

**THE 10th INTERNATIONAL CONFERENCE
ON PHOTONICS & APPLICATIONS
(ICPA-10)**

Hall A

November 12, 2018 (Monday)

Chairperson:

Prof. Dr. Dao Van Lap (*Swinburne Uni. of Technology, Australia*)

- A-01
13:30 - 13:55 **CAVITY QUANTUM OPTICS BASED ON OPTICAL NANOFIBERS**
(invited talk)
Makoto Morinaga, J. Keloth, K.M. Shafi, R.R. Yalla, K.P. Nayak, J. Wang and Kohzo Hakuta
Center for Photonic Innovation and Institute of Laser Science, University of Electro-Communications, Japan
- A-02
13:55 -14:20 **ROUTE TO CHAOS IN A COUPLED MICRORESONATOR SYSTEM WITH GAIN AND LOSS**
(invited talk)
Marek Trippenbach, Krzysztof Zegadlo, Nguyen Viet Hung, V.V. Konotop
Faculty of Physics, Institute for Theoretical Physics University of Warsaw. Poland
- A-03
14:20 - 14:45 **REAL TIME SIMULATIONS OF ELECTRON DYNAMICS IN STRONG LASER FIELDS**
(invited talk)
Kenichi L. Ishikawa
Graduate school of Engineering, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan

A-04
14:45 - 15:00 **NUMERICAL AND EXPERIMENTAL INVESTIGATION OF FLUORIDE-BASED LASER CRYSTALS**

Marilou Cadatal-Raduban, Luong Viet Mui, Kohei Yamanoi, Toshihiko Shimizu, Nobuhiko Sarukura, Akira Yoshikawa, John Harrison, Krista Steenbergen, Peter Schwerdtfeger

*Centre for Theoretical Chemistry and Physics, Institute of Natural and Mathematical Sciences, Massey University, Auckland, New Zealand
Institute of Laser Engineering, Osaka University, Osaka, Japan
Institute for Materials Research, Tohoku University, Sendai, Japan
Institute of Natural and Mathematical Sciences, Massey University, Auckland, New Zealand
Centre for Theoretical Chemistry and Physics, The New Zealand Institute for Advanced Study, Massey University, Auckland, New Zealand*

A-05
15:00 - 15:15 **EFFICIENT GENERATION OF THE VACUUM – ULTRASHORT LASER PULSE BY FOUR-WAVE RAMAN MIXING**

DinhThang Phan^{*}, Duong Vu, Totaro Imasaka

*Division of International Strategy, Center of Future Chemistry, Kyushu University, Japan.
Center for Laser Technology, National Center for Technological Progress, Hanoi, Vietnam.
Institute of Physics, VAST, Hanoi, Vietnam.*

15:15 -15:30 **Coffee break**

Chairperson:

Prof. Dr. Emeric Frejafon (INERIS, France)

A-06
15:30 - 15:55 **LASER – INDUCED CRYSTALLIZATION: AN EMERGING TOOL FOR PROTEIN CRYSTALLIZATION**

(invited talk)

Abdul Ajees Abdul Salam, Shilpa T, Sajan D. George, Aseefhali Bankapur, Santhosh Chidangil, Deepak Mathur

*Department of Atomic and Molecular Physics, Manipal Academy of Higher Education, Manipal 576104, India
Centre for Applied Nano Sciences, Manipal Academy of Higher Education, Manipal 576104, India.*

- A-07
15:55 - 16:20 **MODELIZATION OF PLASMA-BASED UV, XUV AND SOFT X-RAY LASERS**
(invited talk)
Eduardo Oliva^{*}, Manuel Cotelo, Pablo Martínez, José Moreno, Elisa Vázquez and Pedro Velarde
Departamento de Ingeniería Energética, E.T.S.I. Industriales, Universidal Politécnica de Madrid, Madrid, 28006, Spain
Instituto de Fusión Nuclear, Universidal Politécnica de Madrid, Madrid, 28006, Spain
- A-08
16:20– 16:45 **SUPER RESOLUTION FLUORESCENCE MICROSCOPY d-STORM TO STUDY ELASTOMERIC COMPOSITE MATERIALS: SILICA FILLED NATURAL RUBBER FROM THE LIQUID TOWARD THE DRIED STATE**
(invited talk)
Gianluca Cattinari^{*}, Clement Cabriel, Marc Couty, Matthieu Gallopin, Sandrine Leveque-Fort, Marie-Pierre Fontaine-Aupart
Université Paris-Sud, Institut des Sciences Moléculaire d'Orsay, UMR 8214, Orsay, France
Manufacture Françaisedes Pneumatiques MICHELIN, 23 place des Carmes Déchaux, Clermont Ferrand Cedex 9, France
- A-09
16:45 – 17:00 **Ns-PULSED HIGH PEAK POWER GENERATION FROM MONOLITHIC AND HYBRID DIODE LASER BASED MOPA SYSTEMS SUITABLE FOR MICRO-LIDAR SENSORS FOR THE DETECTIONS OF GASES AND AEROSOLS**
Thi Nghiem Vu, Quoc Tien Tran, Thanh Phuong Nguyen, Andreas Klehr, Bernd Sumpf^c, Hans Wenzel, Gunther Trankle
Institute of Materials Science, Vietnam Academy of Science and Technology, School of Engineering Physics, Hanoi University of Science and Technology, Ferdinand-Braun-Institut, Leibniz-Institut für Hochstfrequenztechnik, Gustav-Kirchhoff-str. 4, 12489 Berlin, Germany
- A-10
17:00 – 17:15 **PAINT REMOVAL USING THIN-DISK LASER**
Jumpon Yangomoot, and Amarin Ratanavis
Department of Industrial Physics and Medical Instrumentation, Faculty of Applied Science, Lasers and Optics Research Center (LANDOS), Science and Technology Research Institute, King Mongkut's University of Technology North Bangkok, Thailand.

