

The 2nd Advance Lasers and Photon Sources ALPS '13

Sponsored & Organized by
The Laser Society of Japan, LSJ



Katsumi Midorikawa
Conference Chair
(RIKEN)

Tuesday, April 23

9:30-10:45

Opening Remarks of OPIC '13

Room 301, 302

9:30 S. Nakai, Organizing Chair of OPIC '13,
President of the Laser Society of Japan

9:40

Introductory talk

Past, present, and future of lasers

K. Shimoda, Congress Chair of OPIC '13,
Prof. Emeritus at the Univ. of Tokyo,
Japan

10:00-k:55

Keynote Lectures of OPIC '13

Room 301, 302

10:00 **Laser for Ignition and Future Energy
Generation**
R. L. Byer, Congress Chair of OPIC '13,
Prof. of Stanford Univ., USA

10:45 **Advanced laser source and applications
to medicine and biology**

Presenter I

K. Midorikawa, Conference Chair of
ALPS '13,
Deputy Director, RIKEN Advanced
Science Institute, Japan

Presenter II

M. Kikuchi, Conference Chair of
CLSM2013, Japan Association for the
Advancement of Medical Equipment,
Japan

----- Lunch Break (11:55-13:20) -----

13:20-15:20

Joint Plenary Sessions of OPIC '13

Session A

Room 301, 302

13:20 **Sensing technologies for bio-material,
food and agriculture**

N. Kondo, Conference Chair of
SeTBio '13, Kyoto Univ., Japan

13:50 **Laser display**

K. Kuroda, Conference Chair of LDC '13,
Utsunomiya Univ., Japan

14:20 **LED and its industrial application**

H. Amano, Conference Chair of
LEIDA '13, Nagoya Univ., Japan

14:50 **Laser Ignition**

T. Taira, Conference Chair of LIC '13,
IMS, Japan

Session B

Room 303

13:20 **Laser and accelerator neutron sources
and applications**

H. Azechi, Conference Chair of
LANSA '13, Osaka Univ., Japan

13:50 **Laser application to nuclear
engineering**

K. Kuroda, Conference Chair of
LANE '13, Japan Atomic Energy Agency,
Japan

14:20 **High-energy density science**

R. Kodama, Conference Chair of
HEDS2013, Osaka Univ., Japan

14:50 **Laser processing for CFRP and
composite materials**

M. Kutsuna, Conference Advisor of
LPCC2013, GPI, Japan

----- Break (15:20-15:45) -----

15:45-18:00

Joint Sessions between LIC '13 and LDC '13

Room 301, 302

Participants of ALPS '13 are highly recommended
to join these joint sessions where advanced laser
sources and applications are highlighted. See the
detail in the conference program of LIC '13 or
LDC '13.

18:30-20:30

OPIC '13 Conference Reception

Intercontinental Hotel

Participants of ALPS '13 are invited.

Wednesday, April 24

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

9:00-9:15

Opening

Room 303

9:00

Opening Remarks

K. Midorikawa, Conference Chair of ALPS '13, Deputy Director, RIKEN Advanced Science Institute, Japan

9:15-10:45

ALPS1 : High Power Lasers (I)

Room 303

Chair: *F. Kannari, Program Committee Chair of ALPS '13, Keio Univ., Japan*

9:15

ALPS1-1 Development of cryogenically-cooled Yb:YLF chirped-pulse amplification laser for pumping few-cycle optical-parametric chirped-pulse amplification

Y. Akahane^{1,2)}, K. Ogawa^{1,2)}, and K. Yamakawa^{1,2)}

¹⁾ Japan Atomic Energy Agency, Japan, ²⁾ JST-CREST, Japan

9:30

ALPS1-2 High small signal gain of monolithic composite ceramic with Yb:YAG thin layers - multi-TRAMs -

J. Kawanaka¹⁾, H. Furuse¹⁾, S. Hwang¹⁾, and T. Kawashima²⁾

¹⁾ ILE, Osaka Univ., ²⁾ Hamamatsu Photonics K. K., Japan

9:45

ALPS1-3 Thermo-optical calculations of an Yb:YAG cryogenically cooled slab amplifier with pulse energy of 100 J

