimodal nonlinear spectral imaging of tissue samples with CARS molecular fingerprint (30min.)**
2-Department of Chemistry, School of Science, The University of Tokyo[1], 1-Graduate School of Pure and Applied Sciences, University of Tsukuba[2], 3-Graduate School of Comprehensive Human Science, University of Tsukuba[3] Segawa Hiroki[1], Akiyama Toshihiro[2], Kaji Yuichi[3], ○Hideaki Kano[2]

▲ 2 Three-dimensional see-through display using resolution enhanced lens-array holographic optical element
SNU ○(M2)Changwon Jang, Keehoon Hong, Jiwoon Yeom, Byoungho Lee

▲ 3 Optical Design for Heterogeneous Imaging Based on Retro Reflection Using Parallel Roof Mirror Arrays
Graduate School of Eng., Osaka City Univ.[1], Parity Innovations Co. Ltd.[2] ○(D)Yuki Maeda[1], Daisuke Miyazaki[1], Satoshi Maekawa[2]

▲ 4 Comparison of retroreflective elements in directivity of aerial imaging by retroreflection (AIRR)
Univ. Tokushima[1], Univ. Utsunomiya[2] ○Tomiyama Yuka[1], Suyama Shiro[1], Yamamoto Hirotsugu[1,2]

▲ 5 **[INVITED] Imperceptible Polychromatic Visual Stimuli for Brain-Display Interfaces (30min.)**
Dept. of Photonics & Display Inst., NCTU[1], Dept. of Photonics & Inst. of EO Eng., NCTU[2], Dept. of CS & Inst. of Biomed. Eng., NCTU[3], Swartz Center, UCSD[4] ○Fang-Cheng Lin[1], Yu-Yi Chien[2], John K. Zao[3], Ching-Chi Chou[1], Yi-Pai Huang[1], Yijun Wang[4], Tzyy-Ping Jung[4], Han-Ping D. Shieh[1]

▲ 6 Single-shot color digital holography based on spatial frequency-division multiplexing and space-bandwidth capacity-enhance
Kansai Univ. ○Tatsuki Tahara, Toru Kaku, Yasuhiko Arai

▲ 7 Fast Generation Method for Computer-Generated Hologram Animation with Hidden Surface Removal Using Ray Tracing Method.
OSA ○Ryosuke Watanabe, Yuji Sakamoto

▲ 8 **[INVITED] Efficient Autofocusing in Optical Scanning Holography (30min.)**
University of Hong Kong Siyang Li, ○Edmund Lam

Lunch 11:45 ～ 12:45

20p-C4 - 1 ～ 7

1 **[INVITED] Separating Reflective and Fluorescent Components using High Frequency Illumination in the Spectral Domain (30min.)**
National Inst. of Informatics[1], Univ. of Tokyo[2], Kyushu Inst. of Technology[3] Ying Fu[2], Antony Lam[1], ○Imari Sato[1], Takahiro Okabe[3], Yoichi Sato[2]

▲ 2 Computational image projection with extended depth-of-field and field-of-view: concept and implementations
Osaka Univ. ○(D)Tomoya Nakamura, Ryoichi Horisaki, Jun Tanida

▲ 3 System of crossed-mirror array to converge illumination light for culturing chlorella
University of Tokushima[1], Utsunomiya University[2] ○Ryosuke Kujime[1], Kouhei Miyamoto[1], Shiro Suyama[1], Hirosugu Yamamoto[2]

▲ 4 Controlled-release of single-stranded DNA based on photothermal effect using BHQ
Osaka Univ. ○(M1)Atsushi Onishi, Yusuke Ogura, Jun Tanida

▲ 5 **[INVITED] Computational Hyperspectral Imaging (30min.)**
Department of Automation, Tsinghua University ○Qionghai Dai, Chenguang Ma, Jinli Suo, Xun Cao

▲ 6 Supplementary Zones-surrounded Fresnel Zone Plate
NTU[1], NARL[2] Yen-Min Lee[1], Szu-Hung Chen[2], Pei-Chuen Chiou[1], Kuen-Yu Tsai[1], Tien-Tung Chung[1], Cheng-Han Tsai[1], Zhan-Yu Liu[1], ○Jia-Han Li[1]

▲ 7 Acquisition and display of reflectance field
Osaka Univ. ○Ryoichi Horisaki, Yusuke Tampa, Jun Tanida

18.7 Laser Photonics － XFEL and ultrafast optics －

9月17日 9:15 ～ 17:45

17a-C4 - 1 ～ 9

▲ 1 Cascaded Raman Scattering by a Q-switched and Mode-Locked pulses through Yb3+-doped Fiber Amplifier
National Taipei University of Technology ○Kuan-Cheng Liao, Ja-Hon Lin, Yin-Wen Lee

