Advance Lasers and Photon Sources'14

ALPS'14

Tuesday, April 22

15:55-16:00 Opening Room 301+302

Opening Remarks

15:55 F. Kannari, Keio Univ., Japan

16:00-18:00 ALPS1 : Photonic Researches in Asia Room 301+302

Chair: F. Kannari, Conference Chair of ALPS'14, Keio Univ., Japan

ALPS1-1 16:00 **(Invited) Generation of Few-cycle Infrared Pulses from Degenerate Dual-pump OPCPA**
P. Lu
Huazhong Univ., China

ALPS1-2 16:30 **(Invited) Attosecond-jitter Ultrafast Lasers and Their Applications**
J. Kim
KAIST, Korea

ALPS1-3 17:00 **(Invited) High Power Red Semiconductor Laser for Display Application**
T. Yagi, K. Kuramoto, H. Mitsuyama, and K. Kadoiwa
Mitsubishi Electric Corp., Japan

Wednesday, April 23

9:00-12:30 ALPS2: High Peak Power Lasers Room 301

Chair: H. Kiriyama, Program Committee Member
Japan Atomic Energy Agency, Japan

ALPS2-1 9:00 **(Invited) High Peak Power Laser System Based on Hybrid CPA and OPCPA Amplification**
X. Liang
Shanghai Institute of Optics and Fine Mechanics Chinese Academy, China

ALPS2-2 9:30 **X-ray Coherent Mirage Phenomenon in Two-Stage X-ray Lasers**
T. Pikuz[1,2)], A. Faenov[1,2)], S. Magnitskyi[3)], N. Nagorskyi[2)], M. Tanaka[1)], M. Ishino[1)], M. Nishikino[1)], Y. Fukuda[1)], M. Kando[1)], Y. Kato[4)], and T. Kawachi[1)]
[1)] Japan Atomic Energy Agency, Japan, [2)] Russian Academy of Sciences, Russia, [3)]Moscow State Univ., Russia [4)] The Graduate School for the Creation of New Photonics Industries, Japan

ALPS2-3 9:45 **HiLASE Multislab 100 J/10 Hz Laser System**
A. Lucianetti, M. Divoky, O. Slezak, M. Sawicka, J. Pilar, V. Jambunathan, and T. Mocek
HiLASE Project, Institute of Physics ASCR, Czech Republic

ALPS2-4 10:00 **Insertable Pulse Cleaning Module for High-intensity Ultrashort-pulse Lasers**
A. Yogo[1,2)], K. Kondo[1)], M. Mori[1)], H. Kiriyama[1)], K. Ogura[1)], T. Shimomura[1)], N. Inoue[3)], Y. Fukuda[1)], H. Sakaki[1)], S. Jinno[1)], M. Kanasaki[1,4)], and P. R. Bolton[1)]
[1)]Japan Atomic Energy Agency, Japan, [2)]Osaka Univ., Japan, [3)]Hitachi Zosen Co., Japan, [4)] Kobe Univ., Japan

ALPS2-5 10:15 **(Invited) Development of High Contrast 0.1 Hz 4 PW CPA Laser**
S. K. Lee[1,2)], J. H. Sung[1,2)], T. M. Jeong [1,2)], and C. H. Nam[1,2)]
[1)]Institute for Basic Science, Republic of Korea [2)] Gwangju Institute of Science and Technology, Republic of Korea

9:00-12:30 ALPS3: Optical Frequency Comb Room 418

Chair: H. Inaba, Program Committee Member, AIST, Japan

ALPS3-1 9:00 **(Invited) Graphene Devices for Ultra-low Noise Optical Frequency Combs**
C.-C. Lee and T. R. Schibli
Univ. Colorado at Boulder, USA

ALPS3-2 9:30 **Research on Key Technologies of High Repetition Rate Optical Frequency Comb**
X. Wang and Y. Hu
Beijing Institute of Technology, China

ALPS3-3 9:45 **A Novel Narrow-linewidth Laser System for Optical Clocks by Stabilization to an Optical Frequency Comb**
K. Hosaka, S. Okubo, H. Inaba, D. Akamatsu, M. Yasuda, A. Onae, and F.-L. Hong
AIST, Japan

ALPS3-4 10:00 **Optical Frequency Comb Using Stretched Pulse Mode-locked Er-doped Ultrashort Pulse Fiber Laser Using Carbon Nanotube Polyimide Film**
T. Nagaike[1)], M. Aramaki[1)], Y. Sakakibara[2)], E. Omoda[2)], H. Kataura[1)], and N. Nishizawa[1)]
[1)]Nagoya Univ., Japan, [2)]AIST, Japan

ALPS3-5 10:15 **RF Noise Measurement of a Microcavity Kerr Comb Generated by Dual Pumping**
R. Suzuki, T. Kato, T. Kobatake, and T. Tanabe
Keio Univ., Japan