O. Slezak, A. Lucianetti, M. Sawicka, M. Divoky, and T. Mocek
HiLASE project, Institute of Physics ASCR, Czech Republic

10:00

ALPS1-5 (Invited) 3.1 μm wavelength, 19 μJ energy, 160 kHz repetition rate OPCPA for strong-field physics

M. Hemmer¹⁾, A. Thai¹⁾, M. Baudisch¹⁾, H. Ishizuki²⁾, T. Taira²⁾, and J. Biegert^{1,3)}

¹⁾ ICFO, Spain, ²⁾ IMS, Japan, ³⁾ ICREA, Spain

10:30

ALPS1-6 PENELOPE – a diode-pumped, high-energy, chirped-pulse laser amplifier

M. Siebold¹⁾, M. Loeser^{1,2)}, D. Albach¹⁾, F. Roeder¹⁾, and U. Schramm^{1,2)}

¹⁾ Helmholtz-Zentrum Dresden-Rossendorf, Germany, ²⁾ Dresden Univ. of Technology, Germany

11:15 -12:30

ALPS2 : New Laser Sources

Room 303

Chair: *H. Nishioka, Program Committee of ALPS '13, Univ. of Electro-Communications, Japan*

11:15

ALPS2-1 (Invited) Development of Deep-UV LEDs and THz-QCLs and those applications

H. Hirayama^{1,3)}, S. Fujikawa^{1,3)}, N. Maeda^{1,3)}, W. Terashima¹⁾, T.-T. Lin¹⁾, and N. Kamata²⁾

¹⁾ RIKEN, Japan, ²⁾ Saitama Univ., Japan, ³⁾ JST-CREST, Japan

11:45

ALPS2-2 Cr:YAG as a saturable absorber for a Q-switched and mode-locked 639-nm Pr:YLF laser

R. Abe, J. Kojou, K. Masuda, and F. Kannari
Keio Univ., Japan

12:00

ALPS2-3 Milli-joule level 2 μm fractional vortex generation form an optical parametric master oscillator and amplifier

Y. Tokizane^{1,2)}, M. Yamada¹⁾, T. Yusufu¹⁾, K. Miyamoto¹⁾, and T. Omatsu^{1,2)}

¹⁾ Chiba Univ., Japan, ²⁾ JST-CREST, Japan

12:15

ALPS2-4 VUV light generation with borate crystals

C. Qu^{1,2)}, M. Yoshimura^{1,2)}, J. Tsunoda^{1,2)}, Y. Kaneda^{1,2,3)}, M. Imade¹⁾, T. Sasaki^{1,2)}, and Y. Mori^{1,2)}

¹⁾ Graduate School of Engineering, Osaka Univ., Japan, ²⁾ CREST, Japan, ³⁾ College of Optical Sciences, The Univ. of Arizona, USA

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

13:30-15:00

ALPS3 : Fiber Lasers

Room 303

Chair: *S. Sakabe, Steering Committee Chair of ALPS '13, Kyoto Univ., Japan*

13:30

ALPS3-1 (Invited) Photonic bandgap and multicore fiber lasers for next-generation high-power lasers

A. Shirakawa
Univ. of Electro-Communications, Japan

14:00

ALPS3-2 Dynamics of Er-doped soliton-similariton fiber laser and application for ultrahigh resolution optical coherence tomography

N. Nishizawa and S. Ishida
Nagoya Univ., Japan

14:15
ALPS3-3 Coherent superposition of few-cycle laser pulses based on frequency resolved two-wave-mixing
H. Nishioka, H. Nahara, and T. Morishita
Univ. of Electro-Communications, Japan

14:30
ALPS3-4 Mode-locked thulium-doped all-fiber figure-eight laser and amplifier around 2- μ m
C. W. Rudy, K. E. Urbanek, M. J. F. Digonnet, and R. L. Byer
Stanford Univ., USA

14:45
ALPS3-5 Pulsewidth-tunable fiber laser for processing thin-film devices
K. Nishigori¹⁾, T. Koizumi¹⁾, and S. Wada²⁾
¹⁾ *Megaopto, Co., Ltd, Japan,* ²⁾ *RIKEN, Japan*

