

PROGRAM

November 7, 2016 (Monday)

- 8: 00 - 8: 30** **Registration at the REED Hotel**
(Dinh Dien St., Dong Thanh W., Ninh Binh City).
- 8: 30 - 9: 30** **Official Opening** (Prof. Nguyen Dai Hung & Prof. Dinh Van Trung)
- Welcoming speech of the Governor of Ninh Binh City
 - Opening speech by Prof. Acad. Nguyen Van Hieu
(Conference President)
 - Speech by Prof. Dr. Huynh Thanh Dat
(President. Vietnam National University, Ho Chi Minh City).
 - Speech by Prof. Dr. Yeung Lak Lee
(Vice Director. Advanced Photonic Research Institute, GIST, Korea)
 - Speech by Prof. Dr. Bernard Bourguignon
(Director. Institute of Molecular Science in Orsay. CNRS, France).
 - Speech by Prof. Dr. Katsumi Midorikawa
(Director. RIKEN Center for Advanced Photonics, Japan).
 - Speech by Prof. Acad. Valentin A. Orlovich
(B.I. Stepanov Institute of Physics, NAS Belarus)

PLENARY SESSION

Chairperson:

Prof. Philippe Brechignac (*University of Paris 11, France*)
Prof. Dinh Van Trung (*Institute of Physics, VAST, Vietnam*)

- PL-01*
09:30 - 10:05 **FAST AND SLOW DYNAMICS OF HYDROGEN ATOMS IN
SMALL HYDROCARBON MOLECULES INDUCED BY FEW-
CYCLE INTENSE LASER PULSES: MIGRATION OF HYDROGEN
ATOMS AND PERIODICAL EJECTION OF H₃⁺**
Kaoru Yamanouchi
School of Science, University of Tokyo, Tokyo, Japan
- PL-02*
10:05 - 10:40 **HIGH HARMONIC SPECTROSCOPY OF ATOMS AND
MOLECULES**
Chang Hee Nam.
Center for Relativistic Laser Science, Institute of Basic Science. Korea

10:40- 10:55 **Coffee break**

Chairperson:

Prof. Kohzo Hakuta (*University of Electro-Communication, Japan*)
Prof. Pham Van Hoi (*IMS, VAST, Vietnam*)

PL-03

10:55 - 11:30 **NONLINEAR OPTICS IN WAVEGUIDE ARRAYS AND
PHOTONIC NANOWIRES**

Tran Xuan Truong

Le Quy Don University, Hanoi, Vietnam

PL-04

11:30 - 12:05 **BIO-MEDICAL IMAGING BASED ON OPTICAL
INTERFEROMETER**

Tae Joong Eom

Advanced Photonic Research Institute (APRI), GIST, Korea

PL-05

12:05 - 12:40 **LINEAR AND ULTRAFAST INVESTIGATIONS OF A SINGLE
METAL NANOPARTICLE**

Natalia Del Fatti

University of Lyon I, LASIM, CNRS, France

12. 40 - 13.30 **LUNCH**

Chairperson:

Prof. Fabian Rotermund (*KAIST, Korea*)
Dr. Tran Xuan Truong (*Le Quy Don Uni., VN*)

PL-06

13:30 - 14:05 **PERTURBATIVE APPROACH IN THE EXTREM
ULTRAVIOLET REGION**

Lap Van Dao

Swinburne University of Technology, Melbourne, Australia

PL-07

14:05 - 14:40 **NONLINEAR OPTICAL VIBRATIONAL SPECTROSCOPY TO PROBE INTERACTIONS OF MOLECULES WITH NANOPARTICLES**

Aimeric Ouvrard, Abdoul Mouize Zakaria, Natalia Alyabyeva, Serge Carrez, Wanquan Zheng and Bernard Bourguignon*

Institut des Sciences Moléculaires d'Orsay, Université Paris-Sud, Orsay

PL-08

14:40 - 15:15 **LiCaAlF₆ AND LiSrAlF₆ CRYSTALS AS SOLID-STATE VUV TO UV LASER MATERIALS**

Nobuhiko Sarukura

Institute for Laser Engineering, University of Osaka, Japan

15.15 - 15.30 **Coffee break**

Chairperson:

Prof. N. Sarukura (*University of Osaka, Japan*)

Dr. Pham Hong Minh (*IOP, VAST*)

PL-09

15:30 - 16:05 **SPECTROSCOPIC SIGNATURES OF MOLECULES AND GRAINS IN INTERSTELLAR SPACE: INPUT FROM HYDROCARBONATED NANOPARTICLES IN THE LABORATORY**

Philippe Brechignac

Institute of Molecular Science in Orsay, University Paris-11, CNRS, France

PL-10

16:05 - 16:40 **QUANTUM PHOTONICS WITH OPTICAL NANOFIBERS**

Kohzo Hakuta

Center for Photonic Innovations. University of Electro-Communication, Tokyo, Japan