ALPS3-6 10:30 **Ultra-Broadband Dual-comb Spectroscopy of C_2H_2**
K. Iwakuni[1)], S. Okubo[2)], H. Inaba[2)], K. Hosaka[2)], A. Onae[2)], H. Sasada[1)], and F.-L. Hong[2)]

[1)]Keio Univ., Japan, [2)]AIST, Japan

----- Break (10:45-11:15)-----

ALPS2: High Peak Power Lasers (cont.) Room 301

Chair: N Miyanaga, Program Committee Member, Osaka Univ., Japan

ALPS2-6 11:15 **(Invited) The Apollon 10 PW Project: An Upcoming Ultra Intense Facility**
J. P. Zou[1)], C. L. Blanc[1)], D. N. Papadopoulos[1)], G. Chériaux[2)], P. Georges[3)], G. Mennerat[4)], F. Druon[3)], A. Pellegrina[1,3)], P. Ramirez[1,3)], F. Giambruno[1,2)], A. Fréneaux[1,2)], F. Leconte[1,2)], D. Badarau[1)], J.M. Boudenne[1)], P. Audebert[1)], D. Fournet[1)], T. Valloton[1)], C. Greverie[1)], J. L. Paillard[1)], J. L. Veray[1)], M. Pina[1)], P. Monot[4)], P. Martin[4)], F. Mathieu[1)], J. P. Chambaret, and F. Amiranoff[1)]
[1)]Laboratoire pour l'Utilisation des Lasers Intenses, CNRS, Ecole Polytechnique, Palaiseau, France, [2)]Laboratoire d'Optique Appliquée, ENSTA ParisTech, CNRS, Palaiseau, France, [3)]Laboratoire Charles Fabry, Institut d'Optique, CNRS, Univ Paris Sud, Palaiseau, France, [4)]CEA, Iramis, SPAM, Saclay, France

ALPS2-7 11:45 **First-principles Description of the Optical Response of α-quartz Exposed to Ultrashort Intense Laser Pulses**
K.-M. Lee[1)], C. M. Kim[1,2)], S. A. Sato[3)], T. Otobe[4)], Y. Shinohara[3,5)], K. Yabana[3)], and T. M. Jeong[1,2)]
[1)]Gwangju Institute of Science and Technology, Republic of Korea, [2)]Institute of Basic Science, Republic of Korea, [3)]Univ. Tsukuba, Japan, [4)]Japan Atomic Energy Agency, Japan, [5)]Max-Planck-Institute für Mikrostrukturphysik, Germany

ALPS2-8 12:00 **Yb^{3+}-doped Lu_2O_3 Ceramic Thin-disk Laser**
H. Nakao[1)], T. Inagaki[1)], A. Shirakawa[1)], K. Ueda[1)], H. Yagi[2)], and T. Yanagitani[2)]
[1)]Univ. Electro-Communications, Japan, [2)]Konoshima Chemical Co., Ltd., Japan

ALPS2-9 12:15 **High-Pulse-Energy Yb:YAG Thin Disk Kerr-lens Mode-locked Oscillator for Intra-cavity High Harmonic Generation**
N. Kanda[1,2)], A. A. Eilanlou[1)], T. Imahoko[3)], T. Sumiyoshi[3)], Y. Nabekawa[1)], M. K.-Gonokami[2)], and K. Midorikawa[1,2)]
[1)]RIKEN, Japan, [2)]Univ. Tokyo, Japan, [3)]Cyber Laser Inc., Japan

11:15-12:30 ALPS4 : Pulse Shaping Room 418

Chair: Y. Kobayashi, Program Committee Member, Univ. Tokyo, Japan

ALPS4-1 11:15 **(Invited) High-energy Optical Parametric Waveform Synthesizer**
O. D. Mücke[1,3)], G. Cirmi[1,3)], S. Fang[1,3)], G. M. Rossi[1,3)], S.-H. Chia[1,3)], F. X. Kärtner[1-4)], C. Manzoni[5)], P. Farinello[5)], and G. Cerullo[5)]
[1)]Deutsches Elektronen-Synchrotron DESY, Germany, [2)]Univ. Hamburg, Germany, [3)]The Hamburg Center for Ultrafast Imaging, Germany [4)]Massachusetts Institute of Technology, USA, [5)]IFN-CNR, Italy

ALPS4-2 11:45 **Long-term Stable Passive Synchronization between Two-color Mode-locked Lasers with Temperature Stabilization**
D. Yoshitomi and K. Torizuka
AIST, Japan

ALPS4-3 12:00 **Generation and Pulse Shaping of Ultrashort Infrared Pulses through Different Frequency Mixing using Polarization Shaped Super-Continuum Pulses**
R. Fujii, F. Isa, K. Yoshikiyo, K. Hirosawa, and F. Kannari
Keio Univ., Japan

