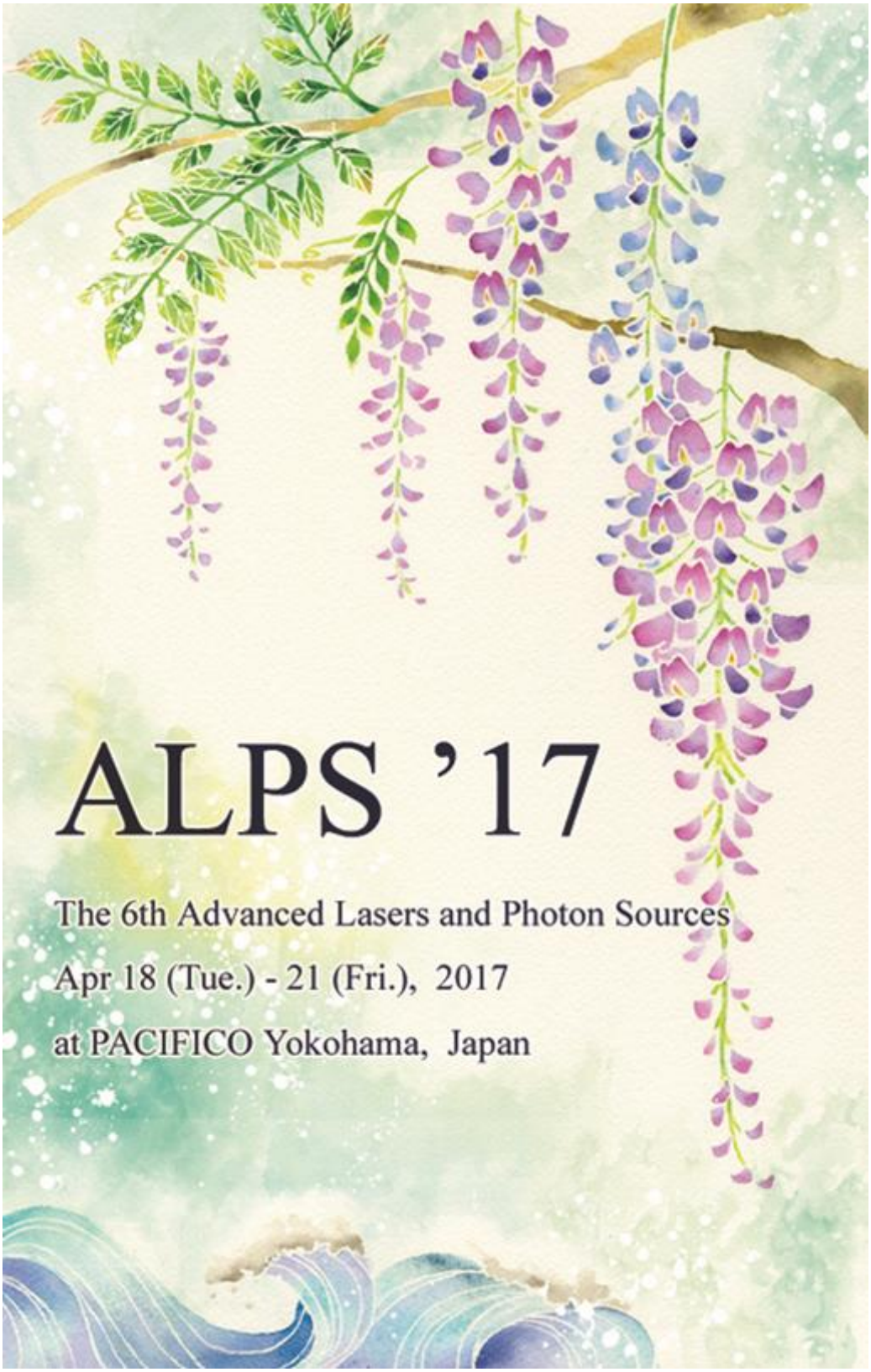
Conference Program
And Proceedings

18th TUE	19th WED	20th THU	21th FRI
Poster session	Joint session	Adv.	



http://www.alps-conference.org/

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PREFACE

We are delighted to welcome you to the 6th Advanced Lasers and Photon Sources Conference (ALPS ’17) in Yokohama, Japan.

The ALPS aims to provide a fruitful opportunity to exchange information and discuss recent progress in lasers and photon sources, and related basic research and industrial applications. The ALPS conference is organized as part of the OPTICS & PHOTONICS International Congress (OPIC 2017), which consists of 12 optics-related scientific conferences. In the ALPS ’17, we will have 19 excellent invited talks and more than 100 contributed papers. The ALPS ’17 will collaborate with the International Conference on X-ray optics, detectors, sources and their applications 2017 (XOPT ’17), and the International Conference on High Energy Density Sciences (HEDS 2017) to hold a special joint session on higher photon energy coherent light and ultra-intense lasers and their applications.

In addition, the OPTICS & PHOTONICS International Exhibition (OPIE 2017) is held jointly at the congress site. We encourage you to actively participate in all aspects of the Congress and Exhibition and hope that you will find these interactions to be beneficial.

We hope that you enjoy your time at the conference, and that you will also take this opportunity to explore the rest of Yokohama.

Hitoki Yoneda, Conference Chair

Institute for Laser Science, University of Electro-Communications, Japan

REGISTRATION

On-Site Registration Fees

(Membership*)

Conference (General)	¥60,000
(Student, Retiree)	¥21,000
Extra Copy of Digest	¥3,000

*Member of organizer, sponsor and cooperative societies

(Non-member)

Conference (General)	¥70,000
(Student, Retiree)	¥23,000
Extra Copy of Digest	¥3,000

OPTICS & PHOTONICS International Congress 2017 (OPIC 2017)

OPTICS & PHOTONICS International Congress is the largest opto-science international meeting in Japan and has been held in Yokohama every year since 2012. OPIC 2017 is the 6th OPIC and comprises twelve International Specialized Conferences. Registration includes access to the plenary session and all conferences.

- Biomedical Imaging and Sensing Conference 2017 (BISC ’17)
- Conference on Laser Energy Science / Laser and Accelerator Neutron Sources and Applications 2017 (CLES/LANSA ’17)
- International Conference on High Energy Density Science 2017 (HEDS 2017)
- International Conference on Nanophotonics and Nanooptoelectronics (ICNN 2017)
- Information Photonics 2017 (IP ’17)
- Laser Display and Lighting Conference 2017 (LDC ’17)
- The 5th International Conference on Light-Emitting Devices and Their Industrial Applications (LEDIA`17)
- Light driven Nuclear-Particle physics and Cosmology (LNPC ’17)
- Laser Solution for Space and the Earth (LSSE 2017)
- The 4th Optical Manipulation Conference 2017 (OMC ’17)
- International Conference on X-ray optics, detectors, sources, and their applications 2017 (XOPT '17)

EXHIBITION & BANQUET

OPTICS & PHOTONICS International Exhibition 2017 (OPIE ’17) is held on 19(Wed)-21(Fri) at Pacifico Yokohama

OPIC 2017 Reception is held on 18:00 - 20:00, 19(Wed) at Room 501+502.

OPIC SCHEDULE & PLENARY SESSION

OPTICS & PHOTONICS International Congress 2017 offers the Plenary Special Session on **19 (Wed.) April, 2017**.

