

The 4th Advanced Lasers and Photon Sources ALPS '15

Sponsored & Organized by
The Laser Society of Japan

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SECRETARIAT

Junji Kawanaka (Osaka Univ., Japan)

Wednesday, April 22

9:15 - 12:30

Plenary Session

Room 501&502

9:15 - 9:25

Opening Remarks of OPIC 2015

Room 501&502

9:15 Kenichi Iga, Congress Chair,
Professor Emeritus, Tokyo Institute of
Technology
Andreas Ostendorf, Congress Chair,
Professor, Ruhr-University Bochum, Germany

9:25 - 10:45

Keynote Speeches

Room 501&502

9:25-10:05 **Digital Photonic Production- the role of Lasers
in Industry 4.0**
Reinhart Poprawe
Director, Fraunhofer Inst. for Laser Tech.,
Germany

10:05-10:45 **Nuclear Photonics for the 21st Century**
Chris Barty, Congress Chair,
CTO, Lawrence Livermore National
Laboratory, USA

----- Break (10:45 - 11:00) -----

11:00 - 12:30

Special Talks

Room 501&502

11:00-11:45 **Optical Communication and Semiconductor
Lasers -Expectation for the Future-**
Yasuharu Suematsu, Japan Prize laureate,
Honorary Professor, Tokyo Institute of
Technology

11:45-12:30 **Illuminating the World by LEDs**
Hiroshi Amano, Nobel Prize laureate,
LEDIA '15 Chair, Professor, Nagoya University

----- Lunch Break (12:30 - 13:40) -----

13:40 - 17:30

ALPS, CLE, HEDS Joint Session

Room 303

Chair: H. Azechi, Conference Chair of CLE '15,
Osaka Univ., Japan

**HEDSj1-1 (Invited) High Energy Density Science Explored
with High-Power-Laser and Plasma-Device
Technologies**
13:40 R. Kodama
OsakaUniv., Japan

**HEDSj1-2 (Invited) Status and Challenges of the Compact
XFEL Facility SACLA**
14:10 M. Yabashi
RIKEN Spring-8 Center, Japan

**ALPSj1-1 (Invited) Prospects for Advanced X-Ray and
Gamma-Ray Sources with Exawatt Laser
Facility XCELS**
14:40 A. M. Sergeev ^{1,2)}, A. V. Bashinov ^{1,2)},
A. A. Gonoskov ^{1,2,3)}, E. S. Efimenko ^{1,2)},
A. V. Korzhimanov ^{1,2)}, A. A. Muraviev ^{1,2)},
A. V. Kim ^{1,2)}
¹⁾Inst. of Appl. Phys. of Russian Academy of
Sci., Russia, ²⁾Univ. of Nizhny Novgorod,
Russia, ³⁾Chalmers Univ. of Tech., Sweden

**CLEj1-1 (Invited) Laboratory Astrophysical
Collisionless Shock Experiments on Omega
and NIF***
15:10 H.-S. Park ¹⁾, C. M. Huntington ¹⁾, F. Fiuza ^{1,2)},
R. P. Drake ³⁾, D. Froula ⁴⁾, G. Gregori ⁵⁾,
M. Koenig ⁶⁾, C. Kuranz ³⁾, D. Lamb ⁷⁾,
M. Levy ^{1,5)}, C. K. Li ⁸⁾, J. Meinecke ⁵⁾,
R. Petrasso ⁸⁾, B. B. Pollock ¹⁾, B. A. Remington ¹⁾,
H. Rinderknecht ⁸⁾, M. Rosenberg ⁴⁾, J. S. Ross ¹⁾,
D. D. Ryutov ¹⁾, Y. Sakawa ⁹⁾, A. Spitkovsky ¹⁰⁾,
H. Takabe ⁹⁾, D. P. Turnbull ¹⁾, P. Tzeferacos ⁷⁾,
S. V. Weber ¹⁾, A. B. Zylstra ⁸⁾
¹⁾Lawrence Livermore National Lab., USA,
²⁾SLAC National Accelerator Lab., USA, ³⁾Univ.
of Michigan, USA, ⁴⁾Lab. for Laser Energetics,
Univ. of Rochester, USA, ⁵⁾Univ. of Oxford,

UK, ⁶LULI, Ecole Polytechnique, France,
⁷Univ. of Chicago, USA, ⁸Massachusetts Inst.
of Tech., USA, ⁹ILE, Osaka Univ., Japan,
¹⁰Princeton Univ., USA

----- Break (15:40 - 16:00) -----

ALPSj1-2 (Invited) Advancement of Laser-Driven

16:00 Compact Particle Accelerators

C. H. Nam ^{1),2)}, H. T. Kim ^{1),3)}, V. B. Pathak ¹⁾,
K. H. Pae ¹⁾, S. K. Lee ^{1),3)}, J. H. Sung ^{1),3)},
H. W. Lee ¹⁾, J. H. Shin ¹⁾, K. Nakajima ¹⁾
¹Center for Relativistic Laser Sci., Inst. for
Basic Sci. (IBS), Korea, ²Dept. of Phys. and
Photon Sci., GIST, Korea, ³Advanced
Photonics Res. Inst., GIST, Korea

HEDSj1-3 (Invited) High Energy Photon and Charged

16:30 Particle Sources with Relativistic Mirrors:

Novel Results and Perspectives

S. Bulanov
JAEA, Japan

CLEj1-2 (Invited) Tuning Laser Produced Electron-

17:00 Positron Jets for Lab-Astrophysics Experiment

H. Chen ¹⁾, F. Fiuza ²⁾, A. Hazi ¹⁾, R. Heeter ¹⁾,

A. Kemp ¹⁾, G. E. Kemp ¹⁾, A. Link ¹⁾,
B. Pollock ¹⁾, E. Marley ¹⁾, S. R. Nagel ¹⁾,
J. Park ¹⁾, M. Schneider ¹⁾, R. Shepherd ¹⁾,
R. Tommasini ¹⁾, S. C. Wilks ¹⁾, G. J. Williams ¹⁾,
D. Barnak ³⁾, P-Y. Chang ³⁾, G. Fiksel ³⁾,
V. Glebov ³⁾, D. D. Meyerhofer ³⁾, J. F. Myatt ³⁾,
C. Stoeckel ³⁾, M. Nakai ⁴⁾, Y. Arikawa ⁴⁾,
H. Azechi ⁴⁾, S. Fujioka ⁴⁾, H. Hosoda ⁴⁾,
S. Kojima ⁴⁾, N. Miyanaga ⁴⁾, T. Morita ⁴⁾,
T. Moritaka ⁴⁾, T. Nagai ⁴⁾, T. Namimoto ⁴⁾,
H. Nishimura ⁴⁾, T. Ozaki ⁴⁾, Y. Sakawa ⁴⁾,
H. Takabe ⁴⁾, Z. Zhang ⁴⁾
¹Lawrence Livermore National Lab., USA,
²SLAC National Accelerator Lab., USA, ³LLE,
Univ. of Rochester, USA, ⁴ILE, Osaka Univ.,
Japan

----- Break / Move (17:30 - 18:00) -----

18:00 - 20:00

OPIC Banquet

Room 501&502

Thursday, April 23

9:00 - 9:05

Opening Address

Room 302

N. Miyanaga, Conference Chair of ALPS '15,

Osaka Univ., Japan

9:15 - 10:30

ALPS2 : Optical Frequency Comb

Room 302

Chair: H. Inaba, Program Committee Member

AIST, Japan

ALPS2-1 (Invited) Towards a 30 GHz Astrocomb for the
9:15 Near-Infrared

G. Ycas ¹⁾, D. C. Hackett ¹⁾, S. Diddams ²⁾

9:15 - 10:30

ALPS3 : Metamaterial and Nano-
Material

Room 311&312

Chair: T. Tanaka, Program Committee Member

RIKEN, Japan

ALPS3-1 (Invited) Recent Progress in Resonance
9:15 Enhancement of Light Emissions on
Metasurfaces