ALPS4-4 12:15 **Phase-locked Raman sidebands generated by two-phonon interference**
H. Nishioka
Univ. Electro-Communications, Japan

----- Lunch Break (12:30-13:30)-----

13:30-15:00 ALPS5 : Nonlinear Optics Room 301

Chair: H. Minamide, Steering Committee Member, RIKEN, Japan

ALPS5-1 13:30 **(Invited) Quality Evaluation of Quasi-phase-matching Devices by Simple Diffraction Measurement**
P. P. Dwivedi, H. J. Choi, B. J. Kim, and M. Cha
Pusan National Univ., Republic of Korea

ALPS5-2 14:00 **Difference Frequency Generation in MgO:PPLN with a Thermal Waveguide**
I.-H. Bae[1)], H. S. Moon[2)], S. K. Kim[1)], and D.-H. Lee[1)]
[1)]KRISS, Republic of Korea, [2)]Pusan National Univ., Republic of Korea

ALPS5-3 **Suppression of Parasitic Green Light in Optical**

13:30-17:30 ALPS7: Photon Science Room 418

Chair: Y. Kato, The Graduate School for the Creation of New Photonics Industries, Japan

ALPS7-1 13:30 **(Invited) Time-domain Multiplexing for Hybrid Quantum Information Processing**
A. Furusawa
Univ. Tokyo

ALPS7-2 14:00 **(Invited) The Progress on the Optical Frequency Standard of Trapped and Cold Ca^+**
K. Gao
China Academy of Sciences, China

14:15 **Parametric Oscillator by Engineered Quasi-Phase-Matching Structures**
H. H. Lim[1)], S. Kurimura[1)], and N. E. Yu[2)]
[1)]NIMS, Japan, [2)] Gwangju Institute of Science and Technology, Republic of Korea

ALPS5-4 14:30 **Laser-induced Breakdown and Damage Generation in Second Harmonic Generation by Periodically Poled $LiTaO_3$ Crystal**
O. A. Louchev[1)], H. Hatano[2)], N. Saito[1)], S. Wada[1)], and K. Kitamura[2)]
[1)]RIKEN, Japan, [2)]NIMS, Japan

ALPS5-5 14:45 **Dispersion Tolerance of Phase Sensitive Amplifier using PPLN waveguide**
M. Asobe[1)], T. Umeki[2)], and H. Takenouchi[2)]
[1)]Tokai Univ. Japan, [2)]NTT Photonics Labs., Japan

ALPS7-3 14:30 **Ultrafast Coherent Control Meets Ultracold Systems**
N. Takei[1,2,3)], C. Sommer[1,2,3)], H. Goto[1)], K. Koyasu[1,2,3)], H. Chiba[1,3,4)], Y. Okano[1)], G. Pupillo[3,5)], C. Genes[3,6)], M. Weidemüller[3,7)], and K. Ohmori[1,2,3)]
[1)]NINS, Japan, [2)]SOKENDA, Japan, [3)]CREST-JST, Japan, [4)]Iwate Univ., Japan, [5)]Univ. Strasbourg and CNRS, France, [6)]Univ. Innsbruck, Austria, [7)]Univ. Heidelberg, Germany

ALPS7-4 14:45 **Lifetime Measurement for Autoionizing Transition with Isolated Attosecond Pulse**
H. Mashiko[1)], T. Yamaguchi[1,2)], K. Oguri[1)], A. Suda[2)], and H. Gotoh[1)]
[1)]NTT Basic Research Labs., Japan, [2)]Tokyo Univ. Science, Japan

----- Break (15:00-15:30) -----

15:30-17:45 ALPS6 : THz Light Sources Room 301

Chair: H. Nishioka, Steering Committee Chair, Univ. Electro-Communications., Japan

ALPS6-1 15:30 **(Invited) THz Wave Generation Using Quasi-phase Matched Devices**
N. E. Yu
Gwangju Institute of Science and Technology, Republic of Korea

ALPS6-2 16:00 **Effective THz Detection Using a Periodically Poled $LiNbO_3$**
K. Nawata[1)], T. Notake[1)], H. Ishizuki[2)], F. Qi[1)], Y. Takida[1)], S. Fan[1)], S. Hayashi[1)], T. Taira[2)], and H. Minamide[1)]
[1)]RIKEN, Japan, [2)]NINS, Japan

ALPS6-3 16:15 **Coherent Monochromatic Terahertz-wave Pulse Detection by using Nonlinear Parametric Up-conversion**
S. Hayahi[1)], K. Nawata[1)], K. Kawase[2,1)], and H. Minamide[1)]
[1)]RIKEN, Japan, [2)]Nagoya Univ., Japan

ALPS6-4 16:30 **Effects of Bias Voltage in THz Wave Generations using a Laser Chaos**
F. Kuwashima[1)], T. Shirao[1)], M. Tani[2)], K. Kurihara[2)], M. Hangyo[3)], T. Nagashima[3)]
[1)]Fukui Univ. of Technology, Japan, [2)]Univ. Fukui, Japan, [3)]Osaka Univ., Japan