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

15:30-17:15

ALPS4 : THz Sources and its applications

Room 303

Chair: *H. Minamide, Program Committee of ALPS '13, RIKEN, Japan*

15:30
ALPS4-1 (Invited) Photonic terahertz sources and their applications in fundamental and applied research
D. Molter^{1,2)}, F. Ellrich²⁾, and R. Beigang^{1,2)}
¹⁾ *Univ. Kaiserslautern, Germany,* ²⁾ *Fraunhofer Institute for Physical Measurement Techniques IPM, Germany*

16:00
ALPS4-2 Photoluminescence flash induced by intense single-cycle terahertz pulses in undoped GaAs quantum wells
K. Shinokita¹⁾, H. Hirori²⁾, K. Tanaka^{1,2)}, T. Mochizuki^{2,3)}, C. Kim^{2,3)}, H. Akiyama^{2,3)}, L. N. Pfeiffer⁴⁾, and K. W. West⁴⁾
¹⁾ *Kyoto Univ., Japan,* ²⁾ *JST-CREST, Japan,* ³⁾ *Univ. of Tokyo, Japan,* ⁴⁾ *Princeton Univ., USA*

16:15
ALPS4-3 High Al composition AlGaAs THz QCLs with operation temperature and T₀ improvement
T. -T. Lin and H. Hirayama
Terahertz Quantum Device Laboratory, RIKEN, Japan

16:30
ALPS4-4 Broadband and high power THz wave generation using femtosecond fiber laser in 4-dimethylamino-N-methyl-4-stilbazolium tosylate crystal
S. R. Tripathi^{1,2)}, T. Sugiyama¹⁾, K. Murate¹⁾, K. Takeya¹⁾ and K. Kawase^{1,2)}
¹⁾ *Nagoya Univ., Japan,* ²⁾ *RIKEN, Japan*

16:45
ALPS4-5 Gapless terahertz frequency comb spectroscopy of molecular gas
Y.-D. Hsieh¹⁾, Y. Iyonaga¹⁾, Y. Sakaguchi¹⁾, S. Yokoyama¹⁾, H. Inaba²⁾, K. Minoshima²⁾, T. Araki¹⁾, F. Hindle³⁾, and T. Yasui^{1,4)}
¹⁾ *Graduate School of Engineering Science, Osaka Univ., Japan,* ²⁾ *AIST, Japan,* ³⁾ *Université du Littoral Côte d'Opale, France* ⁴⁾ *Univ. of Tokushima, Japan*

17:00
ALPS4-6 Energy enhancement of THz emission from intense-laser cluster plasmas by optimizing laser pulse duration
K. Mori¹⁾, M. Hashida¹⁾, T. Nagashima²⁾, S. Tokita¹⁾, M. Hangyo²⁾, and S. Sakabe¹⁾
¹⁾ *Advanced Research Center for Beam Science, ICR, Kyoto Univ., Japan and Department of Physics, GSS, Kyoto Univ., Japan,* ²⁾ *Institute of Laser Engineering, Osaka Univ., Japan*

Thursday, April 25

9:00-12:00

JALPS5: Joint Session with CLSM'13 on Optical Devices and Techniques for Bio and Medical Applications

Room 303

Chair: *T. Kushibiki, Steering Committee of CLSM '13, NDMC, Japan*

9:00
JALPS5-1 (Invited) Optical harmonic generation biopsy of human skin based on a femtosecond Cr:forsterite laser
Chi-Kuang Sun^{1,2,3)}
¹⁾ *Molecular Imaging Center, National Taiwan Univ., Taiwan,* ²⁾ *Graduate Institute of Photonics and Optoelectronics, Graduate Institute of Biomedical Electronics and Bioinformatics, and Department of Electrical Engineering, National Taiwan Univ., Taiwan,* ³⁾ *Research Center for Applied Sciences and Institute of Physics, Academia Sinica, Taiwan*

9:30
JALPS5-2 (Invited) Fourier domain mode-locked lasers and their application to OCT
T. Klein, W. Wieser, T. Pfeiffer, and R. Huber
Ludwig-Maximilians-Universität München, Germany

10:00
JALPS5-3 (Invited) Spatial overlap modulation nonlinear optical microscopy for background-free deep imaging