¹Dep. of Phys., Univ. of Colorado, USA

²National Inst. of Std. and Tech., USA

ALPS2-2 Spectroscopy and Frequency Measurement of the Clock Transitions in ¹⁷¹Yb and ⁸⁷Sr Based on Linewidth Transfer Using a Narrow Linewidth Frequency Comb

9:45

T. Tanabe ¹, M. Yasuda ¹, D. Akamatsu ¹,
T. Kobayashi ^{1,2}, H. Inaba ¹, S. Okubo ¹,
A. Onae ¹, F.-L. Hong ^{1,2}, and K. Hosaka ¹

¹National Metrology Inst. of Japan (NMIJ),
National Inst. of Advanced Industrial Sci. and
Tech. (AIST), Japan, ²Dept. of Phys.,
Yokohama National Univ., Japan

ALPS2-3 An Yb-Fiber Laser Comb with Mode Spacing of Higher than 20 GHz by Using Two Fabry-Pérot Cavities

10:00

L. Hou, H. Han, L. Zhang, L. Pang, Z. Wei
Beijing National Lab. for Condensed Matter
Phys., Inst. of Phys., CAS, China

ALPS2-4 Highly Stabilized Fiber-Based Optical Frequency Comb Interferometer with Meters-Wide Scanning Range

10:15

Y. Nakajima ^{1,2}, K. Minoshima ^{1,2}

¹UEC, Japan, ²JST, ERATO Intelligent Optical
Synthesizer Project, Japan

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

11:00 - 12:30

ALPS4 : High Energy Light Sources and Applications

Room 302

Chair: T. Kawachi, Program Committee Member,
JAEA, Japan

ALPS4-1 (Invited) High Average Power Table-top Soft X-Ray Lasers

11:00

J. J. Rocca ^{1,2}, B. A. Reagan ¹, C. Baumgarten ¹,
Y. Wang ¹, S. Wang ¹, A. Rockwood ¹,
L. Yin ¹, M. C. Marconi ¹, V.N. Shlyaptsev ¹,
C. S. Menoni ¹

¹Dep. of Electrical Eng., Colorado State Univ.,
USA, ²Dep. of Phys., Colorado State Univ., USA

M. Iwanaga ¹, B. Choi ¹, H. T. Miyazaki ¹,
Y. Sugimoto ¹, and K. Sakoda ^{1,2}

¹NIMS, Japan, ²Tsukuba Univ., Japan

ALPS3-2 Plasmonic Coupling between Gold Curvilinear Nanorods and Straight Nanorods with Controlling Gap Distance

9:45

Y. Yokota ¹, T. Tanaka ^{1,2,3}

¹RIKEN, Japan, ²Hokkaido Univ., Japan,
³Tokyo Tech., Japan

ALPS3-3 Interfering Ultraviolet Femtosecond Laser Processing of Metallic Thin Films

10:00

Y. Nakata ¹, N. Miyanaga ¹, Y. Matsuba ²

¹Osaka Univ., ²Sakai City Office

ALPS3-4 Effects of Prestrain Applied to Poly(Ethylene Terephthalate) Substrate on Microstructures of Porous TiO₂ Film and Optical Scattering Behaviors

10:15

T.-C. Li, J.-F. Lin

National Cheng Kung Univ., Taiwan

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

11:00 - 12:30

ALPS5 : Novel Material

Room 311&312

Chair: T. Tanabe, Steering Committee Member,
Keio Univ., Japan

ALPS5-1 Spontaneous Parametric Down Conversion in Periodically Poled Lithium Tantalate Waveguide

11:00

H. H. Lim ¹, S. Kurimura ¹, K. Fujii ¹,
M. Okano ², S. Takeuchi ^{2,3,4}

¹NIMS, Japan, ²Kyoto Univ., Japan,

³Hokkaido Univ., Japan, ⁴Osaka Univ., Japan

ALPS4-2 In Situ 3D Visualization of XFEL Beam Focusing Properties Using LiF Crystal X-ray Detector

11:30

T. Pikuz ^{1,2)}, A. Faenov ^{2,3)}, T. Matsuoka ³⁾, S. Matsuyama ⁴⁾, K. Yamauchi ^{4,5)}, N. Ozaki ¹⁾, Y. Inubashi ⁶⁾, M. Yabashi ^{6,7)}, Y. Sato ⁸⁾, H. Yumoto ⁶⁾, H. Ohashi ^{6,7)}, A. Grum-Grzhimailo ⁹⁾, M. Nishikino ¹⁰⁾, T. Kawachi ¹⁰⁾, T. Ishikawa ^{6,7)}, R. Kodama ^{1,3)}
¹⁾PPC and GSE Osaka University, Japan, ²⁾Joint Inst. High Temperatures, RAS, Russia, ³⁾Inst. Academic Initiatives, Osaka Univ., Japan, ⁴⁾Dep. Precision Sci. and Tech., Osaka Univ., Japan, ⁵⁾Center for Ultra-Precision Sci. and Tech., Osaka Univ., Japan, ⁶⁾JASRI/SPring-8, ⁷⁾RIKEN Harima Inst., Japan, ⁸⁾Div. of Electrical, Electronic and Information Eng., Osaka Univ., Japan, ⁹⁾Skobeltsyn Inst. Nuclear Phys., Lomonosov Moscow State Univ., Russia, ¹⁰⁾Quantum Beam Sci. Center, JAEA, Japan

ALPS4-3 Observation of Femtosecond Laser Ablation Process on Tungsten by Using a Soft X-Ray Laser Probe

11:45

M. Nishikino ¹⁾, N. Hasegawa ¹⁾, T. Tomita ²⁾, T. Eyama ²⁾, N. Kakimoto ²⁾, N. Ohnishi ³⁾, A. M. Ito ⁴⁾, M. Baba ⁵⁾, Y. Minami ⁵⁾, A. Faenov ⁶⁾, N. Inogamov ⁷⁾, T. Kawachi ¹⁾, M. Yamagiwa ¹⁾, and T. Suemoto ⁵⁾
¹⁾QuBS JAEA, Japan, ²⁾Univ. of Tokushima, Japan, ³⁾Tohoku Univ., Japan, ⁴⁾NIFS, Japan, ⁵⁾ISSP, Univ. of Tokyo, Japan, ⁶⁾Osaka Univ., Japan, ⁷⁾Russian Academy of Sci., Russia

ALPS4-4 Photodissociation of 1,2-Butadiene Studied by Time-Resolved Molecular Orbital Spectroscopy Using Single-Order High Harmonic Pulses

12:00

R. Iikubo ¹⁾, T. Fujiwara ¹⁾, T. Sekikawa ¹⁾, Y. Harabuchi ²⁾, T. Taketsugu ²⁾, and Y. Kayanuma ³⁾
¹⁾Dep. Appl. Phys., Hokkaido Univ., Japan, ²⁾Dep. Chem., Hokkaido Univ., Japan, ³⁾Mater. Struct. Lab., Tokyo Inst. Tech., Japan

ALPS5-2 Highly Efficient 355 nm UV Light Generation in CsLiB₆O₁₀

11:15

M. Yoshimura, C. Qu, Y. Takahashi, and Y. Mori
Osaka Univ., Japan

ALPS5-3 High Peak Output Power External Cavity Mid-IR Quantum Cascade Lasers

11:30

T. Edamura, T. Dougakiuchi, N. Akikusa
Hamamatsu Photonics K.K., Japan

ALPS5-4 Energy Transfer Process in Nd/Cr:YAG Ceramics

11:45

Y. Honda ¹⁾, S. Motokoshi ²⁾, T. Jitsuno ¹⁾, N. Miyanaga ¹⁾, K. Fujioka ¹⁾, M. Nakatsuka ²⁾, M. Yoshida ³⁾
¹⁾ILE Osaka Univ., Japan, ²⁾Inst. Laser Tech., ³⁾Kinki Univ., Japan