**THE 10th INTERNATIONAL CONFERENCE
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Hall A

November 13, 2018 (Tuesday)

Chairperson:

Prof. Dr. Hyyong Suk (APRI, GIST, R. Korea)

A-11

**8:30 - 8:55 LASER INDUCED PLASMA SPECTROSCOPY FOR THE REAL-
TIME & IN-SITU DETECTION OF NANOMATERIALS IN AIR
MATRICES**

(invited talk)

C. Dutouquet and E. Frejafon

*INERIS/DRC/CARA/PROX, Parc Technologique Alata 60550 Verneuil-
en-Halatte, France*

A-12

**8:55 - 9:20 LABEL FREE IN-VIVO OPTICAL IMAGING BY EMPLOYING
NEW WAVELENGTH LASER SOURCE**

(invited talk)

Tae Joong Eom

*Bio photonics Laboratory, Advanced Photonics Research Institute,
Gwangju Institute of Science and Technology*

A-13

**9:20 - 9:45 ULTRAFAST TERAHERTZ SPIN SPECTROSCOPY AND
TERAHERTZ DEVICES BASED ON MAGNETIC MATERIALS**

(invited talk)

Makoto Nakajima

Institute of Laser Engineering, Osaka University, Japan

A-14
9:45 -10:00 **NEW INTENSITY MEASUREMENTS OF CARBON DIOXIDE IN THE 1.6 μm REGION**

P. Chelin, X. Landsheere, M. Schwell, H.T. Nguyen, C.T. Le, N.H. Ngo*

*Laboratoire Interuniversitaire des Systèmes Atmosphériques (LISA, CNRS UMR 7583). Université Paris Est Créteil, Université Paris Diderot, Institut Pierre-Simon Laplace 94010 Créteil Cedex, France
Faculty of physics, Hanoi National University of Education, 136 XuanThuy, CauGiay, Hanoi, Vietnam*

A-15
10:00 -10:15 **DETECTING SALT CONTAMINATION IN TSUNAMI IMPACTED SOIL USING SUBTARGET METHOD IN PULSED CO₂ LASER-INDUCED BREAKDOWN SPECTROSCOPY (LIBS)**

NasrullahIdris*, Arlin Maya Sari, MuliadiRamli, and Kazuyoshi Kurihara

*Department of Physics, Faculty of Mathematics and Natural Sciences, Syiah Kuala University, Jl. SyechAbdurrauf No. 3 Darussalam, 23111 Banda Aceh, Aceh, Indonesia
Department of Chemistry, Faculty of Mathematics and Natural Sciences, Syiah Kuala University, Jl. SyechAbdurrauf No. 3 Darussalam, 23111 Banda Aceh, Aceh, Indonesia
Department of Physics, Faculty of Education, University of Fukui. Japan*

10:15-10:30 **Coffee break**

Chairperson:

Prof. V. A. Orlovich (Institute of Physics, Belarus)

A-16
10:30 - 10:55 **TERAHERTZ NANOSCOPY STUDIES OF SURFACE DYNAMICS IN InP AND GaAs**

(invited talk)

Dai-Sik Kim*, Geunchang Choi, Young-Mi Bahk, Taehee Kang, Yoojin Lee, Byung Hee Son, Yeong Hwan Ahn, and Minah Seo

*Department of Physics and Astronomy and Center for Atom Scale Electromagnetism, Seoul National University, Seoul 151-747, Korea
Sensor System Research Center, Korea Institute of Science and Technology, Seoul 136-791, Korea
Department of Physics and Division of Energy Systems Research, Ajou University, Suwon, Korea*