K. Isobe¹⁾, H. Kawano²⁾, A. Suda³⁾, A. Kumagai²⁾, H. Mizuno²⁾, A. Miyawaki²⁾, and K. Midorikawa¹⁾
¹⁾ ASI, RIKEN, ²⁾ BSI, RIKEN, ³⁾ Tokyo Univ. of Science, Japan

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

Chair: N. Nishizawa, Program Committee of ALPS '13, Nagoya Univ., Japan

11:00

JALPS5-4 Highly sensitive ultrahigh resolution OCT using high power supercontinuum at 1.7 μ m wavelength region based on single wall carbon nanotube fiber laser

H. Kawagoe¹⁾, S. Ishida¹⁾, M. Aramaki¹⁾, Y. Sakakibara^{2,3)}, E. Omoda²⁾, H. Kataura^{2,3)}, and N. Nishizawa¹⁾
¹⁾ Nagoya Univ., Japan, ²⁾ AIST, Japan, ³⁾ JST CREST, Japan

11:15

JALPS5-5 Measurement of the photobleaching spectrum based on the excited-state absorption of fluorescence proteins with Fourier-transform nonlinear spectroscopy

H. Takahashi, K. Toda, and A. Suda
Tokyo Univ. of Science, Japan

11:30

JALPS5-6 Dynamic SERS imaging of living cells

K. Fujita, K. Bando, K.-C. Huang, J. Ando, N. I. Smith, S. Kawata
Graduate School of Engineering, Osaka Univ., Japan

11:45

JALPS5-7 Selective excavation of demineralized dentin using a mid-infrared tunable nanosecond pulsed laser at wavelengths around 6 μ m

K. Ishii¹⁾, T. Kita¹⁾, K. Yoshikawa²⁾, K. Yasuo²⁾, K. Yamamoto²⁾, and K. Awazu^{1,3,4)}
¹⁾ Graduate School of Engineering, Osaka Univ., Japan, ²⁾ Department of Operative Dentistry, Osaka Dental Univ., Japan, ³⁾ Graduate School of Frontier Biosciences, Osaka Univ., Japan, ⁴⁾ The Center for Advanced Medical Engineering and Informatics, Osaka Univ., Japan

--- Lunch Break & Poster Session (12:00-14:30) ---

12:15-14:15

ALPS6 : Poster Session

Exhibition Hall D

Chair: A. Suda, Program Committee of ALPS '13, Tokyo Univ. of Science, Japan

ALPSp6-1 Optical amplification of vacuum ultraviolet femtosecond pulses at 126 nm in an optical-field-induced ionization Ar₂* amplifier

M. Kaku¹⁾, Y. Ezaki¹⁾, T. Daikyuji¹⁾, K. Fujiyoshi¹⁾, M. Katto¹⁾, S. Kubodera¹⁾,

and K. Miyazaki²⁾,

¹⁾ Univ. of Miyazaki, Japan, ²⁾ Kyoto Univ., Japan

ALPSp6-2 Development of high averaged power ultra-short pulse laser system

K. Tsubakimoto^{1,4)}, H. Yoshida^{1,4)}, H. Fujita^{1,4)}, N. Miyanaga^{1,4)}, Y. Nagata^{2,4)}, and H. Kinoshita^{3,4)}

¹⁾ ILE, Osaka Univ., Japan, ²⁾ RIKEN, Japan, ³⁾ Univ. of Hyogo, Japan, ⁴⁾ JST-CREST, Japan

ALPSp6-3 Enhancement of output laser power in high-power Nd/Cr:YAG ceramic active mirror amplifiers based on cross-relaxation effect under white light source pumping

N. Matsuoka¹⁾, T. Saiki¹⁾, N. Fujiwara¹⁾, T. Hayashi¹⁾, N. Hirota¹⁾, K. Fujioka²⁾, M. Nakatsuka³⁾, and Y. Iida¹⁾
¹⁾ Kansai Univ., Japan, ²⁾ ILE, Osaka Univ., Japan, ³⁾ Institute for Laser Technology, Japan