ALPS5-5 Large Thermo-Optic Effects in Silica-Gold Composite Toroidal Microcavity

12:00

S. Tamaki ¹⁾, W. Yoshiki ²⁾ and T. Tanabe ³⁾
Keio Univ., Japan

ALPS4-5 High-Efficient Coherent Lyman- α Resonance Radiation in Two-Photon Resonance Four-Wave Mixing

12:15

N. Saito ¹⁾, Y. Oishi ²⁾, K. Miyazaki ¹⁾,
K. Okamura ¹⁾, O. Louchev ¹⁾, M. Iwasaki ²⁾,
S. Wada ¹⁾

¹⁾Center for Adv. Photonics, ²⁾RIKEN Nishina
Center for Accelerator-Based Sci., Japan

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

13:30 - 15:00

ALPS6 : High Energy Light Sources (cont'd) and High Average Power Lasers

Room 302

Chair: S. Kubodera, Program Committee Member
Miyazaki Univ., Japan

ALPS6-1 Development of Excimer Laser System for the Next Generation Multiple Patterning Immersion Lithography

13:30

T. Mimura, T. Kumazaki, H. Tsushima,
T. Ohta, A. Kurosu, K. Kakizaki, T. Matsunaga,
and H. Mizoguchi
Gigaphoton Inc., Japan

ALPS6-2 LPP-EUV Source Technology for HVM Lithography

13:45

T. Saito ¹⁾, H. Nakarai ¹⁾, T. Abe ¹⁾, K. M. Nowak ¹⁾,
Y. Kawasuji ¹⁾, H. Tanaka ¹⁾, Y. Watanabe ¹⁾, T.
Hori ¹⁾, T. Kodama ¹⁾, Y. Shiraishi ¹⁾,
T. Yanagida ¹⁾, G. Soumagne ¹⁾, T. Yamazaki ¹⁾,
S. Okazaki ²⁾ and H. Mizoguchi ²⁾

¹⁾Gigaphoton Inc. Hiratsuka facility, Japan,

²⁾Gigaphoton Inc. Oyama facility, Japan

ALPS6-3 Efficient Extreme Ultraviolet Emission in Highly Ionized High-Z Laser-Produced Plasmas

14:00

T. Higashiguchi ¹⁾, R. Amano ¹⁾, T.-H. Dinh ¹⁾,
T. Miyazaki ¹⁾, Y. Suzuki ¹⁾, M. Kawasaki ¹⁾,
A. Sasanuma ¹⁾, G. Arai ¹⁾, H. Hara ¹⁾, Y. Fujii ¹⁾,
K. Nanto ¹⁾, A. Takahashi ²⁾, D. Nakamura ²⁾,
T. Okada ²⁾, T. Makimura ³⁾, T. Miura ⁴⁾,
A. Endo ⁴⁾, B. Li ⁵⁾, P. Dunne ⁶⁾, and
G. O'Sullivan ⁶⁾

¹⁾Dep. Adv. Interdisciplinary Sci. and Center

ALPS5-6 Pulsed Laser Interference Patterning of Polyimide for Dye Doped Polymer Laser

12:15

S. Y. Kok ¹⁾, T. Y. Tou ¹⁾, S. S. Yap ^{1,2)}

¹⁾Multimedia University, Malaysia, ²⁾University
of Malaya, Malaysia

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

13:30 - 15:00

ALPS7 : Novel Material and Nonlinear Optics

Room 311&312

Chair: H. Ishizuki

Inst. Molecular Sci., Japan

ALPS7-1 (Invited) Parametric Processes in Two-Dimensional Nonlinear Photonic Crystals

13:30

K. Gallo
KTH Royal Inst of Tech., Sweden

ALPS7-2 Versatile Generation of Mid Infrared Pulses through Difference Frequency Mixing in Super-Continuum Pulses

14:00

F. Isa, L. Fujii, T. Suzuki, K. Hirokawa, and
F. Kannari

Keio Univ., Japan

for Opt. Res. (CORE), Utsunomiya Univ., Japan, ²Kyushu Univ., Japan, ³Univ. of Tsukuba, Japan, ⁴HiLASE Centre, Czech, ⁵Lanzhou Univ., ⁶Univ. College Dublin, Ireland

ALPS6-4 Effective Bandwidth Reduction and Wavelength Locking for a High-Power Laser-Diode Stack by an External-Cavity Technique

14:15

Y. Zheng, T. Kawashima, N. Satoh, T. Sekine, A. Hiruma, T. Hiruma, and H. Kan
Hamamatsu Photonics K.K., Japan

ALPS6-5 Saturation of Absorption at Zero-Phonon-Line in Yb:YAG Thin Disk

14:30

P. Severová ^{1,2)}, T. Miura ¹⁾, M. Chyla ^{1,2)}, M. Smrž ¹⁾, M. Kawasaki ³⁾, T. Higashiguchi ³⁾, A. Endo ¹⁾, T. Mocek ¹⁾
¹HiLASE Centre, Inst. of Phys. ASCR, Czech, ²Czech Tech. Univ. in Prague, FNSPE, Czech, ³Utsunomiya Univ., CORE, Czech

ALPS6-6 Development of a Kerr Lens Mode-Locked Yb:Lu₂O₃ Bulk Ceramic Oscillator Pumped by a Multimode Laser Diode

14:45

T. Ishikawa ^{1,2)}, A. A. Eilanlou ¹⁾, Y. Nabekawa ¹⁾, Y. Fujihira ³⁾, T. Imahoko ^{1,3)}, T. Sumiyoshi ^{1,3)}, F. Kannari ²⁾, M. Kuwata-Gonokami ^{4,5)}, and K. Midorikawa ^{1,4)}
¹RIKEN Center for Advanced Photonics, Japan, ²Keio Univ., Japan, ³Cyber Laser Inc., Japan, ⁴Inst. for Photon Sci. and Tech., Univ. of Tokyo, Japan, ⁵Graduate School of Sci., Univ. of Tokyo, Japan

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

15:30 - 17:00

ALPS8 : High Average Power Lasers (cont'd)

Room 302

Chair: J. Kawanaka, Steering Committee Member,
Osaka Univ., Japan

ALPS8-1 Demonstration of Femtosecond Ti:sapphire Laser Oscillation Pumped by Two Green InGaN Diode Lasers

15:30

R. Sawada, H. Tanaka, R. Kariyama,

ALPS7-3 Picosecond Pulsed High-Frequency and High-Power Second Harmonic Generation by a Periodically Poled Stoichiometric LiTaO₃

14:15

O. A. Louchev ¹⁾, H. Hatano ²⁾, T. Tsukihana ¹⁾, S. Wada ¹⁾, S. Takekawa ²⁾, and K. Kitamura ²⁾
¹RIKEN, Japan, ²NIMS, Japan

ALPS7-4 A Narrow Linewidth Diode Laser at 243nm

14:30

L. Hou, H. Han, L. Zhang, D. Li, Z. Wei
Beijing National Lab. for Condensed Matter Phys, Inst. of Phys., CAS, China

ALPS7-5 Development of a Compact Iodine-Stabilized Laser at 531 nm Using a Coin-Sized Diode Laser Module

14:45

T. Kobayashi ^{1,2,3)}, D. Akamatsu ²⁾, K. Hosaka ^{2,3)}, H. Inaba ^{2,3)}, S. Okubo ^{2,3)}, T. Tanabe ²⁾, M. Yasuda ²⁾, A. Onae ^{2,3)}, F.-L. Hong ^{1,2,3)}
¹Yokohama National Univ., Japan, ²AIST, Japan, ³JST-ERATO, Japan

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

15:30 - 17:00

ALPS9 : Terahertz Sources and Applications

Room 311&312

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

ALPS9-1 (Invited) First Achievement of Nitride Semiconductor Based Terahertz Quantum Cascade Laser