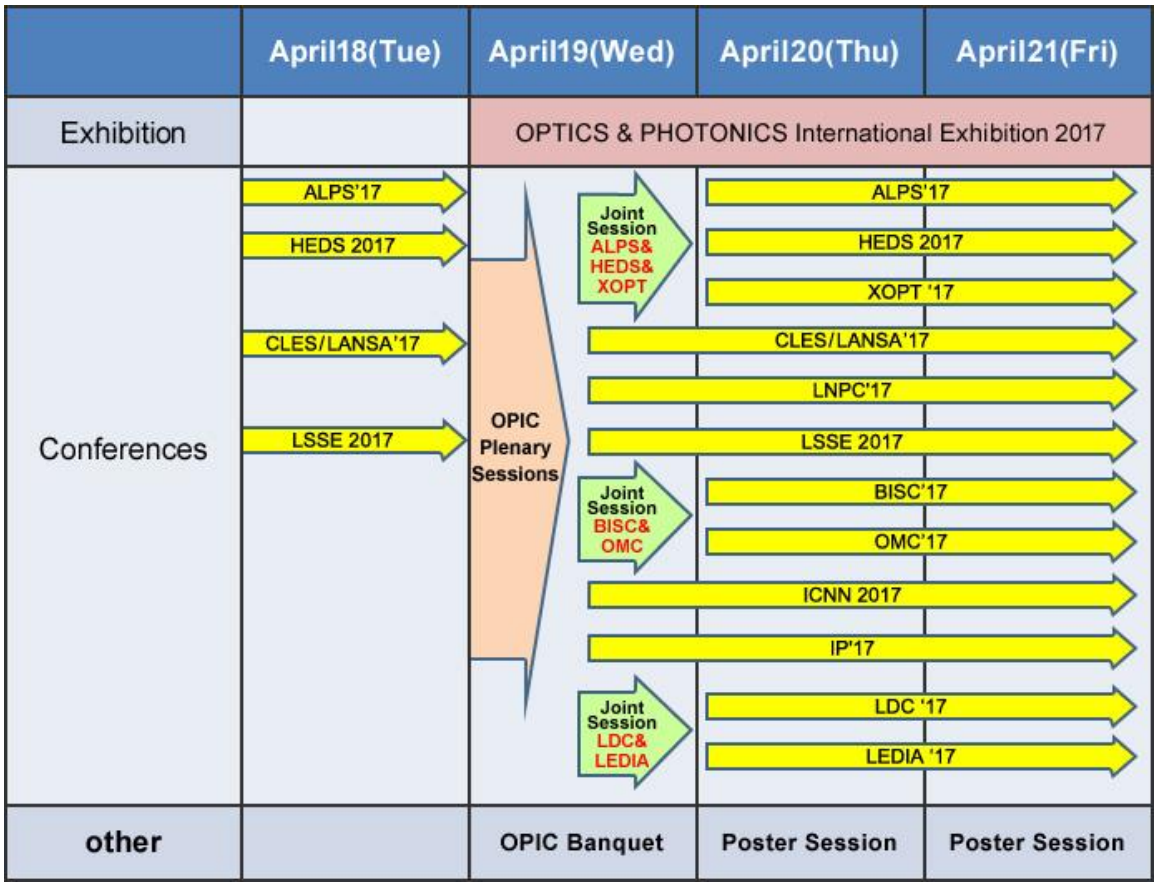
9:00 - 9:15 Greeting
Chris Barty(Congress Chair), **Sadao Nakai** (Congress Chair), **Reinhart Poprawe** (Congress Chair)

9:15 - 9:55 Plenary
"Optical Technologies Required for Vehicle Safety System"
Kazuoki Matsugatani, Director, ADAS Business and Technology Development Div. DENSO, Japan

9:55 - 10:35 Plenary
"Ultra-precision control of optical waves by use of fiber-based frequency combs and its metrology application"
Kaoru Minoshima, Professor, The University of Electro-Communications, JST, ERATO MINOSHIMA Intelligent Optical Synthesizer, Japan

10:50 - 11:30 Plenary
"Breaking limits: space-time focusing technologies for imaging and manipulating"
Jeff Squier, Professor, Colorado School of Mines, Head of the Physics Department, USA

11:30 - 12:10 Plenary
"Gravitational Wave Detection: Laser Interferometer Technologies in Advanced LIGO"
Koji Arai, Senior Scientist, LIGO Caltech, USA



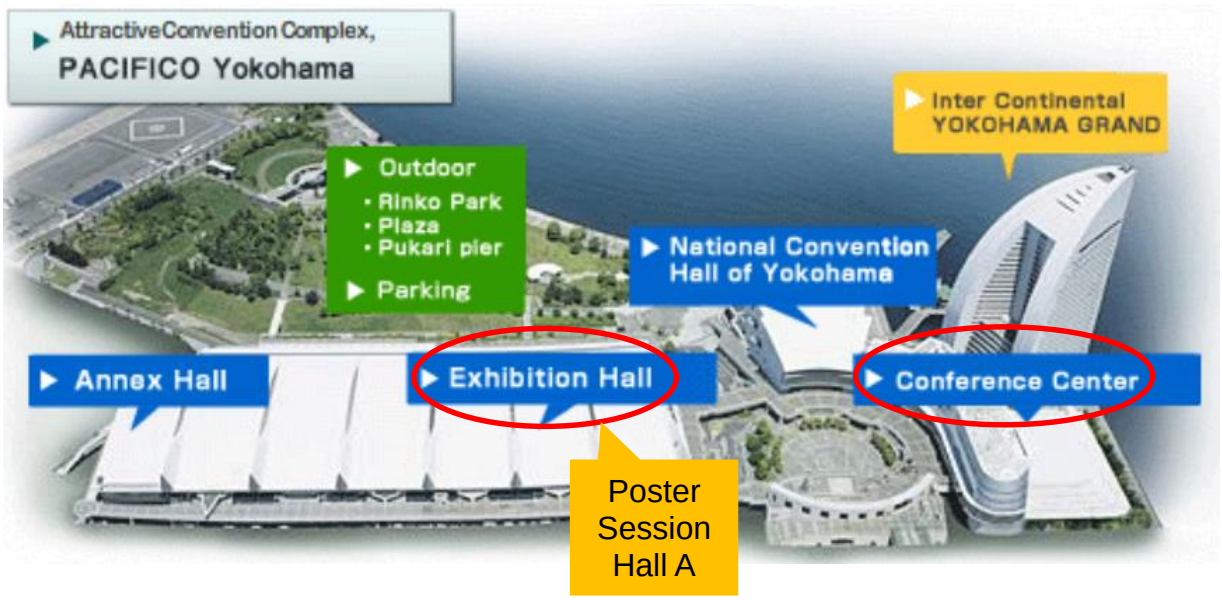
ALPS ’17 PROGRAM-AT-A-GLANCE

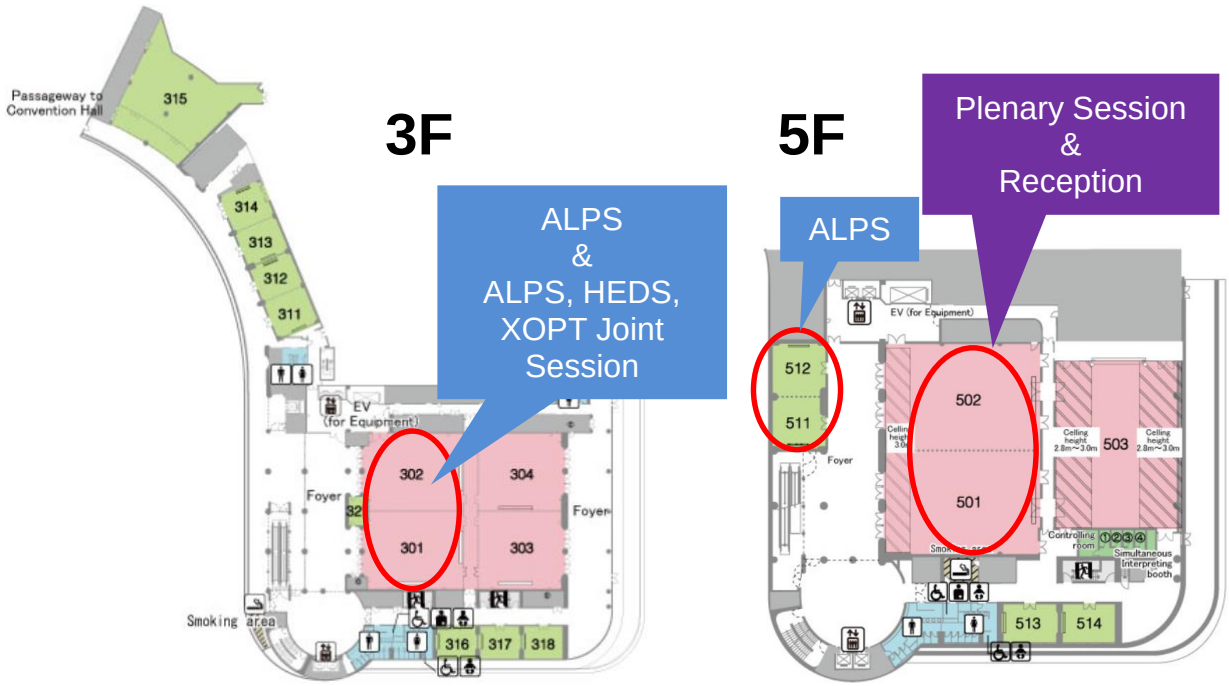
Date	Time \ Room	Room 302	Room 511+512
Tue 18 Apr.	9:00	**Opening** **ALPS1** Optical frequency comb technology and applications	
	10:00		
	45	Coffee Break	
	11:00	**ALPS2** Dual-comb spectroscopy	**ALPS3** High energy laser systems and technology
	12:00	Lunch	
	13:00 15	**ALPS4** Fiber Lasers and Ultrafast Lasers	**ALPS5** Ultra-high intensity lasers and technology
	14:00		
	15:00 15	Coffee Break	Coffee Break
	30	**ALPS6** Advanced Laser Technologies	**ALPS7** Novel laser control, diagnostics and applications
	16:00		
	17:00 15		
	30		
Wed 19 Apr.	9:00	**Plenary session** **ROOM 501+502**	
	12:10	Lunch	
	13:00		
	30	**ALPS, XOPT, HEDS** **Joint Session 1**	**ALPS8** Novel optical devices, materials, nanostructure and applications
	14:00		
	15:00 15		Coffee Break
	30	Coffee Break	
	45		**ALPS9** Biomedical Imaging
	16:00	**ALPS, XOPT, HEDS** **Joint Session 2**	
	17:00		
	18:00	18:00 - 20:00 OPIC2017 Reception (ROOM 501+502)	