ALPSp6-4 Development of Q-switched and mode-locked Nd/Cr:YAG ceramic laser

N. Hirota, T. Saiki, N. Fujiwara, N. Matsuoka, T. Hayashi, and Y. Iida
Kansai Univ., Japan

ALPSp6-5 Air fuel cells using sintered metal pastes for solar energy cycle

T. Karita, T. Saiki, T. Okada, K. Nakamura, Y. Nishikawa, and Y. Iida
Kansai Univ., Japan

ALPSp6-6 Illumination of arbitrary patterns using multi-level free-form three dimensional micro-fabricated high performance diffractive optical elements

A. Hamano¹⁾, A. Yamada¹⁾, T. Takada²⁾, and Y. Usuki¹⁾
¹⁾ Material Research Laboratory, R&D Division, Furukawa Co. Ltd., Japan, ²⁾ R&D Planning Department, R&D Division, Furukawa Co. Ltd., Japan

ALPSp6-7 THz intersubband emission from GaN based quantum cascade laser with development of new growth technique on RF-MB

W. Terashima^{1,2)} and H. Hirayama^{1,2)}
¹⁾ Quantum Optodevice Laboratory, RIKEN, Japan, ²⁾ Terahertz Quantum Device Laboratory, RIKEN, Japan

ALPSp6-8 Measurement and calculation of laser-induced damage threshold at different temperature for optical coating

K. Mikami^{1,2,3)}, S. Motokoshi⁴⁾, T. Somekawa⁴⁾, T. Jijsuno¹⁾, M. Fujita⁴⁾, and K. A. Tanaka²⁾

¹⁾ ILE, Osaka Univ., Japan, ²⁾ Graduate School of Engineering, Osaka Univ., Japan, ³⁾ JSPS Research Fellow, Japan, ⁴⁾ Institute for Laser Technology, Japan