PL-11

16:40 – 17:15 **FIVE-LEVEL CASCADE ATOMIC EIT MEDIUM: AN ANALYTICAL APPROACH AND PROSPECTS**

Dinh Xuan Khoa, Le Van Doai and Nguyen Huy Bang

Vinh University, 183 Le Duan Str., Vinh City, Vietnam

ASILS – 9 PROGRAM

**The 9th Asian Symposium on Intense Laser Science
(ASILS-9)**

Hall A

November 8, 2016 (Tuesday)

Chairperson:

Prof. Katsumi Midorikawa (*RIKEN, Japan*)

A-01

8:30 - 9:00 **NEW APPROACH FOR THERMAL-LENS-FREE CERAMIC LASERS**

(invited talk)

Ken-ichi Ueda

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

A-02

9:00 - 9:30 **DEVELOPMENT OF A HIGH REPETITION RATE PLASMA-BASED SOFT X-RAY LASER: APPLICATIONS AND CURRENT STATUS IN QST**

(invited talk)

T.-H. Dinh*, **N. Hasegawa**, **M. Ishino**, **M. Kishimoto**, **S. Namba**,
J. Seres, **M. Nishikino** and **T. Kawachi**

*Department of Advanced Photon Research/ Kansai Photon Science
Institute/ National Institutes for Quantum and Radiological Science and
Technology (QST), Kizugawa, Kyoto, Japan*

A-03

9:30 - 10:00 **STRONG-FIELD PHENOMENA FROM THE FIRST PRINCIPLES**

(invited talk)

Kenichi L. Ishikawa*, **Takeshi Satob**, **Yuki Orimo**,
Yasushi Shinohara

*Department of Nuclear Engineering and Management, Graduate School
of Engineering, The University of Tokyo, Japan*

- A-04
10:00 - 10:20 **FEMTOSECOND PULSED LASER DEPOSITION OF Nd:YAG AND Er:YAG LASER CRYSTALS ON SILICON**
Lean Dasallas, Arriane Lacaba, Floyd Willis Patricio and Wilson Garcia
National Institute of Physics University of the Philippines, Diliman Quezon City, Philippines
- 10:20-10:45** **Coffee break**
- Chairperson:**
Prof. Chang Hee Nam (*Institute for Basic Science, Korea*)
- A-05
10:45 - 11:15 **GRAPHENE FOR BROADBAND NONLINEAR PHOTONICS**
(invited talk)
Fabian Rotermund
Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea
- A-06
11:15 -11:45 **SUPERCONTINUUM GENERATION IN CONDENSED MEDIA BY INTENSE INFRARED ULTRASHORT LASER PULSES**
(invited talk)
Parinda Vasa
Department of Physics, Indian Institute of Technology Bombay, Powai, Mumbai, India
- A-07
11:45 -12:05 **HIGH-ORDER HARMONIC GENERATION USING SINGLE ACTIVE ELECTRON MODEL POTENTIAL**
Le Thi Cam Tu*, Hoang Van Hung, Le Van Hoang
University of Science, Ho Chi Minh City, Vietnam
- 12:30 -13:30** **LUNCH**

13:30-17:30

Chairperson:

Prof. Ho Quang Quy (*Acad. for Sci. & Tech. of Military, Vietnam*)

Dr. Phạm Hồng Minh (*IOP, VAST, Vietnam*)

POSTER SESSION I

Chairperson:

Prof. See Leang CHIN (*University of Laval, Canada*)

A-08

13:30 - 14:00

QUASI-MONOENERGETIC PROTON BEAM FROM AN ION-LAYER EMBEDDED FOIL IRRADIATED BY AN ULTRAINTENSE LASER PULSE

(invited talk)

Kitae Lee *, **Kyung Nam Kim**, **Ha-Na Kim**,
Manoj Kumara, **Seong Hee Park**

Center for Quantum-Beam-based Radiation Research, Korea Atomic Energy Research Institute, Daejeon, KOREA

A-09

14:00 -14:30

DIRECT PROBING TWO-ELECTRON DYNAMICS USING FLUORESCENCE EMISSION

(invited talk)

V. H. Trinh*, **T. Morishita**, **E. J. Takahashi**, and **K. Midorikawa**

Attosecond Science Research Team, RIKEN Center for Advanced Photonics, RIKEN, Japan

A-10

14:30 - 15:00

ULTRAFAST VIBRATIONAL WAVE PACKET DYNAMICS OF STRONG-FIELD-IONIZED MOLECULES OBSERVED BY FEMTOSECOND XUV ABSORPTION SPECTROSCOPY