ALPS6-5 16:45 **Laser Pulse Duration Dependence of THz Emission from Laser Produced Cluster Plasmas**
K. Mori[1)], M. Hashida[1)], T. Nagashima[2)], S. Inoue[1)], S. Tokita[1,2)], M. Hangyo[2)], and S. Sakabe[1)]
[1)]Kyoto Univ., Japan, [2)]Osaka Univ., Japan

ALPS6-6 17:00 **Ultra-broadband Terahertz Time-domain Spectroscopic Ellipsometry**
M. Yamashita, H. Takahashi, and C. Otani
RIKEN, Japan

ALPS6-7 17:15 **Terahertz-wave Balanced Detection at Room Temperature for Precise Frequency-resolved Measurement**
Y. Takida, T. Notake, K. Nawata, F. Qi, S. Fan, S. Hayashi, and H. Minamide
RIKEN, Japan

ALPS6-8 **Parabolic Pulse Amplification using**

ALPS7: Photon Science (cont.) Room 418

Chair: Y. Nagata, Steering Committee Member, RIKEN, Japan

ALPS7-5 15:30 **(Invited) Ultrafast Probing of Molecules by Pump-probe Coincidence Momentum Imaging and Laser Assisted Electron Diffraction**
K. Yamanouchi,
Univ. Tokyo

ALPS7-6 16:00 **(Invited) Generation of Coherent Continua in Soft X Rays using a Carrier-envelope Phase-controlled Few-cycle Infrared Light Source**
N. Ishii[1)], K. Kaneshima[1)], H.Geiseler[1)], K. Kitano[1)], T. Kanai[1)], S. Watanabe[2)], and J. Itatani[1)]
[1)]Univ. Tokyo, [2)]Tokyo Univ. Science

ALPS7-7 16:30 **(Invited) Monolithic Ge Lasers for Si CMOS**
J. Michel, Y. Cai, Z. Han, L. Zhang, W. Yu, and L. C. Kimerling
Massachusetts Institute of Technology, USA

ALPS7-8 17:00 **(Invited) SPASER (Plasmonic Laser And Amplification)**
M. Stockman
Georgia State Univ., USA

17:30 **Double-clad Yb-doped Fiber Toward High-power THz Generation**
J. Hamazaki[1)], H. Mogi[2)], N. Sekine[1)], S. Ashihara[2)], and I. Hosako[1)]
[1)]NICT, Japan, [2)]Tokyo Univ. Agriculture and Technology, Japan

Thursday, April 24

9:00-12:30 ALPS8: High Power Lasers Room 301
Chair: S. Sakabe, Program Committee Member, Kyoto Univ., Japan

ALPS8-1 9:00 **Thermal-lens-free Cooling Concept Alternatives for High Peak/High Average Power Solid State Lasers**
K.-I. Ueda[1-5)]
[1)]Univ. Electro-Communications, Japan, [2)]Osaka Univ., Japan, [3)]Hamamatsu Photonics K.K., Japan, [4)]Institute of Applied Physics, Russia, [5)]Toyota Physical and Chemical Research Institute, Japan

ALPS8-2 9:15 **High Peak Power Sub-100 fs Diode-Pumped Yb-ion Lasers: Going from kW to MW**
H. Zhao and A. Major
Univ. Manitoba, Canada

ALPS8-3 9:30 **Toward a Compact High-energy Femtosecond Oscillator**
D. H. Song[1)], W. B. Cho[1)], H. W. Lee[1)], D. H. Shin[1)], D.-K. Ko[2)], and M. Y. Jung[1)]
[1)]Electronics and Telecommunications Research Institute, Republic of Korea, [2)]Gwangju Institute of Science and Technology, Republic of Korea

ALPS8-4 9:45 **Power Scaling in Diode-end-pumped Nd:YVO_4 Laser with Multiple Doping Concentrations**
Y.-J. Huang, K.-W. Su, and Y.-F. Chen
National Chiao Tung Univ., Taiwan

ALPS8-5 10:00 **Femtosecond Mode-locked Nd^{3+}-doped $Ba(Zr,Mg,Ta)O_3$ Ceramic Laser**
Y. Higashi[1)], T. Tomita[1)], J. Fuse[1)], H. Nakao[1)], A. Shirakawa[1)], K. Ueda[1)], A. A. Kaminskii[2)], S. Kuretake[3)], Y. Kintaka[3)], K. Murayama[3)], and N. Tanaka[3)]
[1)]Univ. Electro-Communications, Japan, [2)]Russian Academy of Sciences, Russia, [3)]Murata Manufacturing Co., Ltd., Japan