▲ 2 **[INVITED] Few-Cycle Parametric Amplifiers and Sub-Cycle Waveform Synthesizers (30min.)**
DESY Center for Free-Electron Laser Science[1], Physics Dept., Univ. of Hamburg[2], The Hamburg Center for Ultrafast Imaging[3], Dept. of Electrical Engineering and Computer Science and Research Lab. of Electronics, MIT[4], IFN-CNR, Dipartimento di Fisica, Politecnico di Milano[5] ○Oliver D. Muecke[1,3], Giovanni Cirmi[1,3], Shaobo Fang[1,3], Giulio M. Rossi[1,3], Shih-Hsuan Chia[1,3], Cristian Manzoni[5], Paolo Farinello[5], Giulio Cerullo[5], Franz X. Kaertner[1,2,3,4]

▲ 3 **[INVITED] Synthesis of Single-Cycle Optical Fields (30min.)**
Academia Sinica[1], National Tsing Hua University[2] ○Andy Kung[1,2]

▲ 4 Laser-induced electron diffraction with carrier-envelope phase-stabilized few-cycle pulses for extraction of elastic scattering cross sections
ISSP, U of Tokyo ○Henning Geiseler, Nobuhisa Ishii, Keisuke Kaneshima, Teruto Kanai, Jiro Itatani

Break 10:45 ～ 11:00

▲ 5 Nuclear Reaction by Laser Induced Proton Recollision
RIKEN Center for Advanced Photonics ○Katsumi Midorikawa, Erik Lötstedt

▲ 6 **[INVITED] Exploring Quantum-Classical Boundary by Ultrafast Optics (30min.)**
Institute for Molecular Science, National Institutes of Natural Sciences ○Kenji Ohmori

▲ 7 Tracking Vibrational Wavepackets of Nitrogen Molecules by XUV-Pump XUV-Probe with Momentum Imaging
RIKEN[1], Univ. Tokyo[2] ○Tomoya Okino[1], Yusuke Furukawa[1], A. Amani Eilanlou[1], Yasuo Nabekawa[1], Eiji J. Takahashi[1], Kaoru Yamanouchi[2], Katsumi Midorikawa[1]

▲ 8 Observation of Vibrational Wavepacket Evolution of H_2^+ by Time-Resolved Spectroscopy of HHG Pulses
RIKEN RAP[1], Univ. Tokyo[2] ○(PC)Yusuke Furukawa[1], Tomoya Okino[1], A. Amani Eilanlou[1], Yasuo Nabekawa[1], Eiji Takahashi[1], Kaoru Yamanouchi[2], Katsumi Midorikawa[1]

▲ 9 Vibrational wavepacket reconstruction with frequency-resolved optical gating technique
RIKEN[1], U. Tokyo[2] ○Yasuo Nabekawa[1], Yusuke Furukawa[1], Tomoya Okino[1], Abdolreza Amani Eilanlou[1], Eiji Takahashi[1], Kaoru Yamanouchi[2], Katsumi Midorikawa[1]

Lunch 12:30 ～ 13:45

17p-C4 - 1 13:45 ～ 14:45

1 **[OSA President's Lecture]**
Quantum Control in Strong Laser Fields（60min.）
Stanford University ○Philip Bucksbaum

Break 14:45 ～ 15:00

17p-C4 - 2 ～ 9

▲ 2 **[INVITED] Two-color XFEL operation at SACLA（30min.）**
RIKEN SPring-8 Center ○Toru Hara

▲ 3 Development of Hard X-Ray Split-Delay Optics Based on Si(220) Crystals
△ Osaka University[1], JASRI[2], RIKEN SPring-8 Center[3], The University of Tokyo[4] ○(D)Taito Osaka[1], Takashi Hirano[1], Yuichi Inubushi[2], Makina Yabashi[3], Yasuhisa Sano[1], Satoshi Matsuyama[1], Kensuke Tono[2], Takahiro Sato[4], Kanade Ogawa[3], Tetsuya Ishikawa[3]

▲ 4 **[INVITED] Two-photon process with X-ray free-electron laser(30min.)**
RIKEN SPring-8 Center ○Kenji Tamasaku

▲ 5 Ultra-fast Processes in Optically Excited $Ge_2Sb_2Te_5$ by Transient X-ray Diffraction Using a Free-Electron Laser
Nanoelectronics Research Institute, AIST[1], Institute of Applied Physics, University of Tsukuba[2], Paul-Drude-Institut fur Festkorperelektronik[3], RIKEN SPring-8, XFEL Research and Development Division[4], XFEL Project Head Office, Japan Synchrotron Radiation Research Institute[5] ○Kirill Mitrofanov[1,4], Paul Fons[1,4], Kotaro Makino[1], Ryo Terashima[2], Alexander Kolobov[1], Junji Tominaga[1], Alessandro Giussani[3], Raffella Calarco[3], Henning Riechert[3], Tetsuo Katayama[5]