Date	Room / Time	Room 302	Room 511+512
Thu 20 Apr.	9:00	**ALPS10** High power lasers	**ALPS11** New Materials for Laser Control
	10:00 30	Break	
	11:00	**ALPS12** New lasers	**ALPS13** Physics and Materials for Photo Emission Control
	12:00	Lunch	
	13:00 15	**ALPSp14** Poster session **Exhibition Hall A**	
	14:00		
	15:00		
	16:00		
	17:00		
	18:00		

Date	Room / Time	Room 511+512
Fri 21 Apr.	9:00	**ALPS15** Terahertz Technology 1
	10:00 30	Break
	11:00	**ALPS16** Terahertz Technology 2
	12:00	Lunch
	13:00 15	**ALPS17** Short wavelength
	14:00	
	45	Break
	15:00	
	16:00 15	Closing
	30	

LOCATION





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1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan
Transportation Guide: TEL +81-45-221-2166;
Information: TEL +81-45-221-2155
http://www.pacifico.co.jp/english/facility/index.html

Tuesday, 18 April

9:00-9:15 Opening Address

Room 302

Hitoki Yoneda, Conference Chair — **Inst. for Laser Sci. Univ.of Electro-Communications, Japan**

9:15-10:45

ALPS1 : Optical frequency comb technology and applications

Room 302

Chair: Mitsuru Musha — **Inst. for Laser Sci. Univ.of Electro-Communications, Japan**

ALPS1-1 9:15 **(Invited) Frequency comb sources for spectroscopy in the mid-infrared**
Ingmar Hartl, DESY, Germany

ALPS1-2 9:45 **One-shot multi-point imaging with a fiber bundle using spectral interferometry of chirped optical-frequency comb**
M. Uchida[1,2], T. Kato[1,2], Y. Tanaka[1], and K. Minoshima[1,2]
[1]The Univ. of Electro-Communications (UEC), [2]Japan Sci. and Tech. Agency (JST), ERATO MINOSHIMA Intelligent Optical Synthesizer (IOS) Project

ALPS1-3 10:00 **Coherent Mid-infrared Optical Frequency Comb Generation Based on an Yb-doped Fiber Laser System**
L. Jin[1], M. Yamanaka[1], V. Sonnenschein[1], H. Tomita[1], T. Iguchi[1], A. Sato[2], A. Ideno[2], T. Oh-hara[2], and N. Nishizawa[1]
[1]Dpet. Quantum Engineering, Nagoya Univ., Japan[2], Sekisui Medical Co. Ltd., Japan

ALPS1-4 10:15 **Repetition rate multiplication of a fiber-based optical frequency comb with a long-fiber-based ring resonator**
Y. Nakajima[1,2], A. Nishiyama[1,2,3], S. Yoshida[1,2], T. Hariki[1], and K. Minoshima[1,2]
[1]The Univ. of Electro-Comm., Japan, [2]JST, ERATO MINOSHIMA IOS Project, Japan, [3]Res. Fellow of the JSPS, Japan

ALPS1-5 10:30 **Development and characterization of 1.0 - 2.1 um octave-spanning, SC comb based on Er-doped ultrashort pulse fiber laser**
T. Niinomi[1], Y. Nomura[1], L. Jin[1], Y. Ozeki[2], and N. Nishizawa[1],
[1]Nagoya Univ., Japan, [2]University of Tokyo, Japan

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

11:00-12:00

ALPS2 : Dual-comb spectroscopy

Room 302

Chair: Hajime Inaba — **AIST, Japan**

ALPS2-1 11:00 **(Invited) Self-Corrected Dual-Comb Spectroscopy**
Jérôme Genest[1], Nicolas Bourbeau Hébert[1], Jean-Daniel Deschênes[1], David G. Lancaster[2]
[1]Centre d'optique, photonique et laser, Univ. Laval, Canada, [2]Laser Phys. and Photonics Devices Lab., Univ. of South Australia, Australia

ALPS2-2 11:30 **Development of Rapid Evaluation Method of Anisotropy of Nonlinear Optical Materials by Dual Comb Spectroscopy**
K. Kondo[1,2], A. Asahara[1,2], Y. Wang[1], I. Shoji[3], K. Minoshima[1,2],
[1]The Univ. of Electro-Communications, Japan, [2]JST,ERATO MINOSHIMA Intelligent Optical Synthesizer, Japan, [3]Chuo Univ., Japan

ALPS2-3 11:45 **Application of Relative Carrier Envelope Offset Frequency for Coherent Control in Dual-Comb Configuration**
A. Asahara[1,2], K. Kondo[1,2], Y. Wang[1], and K. Minoshima[1,2],
[1]Univ. of Electro-Communications, Japan, [2]JST, ERATO MINOSHIMA Intelligent Optical Synthesizer, Japan

11:00-12:00

ALPS3 : High energy laser systems and technology

Room 511+512

Chair: Hiromitsu. Kiriyama, — **QST, Japan**

ALPS3-1 11:00 **(Invited) PENELOPE – amplifier benchmarks and 10 J performance**
D. Albach[1], M. Siebold[1], M. Loeser[1,2], C. Bernert[1,2] and U. Schramm[1,2]
[1]Helmholtz-Zentrum Dresden-Rossendorf, Germany, [2]Technische Universität Dresden, Germany

ALPS3-2 11:30 **Demonstration of a 64J at 10ns Output from Cryo-cooled Yb:YAG Laser using new laser-diode technology**
T. Sekine, Y. Takeuchi, Y. Hatano, Y. Muramatsu, T. Kurita, T. Morita, Y. Mizuta, Y. Kabeya, K. Kawai, T. Iguchi, Y. Tamaoki, M. Kurata, K. Iyama, Y. Zheng, Y. Kato
Industrial Development Center, Central Res. Lab., Hamamatsu Photonics K.K., Japan

ALPS3-3 11:45 **Development of Materials Processing Technology using 100-J class High-Energy-Laser Pulses**
T. Watati, T. Kurita, T. Sekine, Y. Takeuchi, Y. Mizuta, Y. Kabeya, and Y. Kato
Cent. Res. Lab. Industries R&D Center, Hamamatsu Photonics K.K, Japan

----- Lunch Break (12:00 - 13:15) -----

13:15-15:15

ALPS4 : Fiber Lasers and Ultrafast Lasers

Room 302

Chair: Yasushi Fujimoto **Osaka Univ., Japan**

ALPS4-1 13:15 **(Invited) 3 kW Single Mode Fiber Laser for Materials Processing**
Kensuke Shima, M. Kashiwagi, S. Ikoma, K. Uchiyama, H. Miyauchi, and D. Tanaka
Advanced Technology Laboratory, Fujikura Ltd., Japan

ALPS4-2 13:45 **SRS-suppressed photonic bandgap fiber amplifier using a laser diode as the seed source**
D. Yagisawa, A. Shirakawa,
[1]Inst. for Laser Sci., Univ. of Electro-Communications, Japan

ALPS4-3 14:00 **Combining Efficiency in Divided Pulse Amplification**
E. Jo, K. Iwata, H. Tünnermann, and A. Shirakawa,
Inst. for Laser Sci., Univ. of Electro-Communications, Japan

ALPS4-4 14:15 **Single-Shot Spectral Measurements in Soliton Explosion on Yb Fiber Laser with Time-Stretched Dispersive Fourier Transformation**
M. Suzuki[1], S. Yoneya[2], and H. Kuroda[1]
[1]Aichi Med. Univ., Japan, [2]Saitama Med. Univ., Japan

ALPS4-5 14:30 **2 GHz Repetition Rate, Single-Wall Carbon Nanotube Mode-Locked Yb:YAG Channel Waveguide Laser in an Extended Cavity Configuration**
S. Y. Choi[1], T. Calmano[1,2], C. Kränkel[1,2], F. Rotermund[3]
[1]ILP, Univ. Hamburg, Germany, [2]CUI, Univ. Hamburg, Germany, [3]Department of Physics, KAIST, Republic of Korea

ALPS4-6 14:45 **Sub-100 fs mode-locked Yb^{3+}-doped CaF_2 laser by single-walled carbon nanotube**
N. Yokoshima[1], S. Kitajima[1], A. Shirakawa[1], S. Y. Choi[2], and F. Rotermund[3]
[1]Inst. for Laser sci., Japan, [2]Inst. of Laser-Phys., Univ. of Hamburg, Germany, [3]Department of Physics, Korea Advanced Inst. of Sci. and Tech., Korea