ALPS8-6 10:15 **High Power Nd:YAG Ceramic Thin Disc Laser for Advanced Laser Machining**
H. Fujita[1)], K. Iyama[1,3)], K. Tsubakimoto[1)], H. Yoshida[1)], M. Fujita[2)], N. Miyanagaa[1)], and T. Kawashima[3)]
[1)]Osaka Univ. Japan, [2)]Institute for Laser Technology, Japan, [3)]Hamamatsu Photonics K.K., Japan

----- Break (10:30-11:00)-----

ALPS8: High Power Lasers (cont.) Room 301
Chair: A. Suda, Steering Committee Member, Tokyo Univ. of Science, Japan

ALPS8-7 11:00 **(Invited) High-Power and High-efficiency 9xx-nm Laser Diodes for Pumping Applications**
T. Morita, N. Kageyama, T. Nagakura, K. Torii, M. Takauji, J. Maeda, and H. Yoshida
Hamamatsu Photonics K.K., Japan

9:00-10:45 ALPS9: Bio-photonics Room 418
Chair: T. Kushibiki, National Defense Medical College, Japan

ALPS9-1 9:00 **(Invited) Nonlinear Coherent Raman Imaging using Fast and Wide Spectral Tuning Mode-locked Laser**
M. Hashimoto
Osaka Univ., Japan

ALPS9-2 9:30 **Saturated Excitation (SAX) Microscopy with an Optimized Excitation Modulation for 3D Sub-diffraction-limit Imaging**
Y. Yonemaru, M. Yamanaka, K. Uegaki, N. I. Smith, S. Kawata, and K. Fujita
Osaka Univ., Japan

ALPS9-3 9:45 **Some Information of Laser Induced-sound Vibration Properties in Biological Tissue**
S. Sano, K. Kashima, and Y. Hashishin
Kinki Univ, Japan

ALPS9-4 10:00 **Femtosecond Laser Treatment of Neovascularizations in Norway Brown Rat Cornea: *In-vivo***
M. S. Sidhu1[2)], H.-S. Lee[1)], S.-C. Jeoung[1)]
[1)]Korea Research Institute of Standard and Science, Republic of Korea, [2)]Univ. Science and Technology, Republic of Korea

ALPS9-5 10:15 **Necessity of Two Photon Technology in Optogenetics**
T. Kushibiki, S. Okawa, T. Hirasawa, and M. Ishihara
National Defense Medical College, Japan

ALPS9-6 10:30 **Investigation of Optimal Pulse Structure of Quantum Cascade Laser with Peak Wavelength of 5.7 μm for Less-invasive Ablation of Atherosclerotic Plaques**
K. Hashimura, K. Ishii, and K. Awazu
Osaka Univ., Japan

----- Break (10:45-11:15)-----

11:15-12:15ALPS10: High energy lasers Room 418
Chair: K. Oguri, Program Committee Member, NTT Basic Research Labs.

ALPS10-1 11:15 **Single-shot Diffractive Imaging at 13.9 nm**
K. H. Lee[1)], H. Yun[1)], J. H. Sung[1,2)], S. K. Lee[1,2)],

T. M. Jeong[1,2], H. T. Kim[1,2], and C. H. Nam[1,2]
[1)]Institute for Basic Science, Republic of Korea, [2)]Gwangju Institute of Science and Technology, Republic of Korea

ALPS8-8 11:30 **High-gain and High-peak-power Operation of a Yb:YAG Planar Waveguide Laser Amplifier**
T. Takasaki, Y. Watanabe, and T. Yanagisawa
Mitsubishi Electric Corp., Japan

ALPS8-9 11:45 **180 W of High Average Power at 1 kHz, 532 nm from Nd:YAG Laser in Long Term Operation**
Y. Tamaoki[1,2], Y. Kato[1,2], K. Iyama[1,2], T. Kawashima[1,2], and N. Miyanaga[3)]
[1)]Hamamatsu Photonics K.K., Japan, [2)]Advanced Laser and Process Technology Research Association (ALPROT), Japan, [3)]Osaka Univ., Japan

ALPS8-10 12:00 **Q-switched Operation of Nd:YAG Vortex Lasers**
D.J.Kim, and J.W.Kim
Hanyang Univ. Ansan, Republic of Korea

ALPS8-11 12:15 **A Femtosecond Ti:Sapphire Laser Pumped Directly with a Green Diode Laser**
A. Hosaka, S. Sawai, K. Hirosawa, and F. Kannari
Keio Univ., Japan

ALPS10-2 11:30 **Sub-mW Vacuum-UV Harmonic Source for Pump-probe Photoelectron Imaging**
S. Adachi[1,2], M. Sato[1)], Y.-I. Suzuki[1)], T. Suzuki[1,2]
[1)]Kyoto Univ., Japan, [2)]RIKEN, Japan