- A-17
10:55 -11:20 **OPTICAL PARAMETRIC OSCILLATOR BASED ON DIFFERENTIAL ABSORPTION LIDAR FOR URBAN METHANE CONCENTRATION MEASUREMENT**
(invited talk)
T. Gasmi, F. Medjahed
Division of Science and Engineering, Saint Louis University-Madrid campus, Avenida del Valle, 34. Madrid 2803, Spain
- A-18
11:20 -11:45 **INVESTIGATION ON THE INTERLINK BETWEEN OPTICAL PROPERTIES OF DUSTS AND BIOMASS BURNING AEROSOLS USING CALIPSO DATA**
(invited talk)
Wei-Nai Chen*, Roja M. Raman, Sin-Jie He, Li-Ting Chen, Kai-Hsuan Hsu
Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan, 115
UGC-SVU Centre for MST Radar Applications, S V University, Tirupati. Andhra Pradesh, India, 517502.
- A-19
11:45 -12:00 **LASER-INDUCED CRYSTALLIZATION OF METASTABLE PHASE OF PHARMACEUTICAL COMPOUND ASPIRIN**
Y. Tsuru*, M. Maruyama, S. Okada, H. Adachi, H. Yoshikawa, K. Takano, S. Murakami, H. Matsumura, T. Inoue, M. Imanishi, K. Tsukamoto, M. Yoshimura, and Y. Mori
*Graduate School of Eng., Osaka Univ.,
Graduate School of Life and Environ. Sci., Kyoto Pref. University,
Dept. of Chem., Saitama University,
Sch. of Life Sci. and Tech., Tokyo Inst. of Tech.,
Dept. of Biotech., Ritsumeikan Univ.,
Graduate School of Science, Tohoku University, ILE, Osaka University.*
- A-20
12:00 -12:15 **EVANESCENT-BASED PLASTIC OPTICAL FIBER SENSOR FOR DETECTION OF LARD ADULTERATION IN OLIVE OIL**
I. Puspita*, F.I. Husada, Sekartedjo, A.M. Hatta, F. Kurniawan
Department of Engineering Physics, Institut Teknologi Sepuluh Nopember, Indonesia
Department of Chemistry, Institut Teknologi Sepuluh Nopember, Indonesia

12:30 -13:30 LUNCH

13:30-17:30

POSTER SESSION II

Chairperson:

Dr. Tae Joong Eom (APRI, GIST, R. Korea)
Dr. Kohei Yamanoi (Osaka University, Japan)
Dr. Pham Hong Minh (IOP, VAST, VN)

Chairperson:

Prof. Dr. Eric Tinet (Uni. of Paris-13, France)

A-21

13:30 - 13:55

**HIGH-THROUGHPUT FEMTOSECOND LASER NANO-AND
MICRO-FABRICATION**

(invited talk)

Sergey I. Kudryashov*

*ITMO University, Kronverkskiyprospect 49, 197101 St. Petersburg, Russia
Moscow*

Lebedev Physical Institute, Leninsky prospect 53, 119991 Moscow, Russia

A-22

13:55 -14:20

**TIME-RESOLVED ARPESFOR PETAHERTZ-SCALE SOLID
STATE TECHNOLOGY**

(invited talk)

**KatsuyaOguri, KentoToume, Hiroki Mashiko, Keiko Kato, Yoshiaki
Sekine, Hiroki Hibino, Akira Suda, and Hideki Gotoh**

*NTT Basic Research Laboratories, NTT Corporation, 3-1
MorinosatoWakamiya, Atsugi, Kanagawa 243-0198, Japan*

*Tokyo University of Science, 2641 Yamazaki, Noda, Chiba 278-8510, Japan
KwanseiGakuin University, 2-1 Gakuen, Sanda, Hyogo 669-1337, Japan*

A-23

14:20 - 14:45 PHOTOCONDUCTIVE AND ELECTRO-OPTIC SAMPLING OF THz PULSED WAVES BY USING 1.55- μ m fs LASER PULSES

(invited talk)

Masahiko Tani, Hideaki Kitahara, Mary Clare S. Escaño, Hiroyuki Kato, Valynn Mag-usara, Jessica Afalla, Kohji Yamamoto, Takashi Furuya, Elmer Estacio, Michael Bakunov

Research Center for Development of Far-Infrared Region, University of Fukui, Bunkyo, Fukui 910-8507 Japan

National Institute of Physics, University of the Philippines, Diliman, Quezon City, 1101 Philippines

University of Nizhny Novgorod, Nizhny Novgorod, 603950 Russia

A-24

14:45 - 15:00 LOCALIZING NANOPARTICLE ANTITUMOR DRUGS UPTAKE IN MOUSE ORGANS BY X-RAY PHASE CONTRAST TOMOGRAPHY

Longo Elena*, Brun Francesco, Bukreeva Inna, Cedola Alessia , Fratini Michela, Massimi Lorenzo, LeGuevel Xavier, Sancey Lucie, De La Rochefoucauld Ombeline, Bravin Alberto, Zeitoun Philippe