ALPS4-7 15:00 **Sub 200 fs Kerr-lens Mode-locked Tm^{3+}:Sc_2O_3 Laser In-band Pumped by a 1611nm Er:Yb Fiber MOPA**
M. Tokurakawa[1],Y. Mashiko[1],E. Fujita[1], and C. Kränkel[2,3]
[1]ILS, UEC, Japan, [2]Inst. of Laser-Phys., Univ. of Hamburg, Germany, [3]The Hamburg Centre for Ultrafast Imaging, Germany

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

13:15-15:00

ALPS5 : Ultra-high intensity lasers and technology

Room 511+512

Chair: Takunori Taira **IMS, Japan**

ALPS5-1 13:15 **(Invited) J-KAREN-P laser facility producing 10^{22} W/cm^2 at 0.1 Hz**
H. Kiriyama, M. Nishiuchi, A. S. Pirozhkov, Y. Fukuda, H. Sakaki, A Sagisaka, N. P. Dover, K. Kondo, K. Nishitani, K. Ogura, M. Mori, Y. Miyasaka, M. Kando and K. Kondo
KPSI QST, Japan

ALPS5-2 13:45 **J-KAREN-P Laser Wavefront, Spot, and Pulse Shape**
A. S. Pirozhkov[1], Y. Fukuda[1], M. Nishiuchi[1], A. Sagisaka[1], K. Ogura[1], H. Kiriyama[1], M. Mori[1], M. Kanasaki[2], K. Kondo[1], and M. Kando[1]
[1]KPSI QST, Japan, [2]Kobe Univ., Japan

ALPS5-3 14:00 **Formation process of ozone assisted gas grating**
Y. Michine, H. Yoneda,
Inst. for Laser Sci., Univ. of Electro-Communications, Japan

ALPS5-4 14:15 **Picosecond pedestals of recompressed Ti:Sapphire laser pulses.**
M. Kalashnikov, N. Khodakovskiy
Max-Born-Inst. for Nonlinear Opt. and Short Pulse Spectroscopy, Germany

ALPS5-5 14:30 **Thin Disk Ti:Sapphire Amplifiers for High Average Power Sub PW class Laser Systems**
M. Kalashnikov[1,2], V. Chvykov[2], R. Nagymihaly[2], H. Cao[2], K. Osvay[2]
[1]Max-Born-Inst. for Nonlinear Opt. and Short Pulse Spectroscopy, Germany, [2]ELI-Hu Nkft., Hungary

ALPS5-6 14:45 **Compression of high-power femtosecond laser pulses in a solid medium**
J. Y. Yoo[1], J. I. Kim[1,2], H. W. Lee[1], J. H. Sung[1,3], J. M. Yang[1], Y. J. Son[1], Y. H. Jang[1], S. K. Lee[1,3], and C. H. Nam[1,2]
[1]Center for Relativistic Laser Sci., Inst. for Basic Sci., Korea, [2]Dep. of Phys. and Photon Sci., GIST, Korea, [3]Ultraintense Laser Lab., Adv. Photonics Res. Inst., GIST, Korea

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

15:30-17:30

ALPS6 : Advanced Laser Technologies

Room 302

Chair: Shunichi Matsushita
Furukawa Electric Co., Ltd, Japan

ALPS6-1 15:30 **(Invited) Visible laser oscillation in Pr-doped waterproof fluoro-aluminate glass fiber(tentative)**
Yasushi Fujimoto
Osaka Univ., Japan

ALPS6-2 16:00 **Pr^{3+}:YLF laser directly pumped by high power blue diode laser**
H. Tanaka, K. Iijima, Y. Kiyota, F. Kannari
Keio Univ., Japan

ALPS6-3 16:15 **Passively Q-switched, visible Pr:YLF laser operation with a Co:MALO saturable absorber**
D.-T. Marzahl[1], M. P. Demesh[2], A. S. Yasukevich[2], V. E. Kisel[2], N. V. Kuleshov[2], and C. Kränkel[1,3]
[1]Inst. für Laser-Phys., Univ. Hamburg, Germany, [2]Center for Opt. Materials and Tech., Belarusian National Tech. Univ., Belarus, [3]The Hamburg Center for Ultrafast Imaging, Univ. Hamburg, Germany

ALPS6-4 16:30 **A 796-nm Laser-Diode Pumped Self-Frequency-Doubling Nd:GdCOB Green Laser**
L. Li[1,2,3], Y. Liu[1,2,3], S. Zhao[1,2,3], and W. Zheng[1,2,3]
[1]State key Lab. on Integrated Optoelectronics, Inst. of Sem., CAS, China, [2]Lab. of Solid-state Optoelectronics Info. Tech., Inst. of Sem., CAS, China, [3]College of Materials Sci. and Opto-Electronic Tech., Univ. of Chinese Academy of Sci.,China

ALPS6-5 16:45 **Comparative study of Ti:sapphire laser pumped by 451-, 478- and 520-nm laser diodes**
N. Sugiyama, H. Tanaka, and F. Kannari
Keio Univ., Japan

ALPS6-6 17:00 **Yb-doped CaF_2-LaF_3 ceramic laser**
K. Yamakado[1], S. Kitajima[1], A. Shirakawa[1], K. Ueda[1] and H. Ishizawa[2]
[1]ILS., UEC., Japan, [2]NIKON Corp., Japan

ALPS6-7 17:15 **Brightness enhancement in a ring-shape-pumped solid state laser**
S. H. Noh, S. M. An, J. G. Hwang, D. J. Kim and J. W. Kim
Dpt. of Appl. Phy., Hanyang Univ., Ansan, Korea

15:30-17:15

ALPS7 : Novel laser control , diagnostics and applications

Room 511+512

Chair: Toshiyuki Kawashima
Hamamatsu Photonics K.K., Japan

ALPS7-1 15:30 **Attosecond streaking of chirp-free high harmonics in the extreme ultraviolet driven by a long-wavelength infrared light source**
N. Saito[1], N. Ishii[1], T. Kanai[1], S. Watanabe[2], and J. Itatani[1]
[1]ISSP, Univ. Tokyo, Japan, [2]Tokyo Univ. Sci., Japan

ALPS7-2 15:45 **Ultrafast Thulium-Doped Fiber Amplifier Generating Watt-Level 50 Femtosecond Pulses**
Y. Nomura[1,2], T. Fuji[1]
[1]Inst. for Molecular Sci., Japan, [2]JST-PRESTO, Japan

ALPS7-3 16:00 **Femtosecond Double-Pulse Laser Ablation for Titanium at the Fluence near Ablation Threshold**
Y. Furukawa[1,2], S. Inoue[1,2], M. Hashida[1,2], K. Teramoto[1,2], K. Mori[1,2], Y. Nakamiya[1], S. Sakabe[1,2]
[1]Adv. Res. Cent. for Beam Sci., Inst. for Chem. Res., Kyoto Univ., Japan, [2]Grad. Sch. of Sci., Kyoto Univ., Japan

ALPS7-4 16:15 **Mid Infrared Pulse Generation, Shaping and Amplification from a Supercontinuum Pulse**
R. Hida, T. Suzuki, Y. Yamaguchi, and F. Kannari
Dep. of Electronics and Electrical Eng., Keio Univ., Japan

ALPS7-5 16:30 **Optical pulse compression of supercontinuum using spatial light modulator available for UV-NIR**
T. Suzuki[1], M. Yamashita[2,3], and H. Yoneda[1]
[1]Inst. for Laser Sci., Univ. Electro-Comm., Japan, [2]Hokkaido Univ., Japan, [3]Kyoto Photonics Soc., Japan

ALPS7-6 16:45 **CO_2-TEA Pulse Clipping Using Pulsed High Voltage Pre-Ionization For High Spatial Resolution I.R. LIDAR Systems**
T. G. Cherifi,
Division of Sci. & Eng., Saint Louis Univ.-Madrid Campus, Spain

Wednesday, 19 April

9:00-12:10 OPIC Plenary Session

Room 501+502

----- Lunch （12:10-13:30）-----

13:30-15:30

ALPS, HEDS, XOPT Joint Session 1

Room 302

Chair: Chair: R. Kodama **Osaka Univ., Japan**
Chair: Chair: H. Yoneda
Inst. for Laser Sci., Univ. Electro-Comm., Japan

HEDSj-1 13:30 **(Invited) Implementation of Extreme Light Infrastructure-Nuclear Physics**
Kazuo Tanaka
Extreame Light Infrastructure -Nuclear Physics (ELI-NP)

HEDSj-2 14:00 **(Invited) High peak and average power laser research at the Laboratory for Laser Energetics**
Michael Campbell
University of Rochester, USA