Break 16:30 ～ 16:45

▲ 6 A Density Function Investigation of Excited-State effects due to Ultrafast Excitation in $Ge_2Sb_2Te_5$ Epitaxial Films
Nanoelectronics Research Institute, AIST[1], Institute of Applied Physics, University of Tsukuba[2], Paul-Drude-Institut fur Festkorperelektronik[3], RIKEN SPring-8, XFEL Research and Development Division[4], XFEL Project Head Office, Japan Synchrotron Radiation Research Institute[5] ○Paul Fons[1,4], Kirill Mitrofanov[1,4], Kotaro Makino[1], Ryo Terashima[2], Alexander Kolobov[1], Junji Tominaga[1], Alessandro Giussani[3], Raffella Calarco[3], Henning Riechert[3], Tetsuo Katayama[5]

▲ 7 Measurement of excitation and melting processes of the solid silicon surface excited by ultra short laser pulses
Tokai Univ.[1], Kyocera Corp[2], Yazaki Sogyo Corp[3] ○Takashi Yagi[1], Kenta Takakusaki[2], Ryo Inoue[3]

▲ 8 A Theoretical Investigation on Modulational Instability in non-instantaneous Saturable Nonlinear Media
PONDICHERRY UNIVERSITY ○(D)Nithyanandan Kanagaraj, Porsezian Kuppusamy

▲ 9 A Study on Super Continuum Generation in Exponential type Saturable Nonlinearity
PONDICHERRY UNIVERSITY ○(D)Nithyanandan Kanagaraj, Porsezian Kuppusamy

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18.8 Carbon Photonics

9 月 17 日 10:15 ～ 17:30

17a-C3 - 1 ～ 6

▲ 1 **[INVITED] Carbon-Based Optics and Photonics（30min.）**
Rice University ○Junichiro Kono

▲ 2 Ultrahigh-speed Light Emitters Based on Carbon nanotubes
Keio University ○Hideyuki Maki, Tatsuya Mori, Yohei Yamauchi, Satoshi Honda

▲ 3 Tuning Microstructure and Nanostructure of Single-Walled Carbon Nanotubes for Solar Cells Applications
Department of Mechanical Engineering, The University of Tokyo ○Kehang Cui, Rong Xiang, Shohei Chiashi, Shigeo Maruyama

Break 11:15 ～ 11:30

▲ 4 **[INVITED] Single Carbon Nanotube Devices for Integrated Photonics（30min.）**
Inst. Eng. Innov., Univ. Tokyo ○Yuichiro Kato

▲ 5 A New Simulation Method of Graphene-Coated SOI Wire Waveguides
Research Center for Advanced Science and Technology (RCAST), The University of Tokyo ○(M1)Goran Kovacevic, Shinji Yamashita

▲ 6 In situ Observation of Ni Catalyzed Bamboo-like Carbon Nanotubes
△ Growth by Current-Induced Annealing
Nagoya Inst. of Tech.[1], Univ. Pend. Sultan Idris[2], Univ. Putra Malaysia[3], Univ. Teknologi Malaysia[4] ○Mohamad Saufi Rosmi[1,2], Yazid Yaakob[1,3], Mohd Zamri Mohd Yusop[1,4], Golap Kalita[1], Tanemura Masaki[1]

Lunch 12:30 ～ 13:45

OSA President Special Lecture 13:45 ～ 14:45

Break 14:45 ～ 15:00

17p-C3 - 1 ～ 7

▲ 1 **[INVITED] Band nesting and photocarrier relaxation in group 6 transition metal dichalcogenide（30min.）**
National University of Singapore ○Goki Eda

▲ 2 Modulation of Photoluminescence Properties of Monolayer Transition Metal Dichalcogenides via Chemical Doping
Institute of Advanced Energy, Kyoto University[1], Japan Science and Technology Agency, PRESTO[2], Graduate School of Science, Nagoya University[3] ○Shinichiro Mouri[1], Yuhei Miyauchi[1,2,3], Kazunari Matsuda[1]

▲ 3 Photo-induced anomalous Nernst effects in transition metal dichalcogenides
Univ. of Tsukuba[1], Tokyo Univ. of Science[2], JST, CREST[3] ○Satoru Konabe[1,3], Takahiro Yamamoto[2]