- ALPSP6-9 75 nm-wide tunable ytterbium doped fiber ring laser based on bidirectional pumping scheme**
Y. Jhang and W.-P. Lin
Chung Gung Univ., Taiwan
- ALPSP6-10 Analysis of energy transfer process in Nd/Cr:YAG materials**
Y. Honda ¹⁾, S. Motokoshi ²⁾, T. Jitsuno ¹⁾, N. Miyanaga ¹⁾, K. Fujioka ¹⁾, M. Nakatsuka ²⁾, and M. Yoshida ³⁾
¹⁾ ILE, Osaka Univ., Japan, ²⁾ Institute for Laser Technology, Japan, ³⁾ Kinki Univ., Japan
- ALPSP6-11 Optimization of depolarization losses and scaling of a high average power diode pumped laser amplifier using Yb³⁺ doped CaF₂**
D. Albach ¹⁾, M. Loeser ^{1,2)}, F. Roeser ¹⁾, M. Siebold ¹⁾, and U. Schramm ^{1,2)}
¹⁾ Helmholtz-Center Dresden-Rossendorf, Germany, ²⁾ Dresden Univ. of Technology, Germany
- ALPSP6-12 10-mm short fiber laser demonstration with single-mode Nd-doped silica fiber fabricated by Zeolite method**
M. Murakami ¹⁾, Y. Fujimoto ¹⁾, H. Shiraga ¹⁾, S. Motokoshi ²⁾, and T. Sato ³⁾
¹⁾ ILE, Osaka Univ., Japan, ²⁾ Institute of Laser Technology, Japan, ³⁾ Shin-Etsu Quartz Products Co., Ltd., Japan
- ALPSP6-13 Broadband, diode pumped Yb:SiO₂ multicomponent glass laser**
M. Loeser ^{1,2)}, A. Reichelt ^{1,2)}, D. Albach ¹⁾, F. Roeser ¹⁾, M. Siebold ¹⁾, S. Grimm ³⁾, D. Litzkendorf ³⁾, A. Schwuchow ³⁾, J. Kirchhof ³⁾, and U. Schramm ^{1,2)}
¹⁾ Helmholtz-Center Dresden-Rossendorf, Germany, ²⁾ Dresden Univ. of Technology, Germany, ³⁾ Institute of Photonic Technology, Germany
- ALPSP6-14 Intracavity second-harmonic generation at 261nm of an actively Q-switched Pr:LiYF₄ laser**
J. Kojou, R. Abe, A. Sakurai, and F. Kannari
Keio Univ., Japan
- ALPSP6-15 Investigation of gain spectral filtering for spectral enhancement on fiber oscillator system**
S. Hwang ¹⁾, F. Hiroaki ²⁾, C. Lim ³⁾, K. Junji ¹⁾, and M. Noriaki ¹⁾
¹⁾ ILE, Osaka Univ., ²⁾ Institute for Laser Technology, Japan, ³⁾ Korea Atomic Energy Research Institute, Korea
- ALPSP6-16 Analysis of fluorescence for Nd:CNCG powder**
T. Isshiki ¹⁾, S. Motokoshi ²⁾, K. Fujioka ¹⁾, T. Jitsuno ¹⁾, M. Murakami ¹⁾, and M. Yoshida ³⁾
¹⁾ ILE, Osaka Univ., Japan, ²⁾ Institute for Laser Technology, Japan, ³⁾ Kinki Univ., Japan
- ALPSP6-17 Rapidly-tunable Cr:ZnSe laser system for high energy optical-parametric oscillator**
M. Yumoto, N. Saito, U. Takagi, T. Tomida, and S. Wada
ASI, RIKEN, Japan
- ALPSP6-18 Temperature distribution characteristics in a cryogenic Yb:YAG TRAM laser medium**
T. Sakurai ¹⁾, H. Furuse ¹⁾, H. Chosrowjan ¹⁾, J. Kawanaka ²⁾, N. Miyanaga ²⁾, K. Hamamoto ³⁾, T. Yamada ³⁾, M. Fujita ¹⁾ and Y. Izawa ¹⁾
¹⁾ Institute for Laser Technology, Japan, ²⁾ ILE, Osaka Univ., Japan, ³⁾ Mitsubishi Heavy Industries LTD., Japan
- ALPSP6-19 Coherent sodium D₂ resonance light source for trossø sodium lidar**
N. Saito ¹⁾, T. Tsukihana ²⁾, T. D. Kawahara ³⁾, S. Nozawa ⁴⁾, T. Kawabata ⁴⁾, T. T. Tsuda ⁴⁾, and S. Wada ¹⁾
¹⁾ ASI, RIKEN, Japan ²⁾ MegaOpt Co., Ltd., Japan, ³⁾ Shinshu Univ., Japan, ⁴⁾ Nagoya Univ., Japan
- ALPSP6-20 Solar light pumped laser technology for brightness enhancement as renewable energy utilization**
S. Uchida ¹⁾ and W. Bin ²⁾
¹⁾ Laser Institute for Technology, Japan, ²⁾ Nagoya Univ., Japan
- ALPSP6-21 An InGaN diode-laser pumped Ti:sapphire laser**
S. Sawai, H. Kawauchi, and F. Kannari
Keio Univ., Japan
- ALPSP6-22 Relativistic effects in strong-field nonsequential double ionization: importance of the laser magnetic field and Darwin corrections**
E. Lötstedt and K. Midorikawa
ASI, RIKEN, Japan
- ALPSP6-23 Anti-corrosion properties of DLC films as novel biomaterials**
A. Alanazi ¹⁾, T. Sato ²⁾, Y. Ohgoe ³⁾, F. Shizuku ⁴⁾, and K. Hirakuri ²⁾
¹⁾ King Saudi Univ., Saudi Arabia, ²⁾ Tokyo Denki Univ., Japan, ³⁾ Division of Science of Engineering, Tokyo Denki Univ., Japan, ⁴⁾ Sankyo Seisakusho Co., Japan
- ALPSP6-24 Longitudinally excited N₂ Laser with high beam quality for cell sectioning**
W. Gong ¹⁾, K. Uno ¹⁾, S. Shitajima ¹⁾, T. Akitsu ¹⁾, T. Jitsuno ²⁾
¹⁾ Univ. of Yamanashi, Japan, ²⁾ ILE, Osaka Univ., Japan
- ALPSP6-25 Determination of the thermal expansion coefficient in TGG ceramics between 293 K and 64 K**
R. Yasuhara ¹⁾, H. Nozawa ²⁾, T. Yanagitani ²⁾, J. Kawanaka ³⁾
¹⁾ National Institute for Fusion Science, Japan, ²⁾ Konoshima Chemical Co. Ltd., Japan, ³⁾ ILE, Osaka Univ., Japan