ALPSj-1 14:30 **(Invited)Linking high harmonics from solids and gases**
T. J. Hammond, Paul B. Corkum
University of Ottawa, Canada

ALPSj-2 15:00 **(Invited) Recent Advances of the Apollon 10 PW Laser**
J. Zou[1], D. N. Papadopoulos[1], C. L. Blanc[1], F. Druon[2], L. Martin[1], A. Fréneaux[1], C. Bonnin[1], I. Taghzout[1], A. Beluze[1], N. Lebas[1], B. L. Garrec[1], F. Mathieu[1], and P. Audebert[1]
[1]Lab. pour l'Utilisation des Lasers Intenses, CNRS, Ecole Polytechnique, CEA, Univ. Pierre et Marie Curie, Palaiseau, France
[2]Lab. Charles Fabry, Inst. d'Optique, CNRS, Univ. Paris Sud, Palaiseau, France

----- Break (15:30 - 16:00) -----

16:00-17:00

ALPS, HEDS, XOPT Joint Session 2

Room 302

Chair: M. Yabashi **RIKEN SPring-8 Center, Japan**

XOPTj-1 16:00 **(Invited) Perfect X-ray focusing via fitting corrective glasses to aberrated optics**
Christian G. Schroer
DESY/University of Hamburg, Germany

13:30-15:15

ALPS8 : Novel optical devices, materials, nanostructure and applications

Room 511+512

Chair: Takasumi Tanabe **Keio Univ., Japan**
Chair: Takuo Tanaka **RIKEN, Japan**

ALPS8-1 13:30 **(Invited) Expanding applicable optical sources in plasmonics and through a dispersionincreasing fiber**
Chen-Bin Huang
Inst. of Photonics Tech., National Tsing Hua Univ., Taiwan

ALPS8-2 14:00 **(Invited) Metamaterial absorbers and their applications**
Takuo Tanaka
[1]RIKEN Metamaterials Lab., Japan, [2]RIKEN Innovative photon manipulation research team, Japan, [3]Tokyo Inst. of Tech., Japan

ALPS8-3 14:30 **Nanofocused Surface Plasmon Pulses at 400 nm and 800 nm using an Aluminum Tapered Tip**
K. Tomita, Y. Kojima, and F. Kannari
Keio Univ., Japan

ALPS8-4 14:45 **Tuning Supermode Splitting for Stimulated Brillouin Scattering**
Y. Honda[1], W. Yoshiki[1], T. Tetsumoto[1], S. Fujii[1], K. Furusawa[2], N. Sekine[2] and T. Tanabe[1]
[1]Keio Univ, Japan, [2]NICT, Japan

ALPS8-5 15:00 **A Silicon Waveguide Platform with Large Misalignment Tolerance for Flip-Chip Based Hybrid Silicon/III-V Laser**
H. Wang[1], W. Zheng[1,2]
[1]Lab. of Solid State Opt. Info. Tech., Inst. Semiconductors, CAS, China, [2]State Key Lab. on Int. Opt., Inst. Semiconductors, CAS, China

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

15:45-17:30

ALPS9 : Biomedical Imaging

Room 511+512

Chair: Masayuki Suzuki **Aichi-medi. Univ., Japan**

ALPS9-1 15:45 **(Invited) In vivo two-photon imaging of brain and neurons using a high-peakpower gain-switched laser diode and adaptive optics**
Tomomi Nemoto[1,2], R. Kawakami[1,2], T. Hibi[1], A. Tanabe[1, 2]
[1]Research Inst. for Elec. Sci., Hokkaido Univ., Japan
[2]Grad. school of info. Sci. and tech., Hokkaido Univ., Japan

XOPTj-2 16:30 **(Invited) Probe into vacuum filed using high intensity X-ray**
Shoji Asai
The University of Tokyo, Japan

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

ALPS9-2 16:15 **Dynamics of Triplet/Dark State of Fluorescent Molecules in the Photobleaching Process**
N. Sakata, S. Maesako, N. Kamiyama, K. Iwata, K. Toda, and A. Suda
Tokyo Univ. of Sci., Japan

ALPS9-3 16:30 **Real Time Measurement of Folmaldehyde Using 3µm Difference Frequency Laser**
S. Sakai[1], M. Asobe[1], A. Katoh[1], A. Tokura[2]
[1]Tokai Univ., Japan, [2]NTT Corp., Japan

ALPS9-4 16:45 **(Invited) Ultrahigh resolution OCT with broadband fiber lasers**
Norihiko Nishizawa, Hiroyuki Kawagoe, and Masahito Yamanaka
Dept. Electrical Eng., Nagoya Univ., Japan, **(Invited)**

ALPS9-5 17:15 **Ultrahigh speed en face optical coherence tomography using two axis KTN optical beam deflectors**
M. Ohmi[1], Y. Shinya[1], R. Tagashira[1], T. Imai[2], S. Tatsumi[2], S. Toyoda[2], T. Sakamoto[2]
[1]Grad. School of Med., Osaka Univ., Japan, [2] NTT Device Innovation Center, NTT Corp., Japan

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

18:00 - 20:00 OPIC Reception

Room 501+502

Thursday, 20 April

9:00-10:30
ALPS10 :High power lasers
Room 302

Chair: Daniel Albach Institute of Radiation Physics, HZDR, Germanuy

ALPS10-1 9:00 **(Invited) High Average Power Petawatt Laser Systems enabling the transition from proof-of-principle experiments to commercial applications (tentative)**
Constantin Haefner
NIF Photon Science Lawrence Livermore National Laboratory, USA

ALPS10-2 9:30 **Development of a 1-J, 300-Hz High-Power Diode-Pumped Laser System for High-Energy Materials Processing**
T. Kurita[1,2], Y. Kato[1,2], T. Morita[1,2], T. Iguchi, T. Sekine[1,2], Y. Tamaoki[1,2], Y. Takeuchi[1,2], and T. Kawashima[1,2]
[1]Hamamatsu Photonics K.K., Japan, [2]ImPACT Program, Japan

ALPS10-3 9:45 **Recent progress on Kumgang Laser - Coherent Beam Combination Laser using Self-controlled Stimulated Brillouin Scattering Phase Conjugate**

9:00-10:30
ALPS11 : New Materials for Laser Control
Room 511+512

Chair: Sunao Kurimura NIMS, Japan

ALPS11-1 9:00 **(Invited) New Ba-Based Crystals for Nonlinear Frequency Conversion in the Mid-IR**
Valentin Petrov[1,*], V. V. Badikov[2], D. V. Badikov[2], V. B. Laptev[3], K. V. Mitin[4], G. S. Shevyrdyaeva[2], A. Kwasniewski[5], E. Boursier[6,7], N. I. Shchebetova[4], A. Tyazhev[1], G. Marchev[1], V. Panyutin[1], P. Segonds[6,7], B. Boulanger[6,7]
[1]Max-Born-Inst. for Nonlinear Optics and Ultrafast Spectroscopy, Germany, [2]High Tech. Lab., Kuban State Univ., Russia, [3]Inst. of Spectroscopy, Russian Academy of Sci., Russia, [4]Astrophysika National Laser Centre, Russia, [5]Leibniz Inst. for Crystal Growth, Germany, [6]Univ. Grenoble Alpes, Inst. NEEL, France, [7]CNRS, Inst. NEEL, France

ALPS11-2 9:30 **(Invited) Broadband ultrafast nonlinear photonics in nanocarbons**
Fabian Rotermund
KAIST, Korea

Mirrors (SBS-PCMs)
H. J. Kong[1], S. Park[1], S. Cha[1], S. Choi[1], H. Lee[1], J. Oh[1],and J. S. Kim[2]
[1]Dep. of Phys., KAIST, Korea, [2]Laser Spectronix, Korea

ALPS10-4 10:00 **Advanced Multi-pass Amplification System using Yb:YAG Thin-disk Device**
Y. Ochi, K. Nagashima, M. Maruyama, R. Itakura
Kansai Photon Sci. Inst., QST, Japan

ALPS10-5 10:15 **Wavelength conversion of the 100 kHz, 100 W picosecond thin-disk laser from deep-UV to mid-IR**
O. Novák[1], M. Vyvlečka[1,2], H. Turčičová[1], M. Smrž[1], L. Roškot[1,3], J. Mužík[1,3], M. Komanec[4], D. Suslov[4], S. Zvánovec[4], A. Endo[1], T. Mocek[1]
[1]HiLASE Centre, Inst. of Phys. AS CR, Czech Republic, [2]Faculty of Math. and Phys., Charles Univ., Czech Republic,[3]Faculty of Nucl. Sci. and Phys. Eng., Czech Tech. Univ., Czech, Republic, [4]Faculty of Elect. Eng., Czech Tech. Univ., Czech Republic