Laboratoire d'Optique Appliquée UMR7639, ENSTA-CNRS-Ecole Polytechnique- Université Paris-Saclay, Palaiseau, France

Institute of Nanotechnology- CNR, Rome Unit, Rome, Italy

Institute for Advanced Biosciences U1209

UMR5309 UGA, Grenoble, France

Imagine Optic, Bordeaux, France,

ESRF, ID17, Grenoble, France

A-25

15:00 - 15:15 ELECTRO-OPTICS OF II-VI SEMICONDUCTOR ZNO

Roland V. Sarmago

Condensed Matter Physics Lab, National Institute of Physics

College of Science, University of the Philippines-Diliman, Philippines.

15:15-15:30 Coffee break

Chairperson:

Prof. Marek Trippenbach (Uni. of Warsaw, Poland)

A-26

**15:30 - 15:55 RECENT PROGRESS IN NONLINEAR OPTICAL CRYSTAL
CSLIB₆O₁₀**

(invited talk)

Masashi Yoshimura*, Yoshinori Takahashi, Ryota Murai, and Yusuke Mori

*Institute of Laser Engineering, Osaka University, 2-6 Yamadaoka, Suita,
Osaka 565-0871, Japan
SOSHO CHOKO Inc., Japan,
Graduate School of Engineering, Osaka University, Japan*

A-27

**15:55 - 16:20 NONLINEAR OPTICAL PROCESS TAILORED BY ARBITRARILY
MANIPULATING RELATIVE PHASES AMONG RELEVANT
ELECTROMAGNETIC FIELDS**

(invited talk)

Weiyong Liu*, Chiaki Ohae, JianZheng, Masaru Suzuki, Kaoru Minoshima, Masayuki Katsuragawa

*Graduate School of Informatics and Engineering, The University of Electro-
Communications, 1-5-1 Chofugaoka, Chofu, Tokyo 182-8585, Japan
JST,ERATO,MINOSHIMA Intelligent Optical Synthesizer Project, 1-5-1
Chofugaoka, Chofu, Tokyo 182-8585, Japan
Institute for Advanced Science, University of Electro-Communications, 1-5-1
Chofugaoka, Chofu, Tokyo 182-8585, Japan*

A-28

**16:20 - 16:45 TERAHERTZ OPTOELECTRONICS AND PHOTONICS
RESEARCH IN THE PHILIPPINE SETTING**

(invited talk)

Elmer S. Estacio, Armando S. Somintac, and A. Salvador

*National Institute of Physics, University of the Philippines Diliman, Quezon
City 1101, Philippines
Material Science and Engineering Program, University of the Philippines
Diliman, Quezon City 1101, Philippines*

A-29

16:45 - 17:00

DIRECT BAND GAP TUNABILITY OF THE LIYF₄ CRYSTAL THROUGH HIGH-PRESSUREAPPLICATIONS

Mui Viet Luong*, Melvin John F. Empizo, Jacque Lynn F. Gabayno, Yuki Minami, Kohei Yamanoi, Toshihiko Shimizu, Nobuhiko Sarukura, Minh Hong Pham, Hung Dai Nguyen, Krista G. Steenbergen, Peter Schwerdtfeger, John A. Harrison, and Marilou Cadatal-Raduban

Center for Global Initiatives, Osaka University, 1 – 1 Yamadaoka, Suita, Osaka 565-0871, Japan

Institute of Laser Engineering, Osaka University, 2-6 Yamadaoka, Suita, Osaka 565-0871, Japan

Mapua Institute of Technology, 658 Muralla St., Intramuros, Manila 1002, Philippines

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan, Ba Dinh, Hanoi 10000, Vietnam

Centre for Theoretical Chemistry and Physics, The New Zealand Institute for Advanced Study, Massey University, Albany, Auckland 0632, New Zealand

Centre for Advanced Study (CAS) at the Norwegian Academy of Science and Letters, Drammensveien 78, NO-0271 Oslo, Norway

Institute of Natural and Mathematical Sciences, Massey University, Albany, 0632 Auckland, New Zealand

A-30

17:00 -17:15

IMPROVING AXIAL RESOLUTION OF LIGHT SHEET MICROSCOPY VIA TWO LIGHT SHEETS

Vannhu Le, Xiaona Wang, Chengfeng Zhang, Cuifang Kuang, Yong Liu, Xu Liu*

State Key Laboratory of Modern Optical Instrumentation, College of Optical Science & Engineering, Zhejiang University, Hangzhou, China

Collaborative Innovation Center of Extreme Optics, Shanxi University, Taiyuan, China

Department of Optical Engineering, Le Quy Don Technical University, Hanoi, Vietnam.

SESSION B