- ALPSp6-26 High-frequency modulating laser to reduce light power on super-resolution high density optical disc with Sb-Te active film**
K. Nakai¹⁾, M. Ohmaki¹⁾, N. Takeshita¹⁾, M. Shinoda¹⁾, H. Nakayama¹⁾, T. Shima²⁾, T. Nakano³⁾, and J. Tominaga³⁾
¹⁾ Advanced Technology R&D Center, Mitsubishi Electric Corporation, Japan, ²⁾ Electronics and Photonics Research Institute, National Institute of Advanced Industrial Science and Technology, Japan, ³⁾ Nanoelectronics Research Institute, National Institute of Advanced Industrial Science and Technology, Japan
- ALPSp6-27 Optical waveguide using metal nanoparticles**
M. Yada, Y. Iida, and T. Saiki
 Kansai Univ., Japan
- ALPSp6-28 Computational model for generation and auto-oscillations of Lyman- α radiation by resonant laser mixing in Kr-Ar gas under discharge**
O. A. Louchev¹⁾, N. Saito²⁾, S. Wada¹⁾, K. Miyazaki¹⁾, Y. Ohishi²⁾ and M. Iwasaki²⁾
¹⁾ ASI, RIKEN, Japan ²⁾ RIKEN Nishina Center, Japan
- ALPSp6-29 Ultraviolet laser-induced degradation in CsLiB₆O₁₀**
M. Yoshimura^{1,2)}, K. Takachiho^{1,2)}, Y. Takahashi^{1,2)}, T. Sasaki^{1,2)}, and Y. Mori^{1,2)}
¹⁾ Graduate School of Engineering, Osaka Univ., Japan, ²⁾ CREST, JST, Japan
- ALPSp6-30 1.1 kW peak-power terahertz-wave generation comparable to THz-FEL by nonlinear parametric conversion**
S. Hayashi¹⁾, K. Nawata¹⁾, K. Kawase^{1,2)}, and H. Minamide¹⁾
¹⁾ ASI, RIKEN, Japan, ²⁾ Nagoya Univ., Japan
- ALPSp6-31 Ultra-widely tunable DFG THz-wave source using organic DAST and BNA crystals pumped by a dual-wavelength β -BaB₂O₄ optical parametric oscillator**
T. Notake, K. Nawata, T. Matsukawa, Q. Feng, H. Kawamata, and H. Minamide
 ASI, RIKEN, Japan
- ALPSp6-32 Cherenkov phase-matched terahertz wave generation from ridge-type waveguide**
F. Shuzhen¹⁾, H. Takeuchi¹⁾, K. Kajiki²⁾, T. Ouchi²⁾, K. Takeya¹⁾, and K. Kawase^{1,3)}
¹⁾ Nagoya Univ., Japan, ²⁾ Canon Inc., Japan, ³⁾ RIKEN Sendai, Japan

14:30-16:15

ALPS7 : High Power Lasers (II)

Room 303

Chair: *K. Oguri, Program Committee of ALPS '13, NTT, Japan*

14:30

ALPS7-1 Development of a high-average-power, thin-disk ring oscillator

A. A. Eilanlou¹⁾, Y. Nabekawa¹⁾, M. Kuwata-Gonokami^{2,3)}, and K. Midorikawa^{1,2)}
¹⁾ ASI, RIKEN, Japan, ²⁾ Photon Science Center, The Univ. of Tokyo, Japan, ³⁾ Graduate School of Science, The Univ. of Tokyo, Japan

14:45

ALPS7-2 Development of a kW class Nd:YAG ceramic thin disc laser for advanced laser machining

H. Fujita¹⁾, K. Iyama^{1,3)}, R. Bhushan¹⁾, K. Tsubakimoto¹⁾, H. Yoshida¹⁾, M. Fujita²⁾, N. Miyanaga¹⁾, and T. Kawashima³⁾
¹⁾ ILE, Osaka Univ., Japan, ²⁾ Institute for Laser Technology, Japan, ³⁾ Hamamatsu Photonics K.K., Japan