15:30

H. Hirayama and W. Terashima

- A. Hosaka, K.Hirosawa, and F. Kannari
Keio Univ., Japan
- ALPS8-2** **Current Status of the Development of the**
15:45 **Kumgang Laser - 0.4J/10kHz/10ns (4kW)**
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, H. Ahn ¹,
H. Lee ¹, J. Oh ¹, B. J. Lee ², S. Choi ², and
J. S. Kim ³
¹KAIST, Korea, ²HGU, Korea, ³Laser
Spectronix, Korea
- ALPS8-3** **Development of a 180-W, 1-kHz Pulsed Green**
16:00 **Laser System for Industrial Applications**
Y. Kato ^{1,2}, Y. Tamaoki ^{1,2}, T. Sekine ^{1,2},
Y. Takeuchi ^{1,2}, K. Iyama ^{1,2}, T. Kurita ^{1,2},
T. Kawashima ^{1,2}, and N. Miyanaga ³
¹Hamamatsu Photonics K.K., Japan,
²Advanced Laser and Process Tech. Res.
Association (ALPROT), Japan, ³Inst. of Laser
Eng., Osaka Univ., Japan
- ALPS8-4** **QUADRA-T: A Driver Laser System for Intense**
16:15 **THz Pulse Generation**
Y. Ochi, K. Nagashima, M. Maruyama,
M. Tsubouchi, N. Kono, F. Yoshida,
A. Sugiyama
Quantum Beam Sci. Center, JAEA, Japan
- ALPS8-5** **Boosting Up the Intra-Cavity Average Power of**
16:30 **a Kerr Lens Mode-Locked Giant Thin-Disk Ring**
Oscillator to Beyond a kW
A. A. Eilanlou ¹, Y. Nabekawa ¹,
M. Kuwata-Gonokami ^{2,3}, and
K. Midorikawa ^{1,2}
¹RIKEN Center for Advanced Photonics,
Japan, ²Inst. for Photon Sci. and Tech., Univ.
of Tokyo, Japan, ³Graduate School of Sci.,
Univ. of Tokyo, Japan
- ALPS8-6** **1 J, 100 Hz Multiple Active-Mirror Laser**
16:45 **Amplifier Using YAG /Yb:YAG Composite**
Ceramics
S. Tokita ¹, M. Divoky ², S.I. Hwang ¹,
T. Kawashima ³, H. Nishioka ⁴,
A. Lucianetti ², J. Kawanaka ¹
¹ILE, Osaka Univ., Japan, ²HiLASE project,
- RIKEN, Japan
- ALPS9-2** **Ultra-Fast and Ultra-Broadband Optical-Pump/**
16:00 **THz-Probe Spectroscopy for the Study of**
Carrier Dynamics in Graphene
S. Ikeda ¹, M. Yamashita ², C. Otani ^{1,2}
¹Grad. Sch. of Sci. Tohoku Univ., ²RIKEN
- ALPS9-3** **Contact Grating Device with Fabry-Perot**
16:15 **Resonator for Effective THz Light Generation**
M. Tsubouchi, K. Nagashima, F. Yoshida,
Y. Ochi, M. Maruyama
Japan Atomic Energy Agency
- ALPS9-4** **Terahertz Waves Generated by the Interaction**
16:30 **of Argon Clusters and Two-Color Laser Pulses**
K. Mori ^{1,2}, M. Hashida ^{1,2}, T. Nagashima ³,
S. Inoue ^{1,2}, and S. Sakabe ^{1,2}
¹ICR Kyoto Univ., ²GSS Kyoto Univ.,
³Setsunan Univ.
- ALPS9-5** **High-Peak-Power Terahertz-Wave Parametric**
16:45 **Generation and Highly-Sensitive Detection**
Using Surface-Coupling Configuration
Y. Takida, T. Notake, K. Nawata, Y. Tokizane,
S. Hayashi, H. Minamide
RIKEN

Czech, ³Hamamatsu Photonics K.K., Japan,
⁴UEC, Japan

Friday, April 24

9:00 - 10:30

ALPS10 : Intense Ultrafast Sources and Applications

Room 302

Chair: T. Ozaki, Program Committee Member
 INRS, Canada

- ALPS10-1 (Invited) Development of High-power Mid-IR Optical Parametric Amplifier and their Applications in High Harmonic Generation**
 9:00
 T. Kanai, T. Balčiūnas, G. Fan, G. Andriukaitis, P. Malevich, A. Pugžlys, A. Baltuška
 Photonics Inst., Vienna Univ. of Tech., Austria
- ALPS10-2 Kerr-lens Mode-Locked Yb³⁺-doped Lu₃Al₅O₁₂ Ceramic Laser**
 9:30
 S. Kitajima ¹, H. Nakao ¹, A. Shirakawa ¹, H. Yagi ², T. Yanagitani ²
¹Inst. for Laser Sci., Univ. of Electro-Comm., Japan, ²Takuma Works, Konoshima Chemical Co., Ltd., Japan
- ALPS10-3 Pulse Stretching in a Cryogenic-Yb:YAG Regenerative Amplifier Using Transmission Gratings**
 9:45
 S. Tokita ¹, S.I. Hwang ¹, T. Kawashima ², H. Nishioka ³, J. Kawanaka ¹
¹ILE Osaka Univ., Japan, ²Hamamatsu Photonics K.K., Japan, ³UEC Tokyo, Japan
- ALPS10-4 Generation of 1.5 mJ Few-Cycle Infrared Pulses in a BiB₃O₆ Optical Parametric Chirped-Pulse Amplifier**
 10:00
 N. Ishii ¹, K. Kaneshima ¹, T. Kanai ¹, S. Watanabe ², J. Itatani ¹
¹The Inst. for Solid State Physics, Univ. of Tokyo, ²Res. Inst. for Sci. and Tech., Tokyo Univ. of Sci.
- ALPS10-5 Looking into Sub-Cycle Dynamics of Electron Rescattering Induced by Intense Infrared Few-Cycle Pulses**
 10:15
 H. Geiseler ¹, N. Ishii ¹, K. Kaneshima ¹, F. Geier ¹, T. Kanai ¹, J. Itatani ¹

9:00 - 10:30

ALPS11 : Biomedical-Photonics

Room 311&312

Chair: N. Nishizawa, Program Committee Chair
 Nagoya Univ., Japan

- ALPS11-1 (Invited) Stimulated Raman Scattering Microscopy for Label-Free Imaging and Spectroscopy**
 9:00
 Y. Ozeki
 Univ. Tokyo, Japan
- ALPS11-2 All-optical Ultrafast Burst Imaging using Broadband Frequency Chirped Pulse**
 9:30
 T. Suzuki, F. Isa, L. Fujii, K. Hirose, F. Kannari
 Keio Univ., Japan
- ALPS11-3 Supercontinuum Generation for Ultrahigh Resolution Optical Coherence Tomography at 0.8 Sm from Ultrashort Pulse Fiber Laser**
 9:45
 Y. Nomura ¹, H. Kawagoe ¹, Y. Hattori ¹, M. Yamanaka ¹, Y. Sakakibara ², E. Omoda ², H. Kataura ², and N. Nishizawa ¹
¹Nagoya Univ., Japan, ²AIST, Japan
- ALPS11-4 Development of 3D Forearm Vein Imaging System Using Light-section Method for Automatic Blood Sampling**
 10:00
 R. Kimura, Y. Morita, E. Nakamachi
 Doshisha Univ., Japan
- ALPS11-5 Reflectance Response of Tapered Multimode Fiber Coated With Polyaniline for Ammonia Sensing**
 10:15
 A. Shabaneh, S. Girei, F. Mohamad, A. Ibrahim, A. Lateef, N. A. Rahman,

¹⁾The Inst. for Solid State Phys., Univ. of Tokyo,
Japan

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

11:00 - 12:30

ALPS12 : Intense Ultrafast Sources and Applications (cont'd)