Break 16:00 ～ 16:15

▲ 4 **[INVITED] Nanoscale Raman imaging and analysis of strain distribution in carbon nanotube（30min.）**
Tokyo Inst. Tech.[1], RIKEN[2], Chuo Univ.[3], Osaka Univ.[4]
○Taka-aki Yano[1], Taro Ichimura[2], Shota Kuwahara[3], Prabhat Verma[4], Satoshi Kawata[2,4]

▲ 5 An Improved Self-Aligned Ohmic-Contact Process for Graphene-Channel Field-Effect Transistors
RIEC, Tohoku Univ. ○(M2)Hussin Mastura, Kenta Sugawara, Tetsuya Suemitsu, Taiichi Otsuji

▲ 6 3D microstructures made of aligned carbon nanotube/polymer
△ composites fabricated by two photon polymerization lithography
Department of Applied Physics, Osaka University[1], Department of Engineering Science, The University of Electro-Communications[2], Department of Electrical and Computer Engineering, Rice University[3] ○Shota Ushiba[1], Satoru Shoji[2], Kyoko Masui[1], Junichiro Kono[3], Satoshi Kawata[1]

▲ 7 Investigation of gold-graphene surface plasmon resonance biosensor
Nano3 i-kohza, Malaysia- Japan International Institute of Technology (MJIIT), Universiti Teknologi Malaysia[1], 2Nanotechnology Research Center, Nanoelectronic group, Physics Department, Faculty of Science, Urmia University[2] ○(DC)Hamid Toloue[1], Anthony Centeno[1], Mohammad Taghi Ahmadi[2]

コードシェアセッション

3.5 レーザー装置・材料，3.14 光制御デバイス・光ファイバのコードシェアセッション

9 月 19 日 9:00 ～ 12:00

19a-C8 - 1 ～ 11

1 PPMgLN 素子の大口径化および高ビーム品質化検討
分子研 ○石月秀貴，平等拓範

2 PPMgSLT シングルパス波長変換による >10W 532nm CW 発生
オキサイド 畑野秀樹，冨張康弘，今井浩一，茂手木浩，○廣橋淳二，羽鳥正美，牧尾 論，星 正幸，古川保典

3 PP-LBGO デバイスによる 355nm 300mW 発生
オキサイド[1]，東北大学際研[2]，早大材研[3] ○廣橋淳二[1]，谷内哲夫[2]，羽鳥正美[1]，坂入光佳[1]，松倉 誠[1]，竹川俊二[1]，今井浩一[1]，茂手木浩[1]，牧尾 論[1]，宮澤信太郎[1,3]，古川保典[1]

4 非線形光学結晶 YAl3(BO3)4 の育成と評価
オキサイド[1]，早大材研[2] ○宮本晃男[1]，宮澤信太郎[1,2]，古川保典[1]

5 CsB_3O_5の位相整合温度特性
千歳科技大[1]，阪大院工[2] ○梅村信弘[1]，吉村政志[2]，森 勇介[2]，加藤 洌[1]

休 憩 10:15 ～ 10:30

6 無添加及び Mg 添加定比組成 $LiTaO_3$の Sellmeier 方程式の導出
中央大[1]，オキサイド[2] ○加藤大樹[1]，貫 彰太[1]，郡司大輔[1]，庄司一郎[1]，福井達雄[2]，古川保典[2]

△ 7 光軸反転 β-BaB_2O_4デバイスによる深紫外光渦発生
千葉大院融合科学[1]，中央大理工[2]，JST-CREST[3] ○佐々木佑太[1]，宮本克彦[1]，庄司一郎[2]，尾松孝茂[1,3]

△ 8 欠陥低減による $CsLiB_6O_{10}$結晶の紫外光経時劣化耐性の向上
阪大院工 ○増田一稀，高千穂慧，高橋義典，吉村政志，佐々木孝友，森 勇介

9 CLBO 結晶を用いた注入同期 ArF エキシマレーザ用狭帯域高出力 193nm 固体レーザシステムの開発
ギガフォトン[1]，東大物性研[2] ○五十嵐裕紀[1]，玄 洪文[2]，趙 智剛[2]，伊藤紳二[1]，柿崎弘司[1]，小林洋平[2]

10 高平均出力 Nd:YAG パルスレーザーによる 3 倍高調波発生
阪大レーザー研 ○椿本孝治，吉田英次，藤田尚徳，宮永憲明

11 高コヒーレンス 193 nm 固体レーザーの開発
東理大総研[1]，阪大レーザー研[2]，ギガフォトン[3] ○中里智治[1]，坪井瑞樹[2]，小野瀬貴士[3]，田中佑一[1]，猿倉信彦[2]，伊藤紳二[3]，柿崎弘司[3]，渡部俊太郎[1]