ALPS11-3 10:00 **Growing Carbon Nanotubes on a Silica Toroid Microcavity to Observe Saturable Absorption**
N. Hirota, W. Yoshiki, A. Hori, K. Namiki, K. Sato, H. Maki, and T. Tanabe
Keio Univ. Japan

ALPS11-4 10:15 **Growth, Spectroscopy and Laser Operation of a Novel Disordered Tetragonal Tungstate Crystal - Tm:$Na_2La_4(WO_4)_7$**
L. Z. Zhang[1], Z.B. Lin[1], X. Mateos[2,3], P. Loiko[4], J. M. Serres[3], Y.C. Wang[2], U. Griebner,[2], V. Petrov[2],*, M. Aguiló[3], F. Díaz[3], E. Vilejshikova[5], K. Yumashev[5], H.F.Lin[1], G. Zhang[1]and W.D. Chen[1,2]
[1]Key Lab. of Optoelectronic Materials Chemistry and Phys., Fujian Inst. of Res. on the Structure of Matter, Chinese Academy of Sci., Fujian, China, [2]Max-Born-Insti. for Nonlinear Opt. and Ultrafast Spectroscopy, Germany, [3]FiCMA-FiCNA, Univ. Rovira i Virgili (URV), Spain, [4]ITMO Univ., Russia, [5]Center for Optical Materials and Tech., BNTU, Belarus

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

11:00-12:00
ALPS12 : New lasers
Room 302

Chair: Martin Smrž HiLASE centre, Inst. of Phys. ASCR, Czech Republic

ALPS12-1 11:00 **(Invited) Semiconductor laser pumped visible rare-earth doped lasers**
Christian Kränkel
[1]Zentrum für Lasermaterialien, Leibniz-Institut für Kristallzüchtung, Germany, [2]Institut für Laser-Physik, Univ. Hamburg, Germany, [3]The Hamburg Centre for Ultrafast Imaging, Germany

ALPS12-2 11:30 **Highly beam quality PCSEL pumped Yb:YAG laser with near theory limited slope efficiency**
X. Guo,[1,3] S. Tokita,[1] H. Nishida,[1] K. Hirose,[2] T. Sugiyama,[2] A. Watanabe,[2] K. Ishizaki,[3] S. Noda,[3] N. Miyanaga,[1] and J. Kawanaka[1]
[1]ILE. Osaka Univ., Japan, [2]Hamamatsu Photonics K.K., Japan, [3]Kyoto Univ., Japan

ALPS12-3 11:45 **New Concept on Thermal-Lens-Free Solid State Lasers - A Heat Capacitive Active Mirror Laser –**
K. Ueda[1,2,3,4,5,6]
[1]Inst. Laser Sci., Univ. of Electro-Communications, Japan, [2]ILE, Osaka Univ., Japan, [3]Hamamatsu Photonics K.K., Japan, [4]Toyota Phys. Chem. Res. Inst., Japan, [5]JST SAKIGAKE, Japan, [6]Inst. Appl. Phys., RAS, Russian

----- Lunch Break (12:00 - 13:15) -----

11:00-12:00
ALPS13 : Physics and Materials for Photo Emission Control
Room 511+512

Chair: Atsushi Sanada Osaka Univ., Japan

ALPS13-1 11:00 **(Invited) Photonic Dirac cones and relevant physics**
Kazuaki Sakoda
Research Center for Functional Materials, National Institute for Materials Science, Japan

ALPS13-2 11:30 **Optical properties of large diameter CaF_2 and Yb^{3+}:CaF_2 for high energy laser applications**
K. Inaba[1], G. von der Gönna[1], J. Körner[2], and T. Töpfer[1]
[1]Hellma Materials, Germany, [2]Institute of Optics and Quantum Electronics, Germany

ALPS13-3 11:45 **Stable Amplified Spontaneous Emission from Perovskite $CsPb_2Br_5$ Microplate**
J. Du, Z. Hu, Z. Liu, X. Tang, and Y. Leng
[1]State Key Lab. of High Field Laser Phys., Shanghai Inst. of Opt. and Fine Mech., Chinese Acad. of Sci., China, [2]Key Lab. of Optoelectronic Tech. and Sys. (Ministry of Ed.), College of Optoelectronic Eng., Chongqing Univ., China

----- Lunch Break (12:00 - 13:15) -----

13:15-15:00

ALPSp14: Poster Session — Exhibition Hall A

ALPSp14-01 **Optical Properties of InAlN films Developed by RF MOMBE for Infrared Applications**
W.-C. Chen
Instrument Technology Research Center, National Applied Research Laboratories, Taiwan, ROC

ALPSp14-02 **Generation of Supercontinuum using Self-phase Modulation and Induced Phase Modulation in Fused Silica Plates Array**
Y. Yamaguchi, T. Suzuki, R. Hida, and F. Kannari
Keio Univ., Japan

ALPSp14-03 **Broad Bandwidth Visible Light Generation via Third-Order Nonlinear Interaction in Silica Toroid Microcavity**
S. Fujii, T. Kato, A. Chen-Jinnai, R. Suzuki, and T. Tanabe
Keio Univ., Japan

ALPSp14-04 **Effects of Spatial Discretization on Scattering Characteristics of Metamaterial Invisibility Cloaks**
K. Nakagawa, A. Sanada
Osaka Univ., Japan

ALPSp14-05 **Application of sintered Si nanopaste with Si nano-polycrystalline to magnetic materials and vanishing of resistance at local high frequency**
T. Saiki, Y. Iida
Kansai Univ., Japan

ALPSp14-06 **Quantitative analysis of CW-regime, multi-pass amplifier output characteristics including optical losses**
H. Chosrowjan[1], S. Taniguchi[1], T. Kitamura[1], M. Fujita[1,2], Y. Izawa[1]
[1]Inst. for laser Tech., Japan, [2]ILE., Osaka Univ., Japan

ALPSp14-07 **Frequency Characteristics of Core Inductors Using Sintered Metal Nano-paste with a Metal Nano-polycrystalline Structure**
S. Masuda, T. Saiki, M. Inada, T. Teramachi, and Y. Iida
Kansai Univ., Japan

ALPSp14-08 **4 J, 50 Hz Output Simplified MOPA Laser System for Laser Remote Sensing**
K. Mikami[1], N. Hasegawa[1], H. Okada[1], S. Kondo[1], M. Nishikino[1], and T. Kawachi[1]
[1]National. Inst. for Quantum and Radiological Sci. and Tech. Japan

ALPSp14-09 **withdraw**

ALPSp14-10 **Morphological change of Si surfaces induced by plasmonic near-field ablation excited with an intense femtosecond laser pulse**
G. Miyaji and M. Hagiya
Tokyo Univ. of A & T, Japan

ALPSp14-11 **Longitudinally Excited CO_2 Laser with External Optical Cavity**
J. Li[1], K. Uno[1], T. Akitsu[1], T. Jitsuno[2]
[1]Univ. of Yamanash., Japan, [2]Inst. of Laser Eng., Osaka Univ., Japan.

ALPSp14-12 **Model for the polarization dependence of saturable absorption in single-crystalline Cr^{4+}:YAG**
Y. Sato, T. Taira
Inst. for Mol. Sci., Japan

ALPSp14-13 **Sub-ns, 1 J Yb:YAG TRAM multipass amplifier for OPCPA pumping**
S. Tokita[1], K. Iyama[2], T. Kawashima[2], K. Fujioka[1], J. Kawanaka[1]
[1]ILE, Osaka Univ., Japan, [2]HAMAMATSU PHOTONICS K.K.,Japan

ALPSp14-14 **Validity of Measurement for Time-dependent Ionization Degree of Gaseous Media during High-harmonic Generation**
K. Nishimura, K. Sato, G. Ouchi, K. Toume, M. Kohga, T. Kuroda, K. Suzuki, and A. Suda
Dept. of Phys., Fac. of Science and Technology, Tokyo Univ. of Science, Japan

ALPSp14-15 **Integration of Advanced Real-Time Laser Diagnostics for PW, 0.1 Hz J-KAREN-P Laser Facility at QST**
K. Kondo[1], M. Nishiuchi[1], H. Kiriyama[1], A. S. Pirozhkov[1], H. Sakaki[1], N. P. Dover[1], A. Sagisaka[1], Y. Fukuda[1], K. Ogura[1], K. Nishitani[1,2], T. Miyahara[1,2], Y. Watanabe[2], M. Kando[1], K. Kondo[1]
[1]QST, [2]Kyushu Univ., Japan