Room 302

Chair: J. Itatani, Program Committee Member

Univ. of Tokyo, Japan

ALPS12-1 (Invited) Progress Towards a 10PW

11:00 Ultraintense Laser Facility: Demonstration of 5PW High Gain Large Aperture Ti:Sapphire Amplifier

R. Li, X. Liang, Y. Leng, and Z. Xu
SIOM, CAS, China

ALPS12-2 Development update of the PENELOPE Laser System

11:30

D. Albach ¹⁾, M. Siebold ¹⁾, M. Loeser ^{1,2)},
F. Roeser ¹⁾ and U. Schramm ^{1,2)}
¹⁾Helmholtz-Zentrum Dresden-Rossendorf,
Germany, ²⁾Tech. Univ. Dresden, Germany

ALPS12-3 All Four Beams, Pico-Second Operation of LFX-Laser

11:45

J. Kawanaka, N. Morio, S. Matsuo,
K. Kawabata, Y. Kawakami, T. Hirano,
Y. Fujimura, K. Sawai, K. Tsuji, Y. Suzuki,
Y. Matsuda, T. Kawasaki, H. Murakami,
K. Ueda, M. Ishida, S. Kitamura, H. Matsuo,
T. Sakamoto, T. Sezaki, T. Yanagida, S. Tokita,
Y. Nakata, K. Tsubakimoto, H. Shiraga,
T. Jitsuno, and N. Miyanaga

M. A. Mahdi, S. Paiman, M. H. Yaacob
Univ. Putra, Malaysia

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

11:00 - 12:30

ALPS13 : Fiber Lasers

Room 311&312

Chair: A. Fujisaki, Program Committee Member

Furukawa Electric Co., LTD, Japan

ALPS13-1 Development of Yb-doped Fiber Amplifier with

11:00 Adjustable Repetition Rate for Optimized Seeding of Regenerative Amplifiers

J. Linnemann ¹⁾, M. Smrz ¹⁾, T. Miura ¹⁾,
U. Teubner ²⁾, A. Endo ¹⁾, T. Mocek ¹⁾
¹⁾HiLASE Centre, Institute of Physics ASCR,
v.v.i., Czech, ²⁾HS-Emden-Leer, Germany

ALPS13-2 Sub-10ps, 700 kW Peak-Power Pulses from a

11:15 Non-Linearly Compressed All-Fiber MOPA System

R. Yamashita¹⁾, K. Maeda¹⁾, G. Watanabe¹⁾,
K. Tei¹⁾, S. Yamaguchi¹⁾, J. Enokidani²⁾,
S. Sumida²⁾
¹⁾Dept of Phys., Tokai Univ., Japan, ²⁾OPT-i
Co.,Ltd., Japan

ALPS13-3 Improvement of Output Power and

11:30 Suppression of Pedestal Components for Wideband Wavelength-Tunable Narrow-Linewidth Source

Y. Ando ¹⁾, Y. Sakakibara ²⁾, E. Omoda ²⁾,
H. Kataura ²⁾, and N. Nishizawa ¹⁾
¹⁾Nagoya Univ., Japan, ²⁾AIST, Japan

ALPS13-4 Yb:Fiber Comb Based on a Tapered Single-mode Fiber

11:45

Y. Xie, H. Han, L. Zhang, L. Hou, Z. Yu,
Z. Zhu, L. Pang, W. Liu, Z. Wei
Beijing National Lab. for Condensed Matter
Phys., Inst. of Phys., CAS, China
School of Phys. and Optoelectronic Eng.,
Xidian Univ., China

Inst. of Laser Eng., Osaka Univ., Japan
ALPS12-4 The Development of Ozone Grating for High Intensity Lasers
 12:00
 Y. Michine, H. Yoneda
 Inst. for Laser Sci., Univ. Electro-Comm., Japan

ALPS12-5 Intense and Tunable High-order Harmonics from Carbon Plasma
 12:15
 T. Ozaki, A. Fareed, S. Mondal and Y. Pertot
 INRS-EMT, Canada

----- Lunch Break & Poster Session (12:30 - 15:00) -----

ALPS13-5 Impact of Different Order Photonic Bandgap in Spectral Filtering Photonic Bandgap Fiber Amplifier
 12:00
 M. Chen ¹⁾, S. R. Petersen ²⁾, C. B. Olausson ³⁾, T. T. Alkeskjold ³⁾, A. Shirakawa ¹⁾
¹⁾Inst. for Laser Sci., Univ. of Electro-Comm., Japan, ²⁾Dept. of Photonics Eng., Tech. Univ. of Denmark, Denmark, ³⁾NKT Photonics A/S, Denmark

ALPS13-6 Development of Low Photo-Darkening Yb-Doped Silica Glass Fiber by Co-Doping of Group 2 Element
 12:15
 Y. Sakaguchi ¹⁾, Y. Fujimoto ¹⁾, M. Masuda ¹⁾, N. Miyanaga ¹⁾, H. Nakano ²⁾
¹⁾Osaka Univ., Japan, ²⁾Kinki Univ., Japan

----- Lunch Break & Poster Session (12:30 - 15:00) -----

13:00 - 15:00

ALPSp14: Poster Session

Exhibition Hall C

- ALPSp14-01 Fabry-Pérot-Like Interferences in Symmetric Thue-Morse Multilayer**
 C. W. Tsao, Y. H. Cheng, C. H. Chang,
 W. J. Hsueh
 Photonic group, Dept. of Eng. Sci. and Ocean Eng., National Taiwan Univ., Taiwan
- ALPSp14-02 Carrier-Induced Fast All-Optical Switching in a Photonic Crystal Nanocavity Fabricated with a CMOS Compatible Process**
 Y. Ooka, T. Tetsumoto, A. Fushimi, W. Yoshiki and T. Tanabe
 Keio Univ., Japan
- ALPSp14-03 Size Dependence of Thermo-opto-mechanical Oscillation Observed in Crystalline Whispering Gallery Mode Microcavity Fabricated with Ultra-precision Machining**
 H. Itobe ¹⁾, Y. Nakagawa ¹⁾, S. Azami ¹⁾,
 Y. Kakinuma ¹⁾, T. Tanabe ¹⁾
 Keio Univ., Japan
- ALPSp14-04 Shack-Hartmann Wavefront Sensor for**

Multiaxial Actuation Measurement - Optical Devices and Techniques for Bio and Medical Applications

K.-Y. Huang ¹⁾, C.-M. Chia ¹⁾, E. Chang ²⁾,
 C.-W. Chang ¹⁾
¹⁾National Taiwan Univ., Taiwan, ²⁾Genius Electronic Optical Co., Taiwan

ALPSp14-05 Dependence of Temperature on Fluorescence Lifetime of Nd Ion for Ce/Cr/Nd:YAG Ceramic

T. Nakamachi ¹⁾, T. Saiki ¹⁾, T. Hayashi ¹⁾,
 K. Fujioka ²⁾, H. Furuse ³⁾, Y. Honda ²⁾,
 S. Motokoshi ⁴⁾, Y. Fujimoto ²⁾,
 M. Nakatsuka ^{2,4)}, Yukio Iida ¹⁾

¹⁾Kansai Univ., Japan, ²⁾Inst. of Laser Eng., Osaka Univ., Japan, ³⁾Kitami Inst. of Tech., Japan, ⁴⁾Inst. for Laser Tech., Japan

ALPSp14-06 Generation of Octave-Spanning Optical Kerr Frequency Comb in a Dispersion-Managed Whispering Gallery Mode Microcavity