ALPS10-3 11:45 **Coherent Muonium Lyman-α Resonance Radiation Source Based on a Diode-pumped Fiber and Solid-state Laser System**
N. Saito[1)], Y. Oishi[2)], K. Miyazaki[1)], K. Okamura[1)], O. A. Louchev[1)], M. Iwasaki[2)], and S. Wada[1)]
[1)]Center for Advanced Photonics, Japan, [2)]RIKEN, Japan

ALPS10-4 12:00 **Development of High Sensitive Laser Absorption Spectroscopy for Plasma Wind Tunnel using High Power Laser**
R. Morita, M. Matsui , and Y. Yamagiwa
Shizuoka Univ., Japan

----- Lunch Break & Poster Session (12:30-15:15)-----

15:15-17:15 ALPS11: Fiber Lasers Room 301
Chair: N. Nishizawa, Program Committee Chair, Nagoya Univ.,Japan

ALPS11-1 15:15 **(Invited) High-power Divided Pulse Amplification of Er-Doped Fiber Laser**
Q. Ru, Z. Zeng, L. Li, W. Li, and H. Zeng
East China Normal Univ., China

ALPS11-2 15:45 **(Invited) High Power Mid IR Fiber Frequency Combs**
M. E. Fermann, K. Lee, A. Mills, J. Jiang, and C. Mohr
IMRA America Inc., USA

ALPS11-3 16:15 **Phase-locked Q-switched Multicore Fiber Laser with Saturable Absorber**
K. Sato, T. Kubouchi, H. Yamada, and A. Shirakawa
Univ. Electro-Communications, Japan

ALPS11-4 16:30 **Power-Maximized Broadband Wavelength-swept Fiber Optical Parametric Oscillator**
J. Lei and S.Yamashita
Univ. Tokyo,

ALPS11-5 16:45 **Improvement of Sensitivity and Penetration Depth in Ultrahigh-resolution Optical Coherence Tomography using High Power Supercontinuum Source at 1.7 μm Wavelength**
H. Kawagoe[1)], S. Ishida[1)], M. Aramaki[1)], Y. Sakakibara[2)], E. Omoda[2)], H. Kataura[2)], and N. Nishizawa[1)]
[1)]Nagoya Univ., Japan, [2)]AIST, Japan

ALPS11-6 17:00 **Recent Progress on Kumgang Laser – 0.4 J/10 kHz/10 ns (4 kW) Coherent Beam Combination Laser using Self-controlled Stimulated Brillouin Scattering Phase conjugate mirrors (SBS-PCMs)**
H. J. Kong[1)], S. Park[1)], S. Cha[1)], J. S. Kim[2)], and B. J. Lee[3)]
[1)]KAIST, Republic of Korea, [2)]Laser Spectronix, Republic of Korea [3)]HGU, Republic of Korea

17:15-17:45 Closing Room 301
Closing Remarks & Best Poster Presentation Award
17:15 N. Nishioka, Univ. Electro-Communications, Japan

13:00-15:00 ALPS: Poster Session Exhibition Hall C

ALPS-p01 **High-peak and High-average-power Linearly Polarized Tunable CW and Q-switched Lasers Based on Yb-doped Rod PCF**
H. Yoshida, K. Tsubakimoto, H. Fujita, and N. Miyanaga
Osaka Univ., Japan

ALPS-p02 **Characteristics of a Talbot Cavity for Coherent Combination of a Laser-diode-array-pumped Nd:YVO_4 Waveguide Laser Array**
K. Hirosawa[1)], F. Kannari[1)], and T. Yanagisawa [2)]
[1)]Keio Univ., Japan, [2)]Mitsubishi Electric, Japan

ALPS-p03 **Filled-aperture, Single detector Coherent Beam Combining Technique Using Simple Algorithms**
H. Chosrowjan[1,3)], S. Taniguchi[1,3)], M. Fujita[1,2,3)], K. Tsubakimoto[2)], H. Yoshida2), N. Miyanaga2), and Y. Izawa[1)]
[1)]Institute for Laser Technology, Japan, [2)]Osaka Univ., Japan, [3)]ALPROT, Japan

ALPS-p04 **335 W, 15 kHz, 4.8 ns Green Laser from Harmonic Converted Nd:YAG MOPA**
K. Tsubakimoto, H. Yoshida, H. Fujita, and N.

Miyanaga
Osaka Univ., Japan

ALPS-p05 **Motheye Optics utilizing Nanoimprint**
S. Endoh and N. Kaneko
Dexerials Corp., Japan

ALPS-p06 **Calorimetric Measurement for Tandem Pumped Ytterbium Doped Fiber Amplifiers**
H. Jeong[1)], Y. Chang[2)], and J. Nilsson[2)]
[1)]Korea Institute of Industrial Technology, Republic of Korea, [2)]Univ. Southampton, UK

ALPS-p07 **Temperature Dependences of Small Signal Gain for Nd/Cr:YAG Ceramic**
Y. Honda[1)], S. Motokoshi[2)], T. Jitsuno[1)], N. Miyanaga[1)], K. Fujioka[1)], M. Nakatsuka[2)], M. Yoshida[3)]
[1)]Osaka Univ., Japan [2)]Institute for Laser Technology, Japan, 3)Kinki Univ., Japan