ALPSp14-16 **Wavelength Switching and Gain Characteristic of InGaAs/GaAs Single Quantum-Well Laser Diodes**
Y. Lin[1,2,3], Y. Liu[1,2,3], S. Zhao[1,2,3], H. Qu[1,2,3], A. Qi[1,2,3], A. Liu[1,2,3], and W. Zheng[1,2,3]
[1]State Key Lab. on Info. Opt., Inst. of Semi., CAS., China,[2]Lab. of Solid State Opt. Info. Tech., Inst of Semi., China, [3]College of Mat. Sci. and Opt-Elec. Tech., Univ. of Chin. Acad. Of Sci., China

ALPSp14-17 **Passively mode-locked Yb-doped fiber laser with birefringent spectral filter and its application to THz generation**
J. S. Kim[1], S. P. Han[2], N. Kim[2], K. W. Moon[2], K. H. Park[2], and M. Y. Jeon[1]
[1]Dep. of Phys., Chungnam National Univ., Korea, [2]THz Photonics Creative Research Center, ETRI, Korea

ALPSp14-18 **Passively Mode-Locked Erbium-Doped Fiber Laser with Triple-Scale Pulses**
W.-H. Kuan, J.-Y. Wang, L.-T. Gao, K.-H. Lin
Depart. of Appl. Phys. and Chem., Univ. of Taipei, Taiwan

ALPSp14-19 **Recent Progress on Development of an Optically Synchronized Green Laser for OPCPA Pumping**
Y. Miyasaka, H. Kiriyama, M. Kishimoto, M. Mori, M. Kando, and K. Kondo
QST, Japan

ALPSp14-20 **Three-dimensional shape measurement of snowflakes using by a multi-angle line-image scanner and cameras**
Y. Saito[1], N. Tsuda[1], J. Yamada[1], and H. Minda[2]
[1]Aichi Inst. of Tech., Japan, [2]Nagoya Univ., Japan

ALPSp14-21 **Theoretical Analysis of Influence of Beam Propagation for Efficiency of Laser-Diode-Pumped Ti:sapphire Lasers**
K. Hayashi, M. Morioka, S. Inayoshi, T. Sato, H. Kadoya, T. Kanetake, F. Sugiki, N. Nakajima, M. Wang, and S. Kawato
Univ. of Fukui, Japan

ALPSp14-22 **All fiberized mode-locked Tm fiber oscillator above 100 nJ pulse energy and amplifier above 10 W average power with ~6 μJ pulse energy**
Y. Mashiko, and M. Tokurakawa
Univ. of Electro-Communications, Inst. for Laser Sci., Japan

ALPSp14-23 **Continuous-wave operation of a ridge-waveguide laser-amplifier using Er-doped phosphate glass**
Y. Watanabe[1], Y. Takada1, F. Shoda[1], K. Hirosawa1, T. Ito[2], M. Omaki[2], Z. Shen[2], A. Yokoyama[3], M. Nimura[3], and T. Yanagisawa[1]
[1]Mitsubishi Electric Corp. Information Technology R&D Center, Japan, [2]Mitsubishi Electric Corp. Advanced Technology R&D Center, Japan, [3]Mitsubishi Electric Corp. Manufacturing Engineering Center, Japan

ALPSp14-24 **1120 nm high-power fiber source for 1178 nm fiber Raman amplifier pumping**
Y. Michibata, M. Chen, A. Shirakawa
Inst. for Laser Sci., Univ. of Electro-Communications, Japan

ALPSp14-25 **High power nonlinear polarization rotation soliton mode-locked Tm fiber laser with huge sideband spectral structure**
H. Sagara, E. Fujita, Y. Mashiko, and M. Tokurakawa
Univ. of Electro-Communications, Inst. for Laser Sci., Japan

ALPSp14-26 **Characteristics of All-Optical Retiming Switches Using Cascaded Second-Order Nonlinear Effect in QPM-PPLNs: Pattern Effect of Domain Length Error**
Y. Fukuchi, T. Matsuura, T. Kimura, T. Yoshida
Tokyo Univ. of Sci., Japan

ALPSp14-27 **All-Optical Switches Employing Cascaded Second-Order Nonlinear Effect in Quasi-Phase Matched Lithium Niobate Devices: Effect of Random Period Error**
T. Matsuura, A. Enda, Y. Fukuchi
Dep. of Electrical Eng., Tokyo Univ. of Sci., Japan

ALPSp14-28 **All-Optical Gate Switches Using Cascade of Second Harmonic Generation and Difference Frequency Mixing in Quasi-Phase Matched Devices: Output Deterioration and Pattern Effect by Device Error**
T. Matsuura, M. Yamamoto, and Y. Fukuchi
Dep. of Electrical Eng., Tokyo Univ. of Sci., Japan

ALPSp14-29 **Generation and Measurement of Broadband Squeezed State**
M. Tomita, A. Hosaka, T. Otuska, and F. Kannari
Keio Univ., Japan

ALPSp14-30 **Fabrication of terahertz hollow-optical fiber with inner dielectric layer**
T. Suzuki[1], T. Katagiri[1], and Y. Matsuura[2]
[1]Grad. Sch. of Eng., Tohoku Univ., Japan, [2]Grad. Sch. of Bio. Eng., Tohoku Univ., Japan

ALPSp14-31 **Terahertz Magnetic Field Enhancement by a Tapered Metallic Waveguide**
H. Qiu[1], H. Harada[1], K. Kato[1], T. Kurihara[1], K. Takano[1], T. Suemoto[2], M. Tani[3], N. Sarukura[1], M. Yoshimura[1], and M. Nakajima[1]
1 ILE, Osaka Univ., Japan, 2 Toyota Riken,Japan, 3 Univ. of Fukui,Japan

ALPSp14-32 **Ultrafast Nanofocused SPP Pulses for Nonlinear Nanoscopies**
Y. Kojima, K. Tomita, and F. Kannari
Keio Univ., Japan

ALPSp14-33 **Multistage Quantum Pulse Gate for a Quantum Simulator**
T. Otsuka, A. Hosaka, M. Tomita, and F. Kannari
Department of Electronics and Electrical Eng., Keio Univ. Japan

ALPSp14-34 **Analysis of Influence of the Pump Beam Quality for the Optical-to-optical Conversion Efficiency of Laser-diode-pumped Continuous-wave Yb:YAG Laser with a V-shaped Cavity**
H.Kadoya[1], S.Inayoshi[1], M.Morioka[1], K.Hayashi[1], T.Sato[1], F.Sugiki[2], T.Kanetake[2], N.Nakajima[2], M.Wang[2], and S.Kawato[1,2,3]
[1]Grad. School of Eng., Univ. of Fukui, Japan, [2]Faculty of Eng. Univ. of Fukui,Japan, [3]Res. and edu. Program for Life Sci., Univ. of Fukui., Japan

ALPSp14-35 **1.7-μm full-range, ultrahigh-resolution, spectral-domain optical coherence tomography with broadband supercontinuum source**
H. Kawagoe[1], M. Yamanaka[1], S. Makita[2], Y. Yasuno[2], and N. Nishizawa[1]
[1]Dept. Quantum Eng., Nagoya Univ., Japan, [2]Computational Opt. Group, Univ. of Tsukuba, Japan.

ALPSp14-36 **Optical coherence tomography in 2100-nm spectral window with a fiber laser based supercontinuum laser source**
T. Sato, M. Yamanaka, and N. Nishizawa
Dept. Quantum Eng., Nagoya Univ., Japan

ALPSp14-37 **Ultrafast 2D-burst Imaging and 1D-optical Streak Imaging using a linearly frequency-chirped laser pulse**
T. Suzuki, T. Sato, R. Hida, Y. Yamaguchi, and F. Kannari
Keio Univ., Japan

ALPSp14-38 **Adaptive Control for Reducing Photobleaching in Two-photon Excited Fluorescence**
S. Honda, S. Maesako, N. Kamiyama, K. Toda, and A. Suda
Tokyo Univ. of sci., Japan

ALPSp14-39 **A less invasive approach of utilizing the non-ablative fractional laser to assist cutaneous delivery of small-molecule drugs and macromolecules**
J.-Y. Fang[1], C.-W. Huang[1], W.-R. Lee[2], S.-C. Shen[2]
[1]Pharmaceutics Lab., Grad. Inst. of Natural Products, Chang Gung Univ., Taiwan, [2]Grad. Inst. of Med. Sci., Taipei Med. Univ., Taiwan

ALPSp14-40 **Fluorescence imaging using upconversion fluorescence emission in 480-nm wavelength region from Y_2O_3 :Tm,Yb nanoparticle**
D. Sato[1], M. Yamanaka[1], T. Furukawa[2], H. Niioka[2], J. Miyake[2], and N. Nishizawa[1]
[1]Nagoya Univ., Japan, [2]Osaka Univ., Japan

ALPSp14-41 **Acid Rain and UV Tolerance Test of Spinach using an Imaging LIDAR**
M. Uchiumi, M. Takizawa, and M. Kin-nou
Dep. of Creative Eng., Nat. Inst. of Tec. Ariake Coll., Japan