Y. Nakagawa ¹⁾, T. Kato ¹⁾, T. Tanabe ¹⁾

- ¹Keio Univ., Japan
- ALPSp14-07 Efficient Diode-Pumped High Power Femtosecond Yb:LYSO Laser**
W. Tian, Z. Wang, Z. Wei, J. Zhu, L. Zheng, J. Xu
¹Inst. of Phys., CAS, ²Xidian Univ., ³Shanghai Inst. of Ceramics, CAS, China
- ALPSp14-08 Characteristics on Phase Synchronization of Second Harmonic Wave Array from Intra Talbot Cavity Frequency Doubling**
K. Hirose ¹, F. Shohda ², T. Yanagisawa ², F. Kannari ¹
¹Keio Univ., Japan, ²Mitsubishi Electric Co., Japan
- ALPSp14-09 Power Scaling and Q-switched Operation of a Pr³⁺:YLF Laser Pumped by Four InGaN-Blue-Laser-Diodes**
K. Iijima ¹, R. Kariyama ¹, H. Tanaka ¹, K. Hirose ¹, F. Kannari ¹
Keio Univ., Japan
- ALPSp14-10 Passively CW Mode-Locked Red Pr:YLF Laser Pumped by InGaN Laser Diodes**
R. Kariyama, H. Tanaka, K. Iijima, K. Hirose, F. Kannari
Keio Univ., Japan
- ALPSp14-11 Rate Equation Analysis of a Passively Q-switched Pr⁴⁺:YLF Laser with a Cr³⁺:YAG Saturable Absorber in Visible Region**
H. Tanaka, R. Kariyama, K. Iijima, K. Hirose, F. Kannari
Dept. of Electronics and Electrical Eng., Keio Univ., Japan
- ALPSp14-12 Multiple Frequency Injection Locked CW Ti:Sapphire Laser with a Variable Two Frequency Separation and Power**
G. Trivikramarao, Y. Fujimura, R. Yoshizaki, T. Kawashima, T. Ohashi, Y. Sasaki, H. Hamano, K. Yoshii, M. Katsuragawa
Univ. of Electro-Comm., Japan
- ALPSp14-13 Coherent Combination of Four High-Power Laser Beams Using Bernoulli Discrete Probability Distribution Based Algorithm**
T. Kitamura ¹, H. Chosrowjan ^{1,3}, S. Taniguchi ^{1,3}, M. Fujita ^{1,2,3}, K. Tsubakimoto ², H. Yoshida ², N. Miyanaga ², Y. Izawa ¹
¹Inst. for Laser Tech., Japan, ²Inst. of Laser Eng., Osaka Univ., Japan, ³ALPROT, Japan
- ALPSp14-14 Development on Thermoelectric Transducer Using Laser-Sintered Reduced Metal Nanopastes**
Y. Li, T. Saiki, Y. Iida
Kansai Univ., Japan
- ALPSp14-15 Single- and Two-Color Laser Generation from Etalon-Coupled C-Cut Nd:YVO₄ Laser**
Y.-C. Chiu ¹, B.-C. Wang ², Y.-C. Huang ³
Inst. of Photonics Tech., National Tsinghua Univ., China
- ALPSp14-16 Generation of Gaussian Monocycle and Doublet Pulses from Vector Soliton Shaping in an Erbium-Doped Fiber Laser**
Y.-C. Leu, W.-H. Kuan, J.-Y. Wang, and K.-H. Lin
Dept. of Appl. Phys. and Chemistry, Univ. of Taipei, Taiwan
- ALPSp14-17 Enhancing Pressure Response of a Fabry-Pérot Interferometer with a Microchannel Fabricated by Femtosecond Laser**
Y. Yu ^{1,2}, X. Chen ^{1,2}, Q. Huang ^{1,2}, C. Du ^{1,2}, S. Ruan ^{1,2} and H. Wei ³
¹Shenzhen Key Lab. of Laser Eng., China, ²Shenzhen Univ., China, ³Huazhong Univ. of Sci. and Tech., China
- ALPSp14-18 Optical Material Modification by Laser Pulses at Under-Damage Threshold Conditions**
K. Mikami ¹, S. Motokoshi ², T. Jitsuno ¹
¹ILE, Osaka Univ., Japan, ²Inst. for Laser Tech., Japan
- ALPSp14-19 Thermal Damage of Organic Thin Film by Femtosecond Laser Process**
Y. Makino ¹, S. Ono ¹, V. Srinivasan ¹, N. Tsuda ¹, J. Yamada ¹, P.-K. Shin ², S. Ochiai ¹
¹Aichi Inst. of Tech., Japan, ²Inha Univ., Korea
- ALPSp14-20 Direct Writing of Laser Waveguides in Pr:ZBLAN Glass using Ultrafast Laser Pulses**
Y. Yamanaka, K. Hirose, T. Sato, and F. Kannari
Keio University, Japan
- ALPSp14-21 High-Order Harmonic Generation by Non-collinear Wave Mixing in Ionized Media**

T. Kuroda, K. Sato, H. Ohno, K. Suzuki, and
A. Suda
Tokyo Univ. of Sci., Japan

**ALPSP14-22 Interspace of Periodic Grating Structure
Dependence on Laser Fluence for Double Pulse
Irradiation**

M. Hashida ^{1,2}, L. Gemini ^{3,4}, T. Nishii ^{1,2},
Y. Miyasaka ^{1,2}, H. Sakagami ⁵, S. Inoue ^{1,2},
J. Limpouch ³, T. Mocek ⁴, and S. Sakabe ^{1,2}
¹Inst. for Chemical Res., Kyoto Univ., Japan,
²Dept of Phys., Kyoto Univ., Japan, ³FNSPE,
Czech Tech. Univ., Czech, ⁴HiLASE Project,
Inst. of Phys., Czech, ⁵National Inst. for
Fusion Sci., Japan

**ALPSP14-23 Study on Effect of Intense THz-Wave
Irradiation for Protein Conformation**

T. Notake, K. Nawata, Y. Takida, Y. Tokizane,
Z. Han, and H. Minamide
RIKEN RAP, Japan

**ALPSP14-24 Plume Expansion and Optical Emission
Spectrum of Nd:YAG Laser Produced Sn Plasma**

H. Lan, X. Wang, D. Zuo, P. Lu
Wuhan National Lab. for Optoelectronics,
Huazhong Univ. of Sci. and Tech., China

**ALPSP14-25 Evaluation of Impulse Direction and Mass Loss
by a Pulse Laser Irradiation for Laser Ablated
Propulsion**

S. Nakayama ¹⁾²⁾³⁾, Y. Mori ¹⁾, K. Fujita ¹⁾,
Y. Kitagawa ¹⁾
¹The Graduate School for the Creation of New
Photonics Industries, Japan, ²STARSHIP
LASER DRIVE LLC. ³IHI Corporation, Japan

**ALPSP14-26 High Power UV Laser Processing of CFRP with
Various ns Pulse Waveforms**

M. Fujita ^{1,4}, H. Ohkawa ², T. Somekawa ¹,
T. Matsutani ², Y. Maeda ², J. Bovatsek ³,
R. Patel ³, N. Miyanaga ⁴
¹Inst. for Laser Tech., Japan, ²Kinki Univ.,
Japan, ³Spectra-Physics, Newport Company,
USA, ⁴Inst. of Laser Eng., Osaka Univ., Japan

**ALPSP14-27 Development of Feedback Algorithm for Filled
Aperture Coherent Beam Combining Technique
with Phase Control**

K. Tsubakimoto, T. Kinugasa, Y. Iwami,

H. Yoshida, H. Fujita, N. Miyanaga
Inst. of Laser Eng., Osaka Univ., Japan

**ALPSP14-28 All-Fiber 41-fs Pulse Generation from a Self-
Similar Erbium Fiber Amplifier**

D. Yoshitomi, K. Torizuka
National Inst. of Advanced Industrial Sci. and
Tech., Japan

**ALPSP14-29 Control of High Energy Sub-ps Pulses from
Yb-Doped Fiber Laser Using Hollow-Core
Photonic Bandgap Fiber**

N. Otsuka and N. Nishizawa
Nagoya Univ., Japan

**ALPSP14-30 Development of Multi-Color Visible Short Pulse
Glass Fiber Laser Using Graphene Thin Film**

S. Kajikawa ^{1,2}, Y. Fujimoto ¹, M. Yoshida ²,
O. Ishii ³, M. Yamazaki ⁴
¹Inst. for Laser Eng., Osaka Univ., Japan,
²Kinki Univ., Japan, ³Optical Glass Production
Dept., Sumita Optical Glass, Japan, ⁴R&D
Dept, Sumita Optical Glass, Japan