ALPS-p08 **Recyclable Air Fuel Cells Using Sintered Mg Nanopastes for Solar Energy Cycle**
T. Saiki[1)], S. Uchida[2)], T. Karita[1)], K. Nakamura[1)], Y. Nishikawa[1)], S. Taniguchi[3)], and Y. Iida[1)]
[1)]Kansai Univ., Japan, [2)]The Graduate School for the Creation of New Photonics Industries, Japan, [3)]Institute for Laser Technology, Japan

ALPS-p09 **Laser Sintering of Nanopastes with Reduced Metal Nanoparticles Prepared by Laser Ablation in Liquids**
T. Saiki, M. Yoshida, Y. Koga, K. Ri, and Y. Iida
Kansai Univ., Japan

ALPS-p10 **Influence of Sweep Frequency on Sensitivity Enhancement of Wavelength Modulation Spectroscopy for Laser Plasma Diagnostics**
Y. Sato, R. Morita, M. Matsui, and Y. Yamagiwa
Shizuoka Univ., Japan

ALPS-p11 **Amplification of High Repetitive Pulse Laser Using Nd/Cr:YAG Ceramic Active Mirror Amplifier**
Y. Nishino, T. Saiki, T. Nakamachi, K. Fujioka, M. Nakatsuka, and Y. Iida
Kansai Univ., Japan

ALPS-p12 **Passively Q-switched Pr^{3+}:YLF Laser with Cr^{4+}:YAG Saturable Absorber and Intracavity Frequency Doubling**
H. Tanaka, R.Kariyama, J. Kojou, and F. Kannari
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ALPS-p13 **Ultrashort Pulse VUV Laser System with an OFI Ar_2^* Amplifier**
M. Kaku, T. Daikyuji, M. Katto, S. Kubodera
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ALPS-p14 **Direct Writing of Waveguides in Pr:ZBLAN Glass with Femtosecond Laser Pulses**
Y. Yamanaka, K. Hirosawa, and F. Kannari
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ALPS-p15 **Evaluation of IR Laser Processing Properties for Organic Thin Film**
S. Ono, V. Srinivasan, N. Tsuda, J. Yamada, and S. Ochiai
Aichi Institute of Technology, Japan

ALPS-p16 **High-Gain Regenerative Chirped-Pulse Amplifier using Photonic Crystal Rod Fiber with 100 μm Core Diameter**
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ALPS-p17 **High Peak Power All-fiber MOPA System for Pulse Widths of from 50 ps to 2 ns**
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ALPS-p18 **Generation of Few-cycle Infrared Pulses from Degenerate Dual-Pump OPCPA**
Z. Hong[1)], Q. Zhang[1)], and P. Lu[1)]
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ALPS-p19 **Temperature Dependence of the Emission Cross Section of Yb^{3+} and Nd^{3+} Doped Ceramic Laser Materials**
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ALPS-p20 **Diode-pumped Femtosecond Yb:KLu $(WO_4)_2$ Laser Mode-locked by Carbon Nanostructure-based Saturable Absorber Mirror**
S. Y. Choi[1)], J. W. Kim[1)], M. H. Kim[1)], D.-I. Yeom[1)], B. H. Hong[2)], X. Mateos[3)], M. Aguiló[3)], F. Díaz[3)], V. Petrov[4)], U. Griebner[4)], F. Rotermund[1)]
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ALPS-p21 **Modelling of Atomic Process and Hydrodynamics of EUV Light Sources for Microlithography**
A. Sasaki[1)], K. Nishihara[2)], A. Sunahara[3)]
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ALPS-p22 **F_2 Laser Formation of Corrosion Resistant Iron Thin Films**
M. Okoshi[1,2)], Y. Awaihara[1)], T. Yamashita[2)] and N. Inoue[1)]
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ALPS-p23 **Comparison of Supercontinuum with Dispersion of HLNF and Solution of Bandwidth Limitation in Loop Cavity**
Y. Lan, H. Kuo and W. Lin
Chang Gung Univ., Taiwan

ALPS-p24 **Real-time THz Imaging by Difference Frequency Generation in a DAST Crystal at Room Temperature**
S. Fan, F. Qi, T. Notake, K. Nawata, T. Matsukawa, Y. Takida, and H. Minamide
RIKEN, Japan

ALPS-p25 **Angular Dispersive Frequency Conversion Method with Periodical Poling Lithium Niobate Crystal**
Y. Michine and H. Yoneda
Univ. Electro-Communications, Japan

ALPS-p26 **Q-switched Yb:KYW Planar Waveguide Laser by Carbon Nanostructures**
J. W. Kim[1)], S. Y. Choi[1)], S. Aravazhi[2)], M.