15:00

ALPS7-3 (Invited) High average power ultrafast thin disk lasers

C. J. Saraceno^{1,2)}, F. Emaury¹⁾, C. Schriber¹⁾, M. Hoffmann¹⁾, M. Golling¹⁾, T. Südmeyer^{1,2)}, and U. Keller¹⁾
¹⁾ ETH Zurich, Switzerland, ²⁾ Univ. of Neuchâtel, Switzerland

15:30

ALPS7-4 (Invited) Temporal pulse cleaning for high-contrast PW laser pulse

J. H. Sung^{1,2)}, S. K. Lee^{1,2)}, T. J. Yu^{1,2)}, I. J. Kim^{1,2)}, T. M. Jeong^{1,2)}, and C. H. Nam^{1,3)}

¹⁾ Institute for Basic Science, Republic of Korea, ²⁾ Advanced Photonics Research Institute, GIST, Republic of Korea, ³⁾ Department of Physics and Photon Science, GIST, Republic of Korea

16:00

ALPS7-5 DPSSL pumped 20-TW Ti:sapphire laser system for high-intensity laser applications

T. Sekine, Y. Hatano, Y. Takeuchi, and T. Kawashima
 Hamamatsu Photonics K. K., Japan

---- Break (16:15-16:30) ----

16:30-18:00

ALPS8 : High Energy Light Sources and its Applications

Room 303

Chair: *N. Miyanaga, Program Committee of ALPS '13, ILE, Osaka Univ., Japan*

16:30

ALPS8-1 (Invited) Laser plasma accelerators for future colliders and light sources

W. Leemans

Lawrence Berkeley National Laboratory,
USA

17:00

ALPS8-2 Laser plasma sources of extreme ultraviolet (EUV) for application in science and technology

*H. Fiedorowicz, A. Bartnik, T. Fok,
R. Jarocki, B. Korczyk, J. Kostecki,
A. Szczurek, M. Szczurek, I. U. Ahad,
P. Wachulak, and Ł. Węgrzyński*
Military Univ. of Technology, Poland

17:15

ALPS8-3 A proposal of transverse-flow CO₂ laser amplifiers for an EUV light source

*Y. Tanino, J. Nishimae, T. Tamida, and
S. Fujikawa*
Advanced Technology R&D Center,
Mitsubishi Electric Corporation, Japan

17:30

ALPS8-4 Relativistic soft x-ray harmonics beam characterizing by high performance imaging using sub-micron resolution LiF detectors

*T. Pikuz^{1,2)}, A. Faenov^{1,2)}, A. S. Pirozhkov¹⁾,
M. Nishikino¹⁾, N. Hasegawa¹⁾,
T. Esirkepov¹⁾, H. Kotaki¹⁾, Y. Hayashi¹⁾,
K. Ogura¹⁾, J. Koga¹⁾, T. Nakamura¹⁾,
S. Bulanov¹⁾, Y. Fukuda¹⁾, S. Magnitskiy³⁾,
N. Nagorskiy³⁾, M. Epitshev²⁾, S. Pikuz, Jr.²⁾,
Y. Kato⁴⁾, T. Kawachi¹⁾, P. Bolton¹⁾,
K. Kondo¹⁾, and M. Kando¹⁾*
¹⁾ JAEA, Japan, ²⁾ Russian Academy of
Sciences, Russia, ³⁾ International Laser
Center of M.V. Lomonosov Moscow State
Univ., Russia, ⁴⁾ The Graduate School for
the Creation of New Photonics Industries,
Japan

17:45

ALPS8-5 Recently completed petawatt-class SCARLET laser facility at The Ohio State University

*F. Aymond, E. Chowdhury, C. Willis,
P. Pool, K. George, S. Feister, S. Jiang,
R. Daskalova, J. Marketon, M. Storm,
S. Jiang, J. Retz, D. Austin, J. Snyder,
K. Kafka, D. Kelly, J. Krygier,
D. Andereck, D. Schumacher, and
R. R. Freeman*
Physics Department, The Ohio State Univ.,
USA

18:00-18:15

Closing

Room 303

Closing Remarks: *S. Sakabe, Steering Committee
Chair of ALPS '13, Kyoto Univ., Japan*