**ALPSP14-31 Numerical Study of Hybrid Mode-Locked Fiber
Lasers with Full-Vector Model**

L. Jin, N. Nishizawa
Nagoya Univ.

**ALPSP14-32 Er-Doped Hybrid Mode-Locked Fiber Laser
Using Combination of Nonlinear Polarization
Rotation and Carbon Nanotube**

K. Nonobe ¹, L. Jin ¹, Y. Sakakibara ²,
E. Omoda ², H. Kataura ², and N. Nishizawa ¹
¹Dept. Quantum Eng., Nagoya Univ., Japan,
²National Inst. of Advanced Industrial Sci. and
Tech. (AIST), Japan

**ALPSP14-33 Demonstration of Coherence-Selectable
Operation of External-Cavity Semiconductor
Laser**

M. Hyodo ¹, A. Kawakami ², S. Saito ²,
M. Watanabe ³, Y. Tamura ¹ and M. Adachi ¹
¹ Kanazawa Univ., Japan, ²Advanced ICT Res.
Inst., National Inst. of Information and
Comm. Tech., Japan, ³Dept. of Eng. Sci., Univ.
of Electro-Comm., Japan

**ALPSP14-34 Study on Self-Coupling Sensor Using Terminal
Voltage Change**

T. Yoshimatsu, N. Tsuda, J. Yamada

Aichi Inst. of Tech., Japan

ALPSP14-35 Photon-Stimulated Desorption Surface Spectroscopy System by Using a Laser-Produced Argon Plasma

M. Kaku ¹⁾, D. Kai ¹⁾, M. Katto²⁾, A. Yokotani ¹⁾, W. Sasaki ³⁾, S. Kubodera ¹⁾

¹⁾Dept. of Electrical and Electronic Eng. and Photon Sci. Center, Univ. Miyazaki, Japan,

²⁾Cooperative Res. Center, Univ. of Miyazaki, Japan, ³⁾NTP Inc., Japan

ALPSP14-36 Ablation Mechanism and Some Ideas of Applications of Modified Surface Structures Induced by Picosecond Soft X-Ray Laser

M. Ishino ¹⁾, N. Hasegawa ¹⁾, M. Nishikino ¹⁾, M. Maruyama ¹⁾, A. Faenov ^{2,3)}, S. Tamotsu ⁴⁾, T. Pikuz ^{2,3)}, N. Inogamov ²⁾, I. Skobelev ^{2,5)}, T. Kawachi ¹⁾, M. Yamagiwa ¹⁾

¹⁾JAEA, Japan, ²⁾RAS, Russia, ³⁾Osaka Univ., Japan, ⁴⁾Nara Women's Univ., Japan, ⁵⁾National Res. Nuclear Univ., Russia

ALPSP14-37 Continuous Generation of Laser Plasma X-Ray Using Solid Rare Gas Targets

S. Amano

Univ. of Hyogo, Japan

ALPSP14-38 High Intensity Ultrashort VUV Pulse Generation with OFI Ar₂* Amplifier

M. Kaku ¹⁾, N. Deshimaru ¹⁾, M. Katto ²⁾, S. Kubodera ¹⁾

¹⁾Dept. of Electrical and Electronic Eng. and Photon Sci. Center, Univ. Miyazaki, Japan,

²⁾Cooperative Res. Center, Univ. Miyazaki, Japan

ALPSP14-39 Development of Nanosecond Pulse CO₂ Laser for Efficient Extreme Ultraviolet Generation

R. Amano ¹⁾, T. H. Dinh ¹⁾, A. Sasanuma ¹⁾, G. Arai ¹⁾, Y. Fujii ¹⁾, A. Takahashi ²⁾, D. Nakamura ²⁾, T. Okada ²⁾, T. Miura ³⁾, A. Endo ³⁾, T. Mocek ³⁾, and T. Higashiguchi ¹⁾

¹⁾Utsunomiya Univ., Japan, ²⁾Kyushu Univ., Japan, ³⁾HiLASE Center, Czech

ALPSP14-40 Temporal Profile Measurement of Plasma X-Ray Laser Pulses by using a Pump-Probe Laser Spectroscopy

S. Namba ¹⁾, N. Hasegawa ²⁾, M. Kishimoto ²⁾,

M. Nishikino ²⁾ and T. Kawachi ²⁾

¹⁾Hiroshima Univ., Japan, ²⁾JAEA, Japan

ALPSP14-41 Remote Sensing Based on Lasing Action Induced by Femtosecond Laser Filamentation

W. Chu ¹⁾, J. Ni ¹⁾, J. Yao ¹⁾, B. Zeng ¹⁾, G. Li ¹⁾, C. Jing ¹⁾, H. Xu ²⁾, Y. Cheng ¹⁾

¹⁾State Key Lab. of High Field Laser Phys., SIOM, CAS, China, ²⁾College of Electronic Science and Eng., Jilin Univ., Japan

ALPSP14-42 Simultaneously Q-switched and Mode-Locked Eye-Safe Self-Raman Laser at 1525 nm

D. Wang ¹⁾, C. Du ¹⁾, Y. Zhang ¹⁾, S. Ruan ¹⁾, X. Xie ²⁾

¹⁾Shenzhen Univ., China, ²⁾Han's Laser Tech. Industry Group Co., Ltd., China

ALPSP14-43 Second Harmonic Generation in Isotropic Gaseous Medium Using Spatiotemporally Focused Femtosecond Laser Pulses

G. Li ¹⁾, J. Ni ¹⁾, H. Xie ¹⁾, B. Zeng ¹⁾, J. Yao ¹⁾, W. Chu ¹⁾, H. Xu ²⁾, Y. Cheng ¹⁾, Z. Xu ¹⁾

¹⁾SIOM, CAS, China, ²⁾Jilin Univ., China

ALPSP14-44 Compact Low Loss Design of SOI 1x2 Y-Branch Optical Power Splitter with s-Bend Waveguide and Study on the Variation of Transmitted Power with Various Waveguide Parameters

C. P. Vardhani, N. R. Pendam
Osmania Univ., India

ALPSP14-45 Improvement of THz-Wave Parametric Source with a Broad Tunable Range

K. Murate ¹⁾, K. Imayama ¹⁾, S. Hayashi ²⁾, K. Kawase ^{1,2)}

¹⁾Nagoya University, Japan, ²⁾RIKEN, Japan

ALPSP14-46 Control of Nonlinear Emission at a Gold Tapered Tip Excited by Ultrafast Surface Plasmon Pulses

Y. Masaki, K. Toma, K. Hirose, F. Kannari
Keio Univ., Japan

ALPSP14-47 Experimental Verification of Terahertz-Wave Spectroscopic Measurement Based on Nonlinear Wavelength-Conversion