Pollnau[2)], U. Griebner[3)], V. Petrov[3)], D.-I. Yeom[1)], and F. Rotermund[1)]
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ALPS-p27 **Formation of Noise-Like Pulses in Dispersion-managed Fiber Laser Cavities with Fast and Slow Saturable Absorbers**
S. Lee, L. A. V.-Zuniga, and Y. Jeong
Seoul National Univ., Japan

ALPS-p28 **Terahertz Electron Dynamics in Dye-Sensitized $BaSnO_3$**
B. J. Kang[1)], S. S. Shin[2)], I. H. Baek[1)], K. S. Hong[2)], and F. Rotermund[1)]
[1)]Ajou Univ., Republic of Korea, [2)]Seoul National Univ., Republic of Korea

ALPS-p29 **Measurement of Absolute Refractive Indices of Nonlinear Optical Medium by Interferometric Method**
H. J. Choi and M. Cha
Pusan National Univ., Japan

ALPS-p30 **Mid-infrared Optical Parametric Oscillator Pumped with Rapidly Tunable Cr:ZnSe Laser**
M. Yumoto, N. Saito, and S. Wada
RIKEN, Japan

ALPS-p31 **Spectral Properties of Light in Photonic Liquid Crystals Doped with Nanoparticles in the Presence of Induced Defects**
H. Gharagulyan[1)], M. S. Rafayelyan[1)], A. H. Gevorgyan[1)], and R. B. Alaverdyan[1)]
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ALPS-p32 **Directional Control of Surface Plasmon Hot Spot with Double Nanoslit Segment Arrays**
S.-Y. Lee, S. Kim, K. Kim, and B. Lee
Seoul National Univ., Republic of Korea

ALPS-p33 **Control of Ultrafast Localized Plasmon using Response Functions Measured at Orthogonal Polarized Excitation**
Y. Masaki, M. Kusaba, K.Toma, and F. Kannari
Keio Univ., Japan

ALPS-p34 **Control of Grating-coupled Ultrafast Surface Plasmon Pulse and its Nonlinear Emission by Shaped Femtosecond Laser Pulses**
K. Toma, Y. Masaki, M. Kusaba, K. Hirosawa, and F. Kannari
Keio Univ., Japan

ALPS-p35 **Plasmonic Metasurface Induced Off-axis Coherent Perfect Absorber**
H.. Park, S.-Y. Lee, and B. Lee
Seoul National Univ., Republic of Korea

ALPS-p36 **Analytical Solutions of Electromagnetic Waves in Focusing and Magnifying Cylindrical Hyperlenses : Green's Function approach**
P. Tapsanit[1,2)], M. Yamashita[2)], and C. Otani[1,2)]
[1)]Tohoku Univ., Japan, [2)]RIKEN, Japan

ALPS-p37 **High-speed Three Dimensional SS-OCT using a KTN Swept Source for Imaging Underneath Tissue Surface**
A. Fukuda[1)], Y. Sugawa[1)], J. Miyazu[2)], M. Ueno[2)], T. Sakamoto[2)], Y. Sasaki[2)], S. Toyoda[2)], J. Kobayashi[2)] and M. Ohmi[1)]
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ALPS-p38 **Using Two-dimensional Spatial and Temporal Focusing Microscopy to Increase the Imaging Depth and Decrease the Photobleaching Probability**
Q. Song [1,2)], A. Nakamura[1)], A. Isouchi[1)], K. Hirosawa[1)], K. Isobe[2)], K. Midorikawa[2)], and F. Kannari[1)]
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ALPS-p39 **Detection of Early Caries by Laser-induced Breakdown Spectroscopy**
S. Sasazawa[1)], S. Kakino[2)], T. Katagiri[1)] and Y. Matsuura[1)]
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ALPS-p40 **Shockwave Generation by Erbium:YAG Laser-induced Liquid Jet Based on Hollow Optical Fiber**
K. Takahashi, T. Katagiri, and Y. Matsuura
Tohoku Univ., Japan

ALPS-p41 **Temporal Behavior of Fine Heat Source in a Fiber Tip for Clinical Applications**
M. Miyara, K. Maeda, Y. Imai, T. Fujimoto, K. Tei, and S. Yamaguchi
Tokai Univ., Japan

ALPS-p42 **Ultrahigh Resolution, High Speed Optical Coherence Tomography using High Power Supercontinuum at 0.8 μm Wavelength Region**
Y. Hattori, H. Kawagoe, and N. Nishizawa
Nagoya Univ., Japan

ALPS-p43 **Fluorescence Properties for Synthesized Nd:CNGG Powders**
T. Isshiki[1)], Y. Honda[1)], S. Motokoshi[2)], K. Fujioka[1)] , T. Jitsuno[1)] , M. Murakami[1)] , and M. Yoshida[3)]
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ALPS-p44 **Present Status of LED-based Plant Factory in Japan**
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