ALPSp14-42 **Development of optical amplifier based on a self-referenced 750-MHz Yb: fiber laser frequency comb and its application**
B. Xu[1,2], H. Yasui[1,2], T. R. Schibli[3], Y. Ma[4], Z. Zhang[4], K. Minoshima[1,2]
[1]Dep. of Eng. Sci., Grad. Sch. of Info., The Univ. of Electro-Communications, Japan, [2] JST, ERATO MINOSHIMA Intelligent Optical Synthesizer (IOS) Project, Japan,[3]Dep. of Phys. Univ. of Colorado at Boulder, USA, [4]Sch. of Electronics Eng. and Computer Sci., Peking Univ., China

ALPSp14-43 **All polarization maintaining optical frequency comb based on Er-doped ultrashort pulse fiber laser with carbon nanotube polyimide film**
H. Togashi[1], T. Nagaike[1], L. Jin[1], Y. Sakakibara[2], E. Omoda[2], H. Kataura[2], Y. Ozeki[3], and N. Nishizawa[1]
[1]Nagoya Univ., Japan, [2]AIST,Japan, [3]University of Tokyo, Japan

ALPSp14-44 **500MHz frequency spaced Yb:fiber laser comb based on biased nonlinear loop mirror**
T. Jiang, G. Liu, A. Wang and Z. Zhang
State Key Lab. of Adv. Optical Comm. Sys. and Networks, School of Elec. Eng. and Computer Sci., Peking Univ., China

Friday, 21 April

9:00-10:30

ALPS15 : Terahertz Technology 1

Room 511+512

Chair: Jinghua Teng **Inst. of Materials Res. and Eng., Singapore**

ALPS15-1 9:00 **(Invited) Development and Application of Terahertz Focal-Plane Imaging Technique**
Xinke Wang, Yan Zhang
Dep. of Phys., Capital Normal Univ., Beijing Key Lab. of Metamaterials and Devices, and Key Lab. of Terahertz Optoelectronics, Ministry of Edu., China

ALPS15-2 9:30 **Carrier-Envelope Phase-Stable KTA-Based Optical Parametric Amplifiers at 3.3 μm**
F. M. Lu, T. Kanai, Y. Matsumoto, N. Ishii, and J. Itatani
The inst. for Solid State Phys., The Univ. of Tokyo, Japan

ALPS15-3 9:45 **Terahertz radiation from two-color laser filaments in air**
Y. Chen[1,2], Z. Zhang[1,2], M. Chen[1,2], Z. Zhang[1,2], J. Yu1, Z. Sheng[1,2,3], and J. Zhang[1,2]
[1]Dep. Phys. and Astro., Shanghai Jiao Tong Univ., China, [2]Collaborative Innovation Center of IFSA, Shanghai Jiao Tong Univ., China, [3]Dep. Phys., SUPA, Univ. of Strathclyde, UK

ALPS15-4 10:00 **Enhanced Terahertz Emission from Micro Structure Fabricated from Silver Nanoparticles**
K. N. T. Phan, K. Kato, K. Takano, M. Yoshimura, H. Azechi, and M. Nakajima
ILE, Osaka Univ., Japan

ALPS15-5 10:15 **Effects of Metal V grooved waveguide gap width on MLD THz-TDS system using laser chaos and super focusing**
F. Kuwashima[1], T. Shirao[1], T. Kishibata[1], Y. Akamine[1], K. Iwao[1], M. Ooi[1], N. Sakaue[1], , S. Gouda[1], T. Sirasaki[1], M. Tani[2], K. Kurihara[3], K. Yamamoto[2], O. Morikawa[4], H. Kitahara[2], and M. Nakajima[5]
[1]Dep. of Elec. and Elec. Eng., Fukui Univ. of Tech., Japan, [2]Res. Cent. for Dev. of Far-Infrared Reg., Univ. of Fukui, Japan, [3]Fac. of Edu., Univ. of Fukui, Japan, [4]Chair of Liberal Arts, Japan Coast Guard Academy, Japan, [5]ILE., Osaka Univ., Japan

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

11:00-12:00

ALPS16 : Terahertz Technology 2

Room 511+512

Chair: Makoto Nakajima **Osaka Univ., Japan**

ALPS16-1 **(Invited) Tunable and reconfigurable THz devices**
11:00 Jinghua Teng
Inst. of Materials Res. and Eng. Agency for Sci., Tech. and Res. (A*STAR), Singapore

ALPS16-2 **Simultaneous Generation and Detection of Multi-wavelength Terahertz Waves by Parametric Wavelength Conversion**
11:30 K. Murate[1,2], K. Maeda[1], S. Hayashi[3], K. Kawase[1]
[1]Nagoya Univ., Japan, [2]JSPS, Japan, [3]National Inst. of Info. and Commun. Tech., Japan

ALPS16-3 **Characterization of Unexplored Second-order Nonlinear Optical Coefficients of organic DAST Crystal**
11:45 T. Notake, K. Nawata, Y. Takida, Y. Tokizane, Z. Han, M. Koyama, A. K. D. Bosco, and H. Minamide
RIKEN RAP, Teraphotonics Team, Japan

----- Lunch Break (12:00-13:15)-----

13:15-15:45

ALPS17 : Short wavelength

Room 511+512

Chair: Yutaka Nagata RIKEN, Japan
Chair: Nobuhisa Ishii The Univ. of Tokyo, Japan

ALPS17-1 **(Invited) kW-class picosecond thin-disk pre-pulse laser Perla for efficient EUV generation**
13:15 Martin Smrž1, J. Mužík[1,2], O. Novák[1], M. Chyla[1], A. Endo[1], T. Mocek[1]
[1]HiLASE Centre, Inst. of Phys. AS CR, Czech Republic, [2]Faculty of Nuclear Sci. and Phys. Eng., Czech Technical Univ. in Prague, Czech Republic

ALPS17-2 **(Invited) Development of 250 W LPP EUV Light Source for HVM Lithography**
13:45 Tatsuya Yanagida
Gigaphoton Inc., Japan

ALPS17-3 **Few cycle pulse generation from a bandwidth–optimized high energy Yb-doped fiber laser source**
14:15 L. Lavenu[1,2], M. Natile[3,4], F. Guichard[2], Q. Mocaer[2], Y. Zaouter[2], M. Hanna[1], E. Mottay[2], andP. Georges[1], [1]Lab. Charles Fabry, Inst. d'Optique, CNRS, France, [2]Amplitude Sys., France, [3]Amplitude Tech., France, [4]LIDyL, CEA, France

ALPS17-4 **Time-Resolved VUV Reflection Spectroscopy for Spatio-Temporal Diagnosis of Ultrafast Plasma Formation**
14:30 R. Itakura, H. Akagi, Y. Wada, and T. Otobe
KPSI, QST, Japan

----- Break (14:45 - 15:00) ----

ALPS17-5 **UV-driven harmonic generation for time-resolved ultraviolet photoelectron spectroscopy of polyatomic molecules**
15:00 S. Adachi, M. Sato, and T. Suzuki
Grad. Sch. of Sci., Kyoto Univ., Japan

ALPS17-6 **Self-compression of sub-mJ, 14 fs pulses in a deep ultraviolet filament**
15:15 S. Adachi, T. Suzuki
Grad. Sch. of Sci., Kyoto Univ., Japan

ALPS17-7 **Laser-induced damage in silica glasses with double pulses irradiation**
15:30 S. Motokoshi[1], Y. Takemura[2], M. Yoshida[2], T. Jitsuno[3], M. Yoshimura[3]
[1]Inst. for Laser Tech., Japan, [2]Kindai Univ.,Japan, [3]ILE Osaka Univ., Japan

ALPS17-8 **Development of Multi-fragment Momentum Imaging Method for Attosecond-Pump Attosecond-Probe of Ultrafast**
15:45 **Dynamics of Polyatomic Molecules**
T. Okino[1,2], Y. Nabekawa[1], K. Midorikawa[1]
[1]RIKEN Cent. for Adv. Photonics, Japan, [2]JST PRESTO, Japan

ALPS17-9 **Simulation and Experiment of 80 GHz Colliding-Pulse Semiconductor Mode-locked Laser with High Power**
16:00 P. Zhao[1,2,3], A. Liu[2], and W. Zheng[1,2,3]
[1]State Key Lab. on Int. Opt. Lab, Inst. Semiconductors, CAS, China, [2]Lab. of Solid State Opt. Info. Tech., Inst. Semiconductors, CAS, China, [3]Univ. of Chinese Academy of Sci., China.

16:15-16:30 **Closing**

Room511+512

16:15-16:25 **Award Ceremony**
Hiromitsu Kiriyama, Program Committee Chair
QST., Japan

16:25-16:30 **Closing Remarks**
Hiromitsu Kiriyama, Program Committee Chair
QST., Japan

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