S. Hayashi ¹⁾, K. Nawata ¹⁾, K. Kawase ^{1,2)} and H. Minamide ¹⁾

¹⁾RIKEN Center for Advanced Photonics, Japan, ²⁾Nagoya Univ., Japan

- ALPSp14-48 Time-Domain Measurement and Noise Analysis of a Kerr Comb from a Toroid Microcavity**
 Y. Okabe, R. Suzuki, Z. Chen, T. Nagano, T. Kobatake, and T. Tanabe
 Keio Univ., Japan
- ALPSp14-49 Influence of Raman Scattering on a Kerr Frequency Comb Generated in a Silica Toroidal Microcavity**
 T. Kobatake, T. Kato and T. Tanabe
 Keio Univ., Japan
- ALPSp14-50 Enhanced Heat Removal in High Power SHG Module**
 M. Nonaka ^{1,2}, W. Nagashima ^{1,2}, H. H. Lim ¹, S. Kurimura ¹, I. Shoji ²
¹NIMS, Japan, ²Chuo Univ., Japan
- ALPSp14-51 Photon-Number Squeezed Pulse Generation with a Symmetric Fiber Interferometer**
 A. Hosaka, K. Hirose, R. Sawada, and F. Kannari
 Keio Univ., Japan
- ALPSp14-52 Precise Deuteration Control of KDP Crystal and Application to Ultra-broadband Optical Parametric Amplification**
 K. Fujioka ^{1,2}, Y. Fujimoto ¹, K. Tsubakimoto ¹, J. Kawanaka ¹, I. Shoji ³, and N. Miyanaga ¹
¹Inst. of Laser Eng., Osaka Univ., Japan, ²Promotion Center for Laser Tech., ³ Chuo Univ., Japan
- ALPSp14-53 Stimulated Brillouin Scattering Pulse Compression and its Application to Optical Parametric Chirped-Pulse Amplifier**
 J. Ogino ¹, S. Miyamoto ¹, T. Matsuyama ¹, K. Sueda ², H. Yoshida ¹, K. Tsubakimoto ¹ and N. Miyanaga ¹
¹Inst. of Laser Eng., Osaka Univ., Japan
²Photon Pioneers Center, Osaka Univ., Japan
- ALPSp14-54 Effective Photon Conversion from THz to NIR in a Slant-Stripe-Type Periodically Poled LiNbO₃**
 K. Nawata ¹, T. Notake ¹, H. Ishizuki ², Y. Takida ¹, Y. Tokizane ¹, S. Hayashi ¹, T. Taira ², and H. Minamide ¹
¹RIKEN, Japan, ²Inst. for Molecular Sci., Japan
- ALPSp14-55 Sub-THz Wave Generation in DAST-DFG Configuration Pumped by a Dual-Wavelength, Injection-Seeded BBO OPG System**
 Y. Tokizane ¹, Y. Miyake ^{1,2}, K. Nawata ¹, S. Fan ¹, S. Hayashi ¹, T. Notake ¹, A. Sato ², Y. Takida ¹ and H. Minamide ¹
¹RIKEN, Japan, ²Tohoku Inst. of Tech., Japan
- ALPSp14-56 High-efficiency MLD-THz-TDS with Using a Chaotic Oscillation and Metal V Groove Waveguide**
 Y. Akamine ¹, K. Iwao ¹, M. Oi ¹, T. Kishibata ¹, T. Shirao ¹, F. Kuwashima ¹, M. Tani ², K. Kurihara ³, K. Yamamoto ², K. Nagashima ⁴, M. Hangyo ⁵
¹Fukui Univ. of Tech., Japan, ² Res. Center for Development of Far-Infrared Region, Japan, ³Univ. of Fukui, Japan, ⁴Setsunan Univ., Japan, ⁵Inst. of Laser Eng., Osaka Univ., Japan
- ALPSp14-57 Subwavelength and Femtosecond Scale Control of Ultrafast Localized Plasmon Pulses at Metallic Nanostructures by Light Wave Shaping**
 Y. Kojima, Y. Masaki, K. Toma, K. Hirose, and F. Kannari
 Keio Univ., Japan
- ALPSp14-58 Hybrid-lens for Terahertz Subwavelength Focusing beyond the Diffraction Limit**
 P. Tapsanit ^{1,2}, M. Yamashita ², C. Otani ^{1,2}
¹Tohoku Univ., ²RIKEN Center for Adv. Photonics
- ALPSp14-59 Magneto-Optical Integrated Circuits by Femtosecond Laser Modelling in YIG**
 T. Amemiya ^{1,2}, Z. Gu ³, A. Ishikawa ^{2,4}, Y. Shoji ³, P. N. Hai ⁵, M. Tanaka ⁶, T. Mizumoto ³, T. Tanaka ^{2,7}, Shigehisa Arai ^{1,3}
¹Quantum Nanoelectronics Res. Center, Tokyo Inst. of Tech., Japan, ²Metamaterials Lab., RIKEN, Japan, ³Dept. of Electrical and Electronic Eng., Tokyo Inst. of Tech., Japan, ⁴Dept. of Electrical and Electronic Eng., Okayama Univ., Japan, ⁵Dept of Phys. Electronics, Tokyo Inst. of Tech., Japan, ⁶Dept. of Electrical Eng. and Information Systems, Univ. of Tokyo, Japan, ⁷Res. Inst. for

Electronic Sci., Hokkaido Univ., Japan

**ALPSp14-60 Shack-Hartmann Wavefront Sensor for
Nebulization Concentration Measurement**

K.-Y. Huang ¹⁾, C.-M. Chia ¹⁾, E. Chang ²⁾,
Y. M. Chen ¹⁾

¹⁾National Taiwan Univ.

²⁾Genius Electronic Optical Co.

ALPSp14-61 (Withdraw)

**ALPSp14-62 Observing Triplet State Dynamics of
Fluorescent Proteins by Modulated Excitation**

N. Kamiyama, Y. Sunairi, K. Toda,

H. Takahashi, A. Suda

Tokyo Univ. of Sci., Japan

**ALPSp14-63 Wavelength Dependence of Optical Coherence
Tomography Imaging Using Supercontinuum
Source in Wavelengths of 0.8-1.9 μm**

H. Kawagoe, M. Yamanaka, and N. Nishizawa

Nagoya Univ., Japan

----- Break / Move (15:00 – 15:30) -----

15:30 - 16:45

**ALPS15 : Fiber Lasers and Diode
Lasers**

Room 302

Chair: A. Shirakawa, Program Committee Member

Univ. of Electro-Comm., Japan

ALPS15-1 (Invited) Challenges and Opportunities for

15:30 Mid-Infrared Fibre Sources

S. D. Jackson

MQ Photonics, Dept of Eng., Macquarie Univ.,
Australia

ALPS15-2 Development of High-Power and High-

16:00 Efficiency 9xx nm Laser Diodes

T. Uchiyama, K. Torii, N. Kageyama,
T. Nagakura, K. Endo, T. Morita, J. Maeda,
H. Yoshida

Hamamatsu Photonics K. K., Japan

ALPS15-3 Nanosecond Pulsed 1.5 kW Average-Output-

**16:15 Power Fiber Laser System Based on Yb-doped
Rod PCFs for Filled-aperture Coherent and
Spectral Combinations**

H. Yoshida ¹⁾, K. Tsubakimoto ¹⁾, H. Fujita ¹⁾,
N. Miyanaga ¹⁾, T. Yamamura ^{2,5)}, T. Sakagawa ^{2,5)},
M. Tsukamoto ³⁾, H. Chosrowjan ^{4,5)},
T. Kitamura ^{4,5)}, M. Fujita ^{4,5)}, Y. Izawa ^{4,5)}
¹⁾ILE OSAKA Univ., Japan, ²⁾KATAOKA
Corp., Japan, ³⁾JWRI Osaka Univ., Japan, ⁴⁾ILT,
Japan, ⁵⁾ALPROT, Japan

ALPS15-4 CFRP Cutting with High Power Fiber Laser

16:30

T. Miyato ^{1,4)}, A. Fujisaki ^{1,4)}, K. Furukawa ^{2,4)},
M. Matsushita ^{2,4)}, Y. Harada ^{3,4)}, H. Niino ^{3,4)}

¹⁾Furukawa Electric Co., Ltd., Japan, ²⁾Shin

Nippon Koki Co., Ltd., Japan, ³⁾AIST, Japan,

⁴⁾ALPROT, Japan

16:45

Closing

Room 302

16:45 - 16:55

Award Ceremony

Room 302

N. Nishizawa, Program Committee Chair

Nagoya Univ., Japan

16:55 - 17:00

Closing Remarks

Room 302

H. Nishioka, Steering Committee Chair

Univ. of Electro-Comm., Japan