(invited talk)

Zhi-Heng Loh

Division of Chemistry and Biological Chemistry, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore

A-11
**15:00 - 15:20 USING OPTICAL DIFFRACTION ON SURFACE WAVE
FOR MEASURING SURFACE TENSION COEFFICIENT OF
LIQUID**

Paradorn Pakdeevanich* and Nitipong Jongmeechaichana

*Department of Physics, Faculty of Science, Silpakorn University, Nakorn
Prathom, Thailand*

15:20-15:45 Coffee break

Chairperson:

Prof. Zhi-Heng Loh (Singapore)

A-12
**15:45 - 16:15 ULTRASHORT LASER PULSES: ADVENTURES ON THE
INTERFACE OF PHYSICS AND CHEMISTRY**

(invited talk)

Deepak Mathur

Tata Institute of Fundamental Research, Mumbai, India

A-13
**16:15 - 16:45 LASER APPLICATIONS IN EXPLORING PHOTONIC CRYSTAL
FIBERS**

(invited talk)

Tran Xuan Truong

Department of Physics, Le Quy Don University, Hanoi, Vietnam

A-14
**16:45 – 17.05 PERTURBATIVE APPROACH IN THE EXTREME ULTRAVIOLET
REGION**

Lap Van Dao

*Centre for Quantum and Optical Science, Faculty of Science Engineering
and Technology, Swinburne University of Technology, Melbourne, Australia*

The 9th Asian Symposium on Intense Laser Science (ASILS-9)

Hall A

November 9, 2016 (Wednesday)

Chairperson:

Prof. Deepak Mathur (*Tata Institute of Fundamental Research, India*)

A-15

8:30 - 9:00 **FILAMENT INDUCED CONDENSATION AND PRECIPITATION
IN A CLOUD CHAMBER**

(invited talk)

S. L. Chin*, Jingjing Ju, Jiansheng Liu, Hong Liang, Yu Chen,
Haiyi Sun, Yonghong Liu, Jingwei Wang, Cheng Wang,
Tiejun Wang, Ruxin Li, Zhizhan Xu

*Centre of Optics, Photonics and Laser (COPL), University Laval,
Québec, Canada.*

*Shanghai Institute of Optics and Fine mechanics, Chinese Academy of
Science, Shanghai, China*

A-16

9:00 - 9:30 **INTENSE LASER PULSES FOR EXPLOSIVES DETECTION:
SCOPE AND CHALLENGES**

(invited talk)

S. Venugopal Rao

*Advanced Centre of Research in High Energy Materials (ACRHEM),
University of Hyderabad, Hyderabad, Telangana, India*

A-17

9:30 - 10:00 **PETAHERZ ELECTRONIC RESPONSE IN SEMICONDUCTOR**

(invited talk)

K. Oguri*, H. Mashiko, T. Yamaguchi, A. Suda, and H. Gotoh

*NTT Basic Research Laboratories, NTT Corporation, Kanagawa, Japan
Tokyo University of Science, Japan*

A – 18

10:00 -10:20 **DETECTION OF NITRIC OXIDE AT LOW PPB·M CONCENTRATIONS BY DIFFERENTIAL ABSORPTION SPECTROMETRY USING A FULLY-DIODE-LASER-BASED ULTRAVIOLET LASER SYSTEM**

Lemthong Lathdavong, Jie Shao, and Ove Axner

Department of Physics, National University of Laos.

Institute of Information Optics of Zhejiang Normal University, China.

Umeå University, Sweden.

10:20-10:45 **Coffee break**

Chairperson:

Prof. Zhiyi Wei (*Institute of Physics, China*)

A-19

10:45 - 11:15 **HIGHLY FUNCTIONAL ULTRASHORT PULSE FIBER LASERS AND THEIR APPLICATIONS**

(invited talk)

Norihiko Nishizawa*, Li Jin, Hiroyuki Kawagoe, and Masahito Yamanaka

Depat. Quantum Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Japan

A-20

11:15 -11:45 **HIGH-ENERGY ULTRAFAST MULTICOLOR LASER**

(invited talk)

Eiji J. Takahashi

RIKEN Center for Advanced Photonics, Japan

A-21

11:45 -12:15 **DETECTION OF POLYCHLORINATED BIPHENYLS IN TRANSFORMER OILS IN VIETNAM BY FEMTOSECOND LASER IONIZATION MASS SPECTROMETRY**

(invited talk)

Nghiem Thi Ha Lien, Vu Duong, Vu T.T. Duong, Tomoko Imasaka, Yuanyuan Tang, Shinpei Shibuta, Akifumi Hamachi, Do Quang Hoa, Totaro Imasaka*

Institute of Physics, VAST, Vietnam

*Laboratory of Chemistry, Graduate School of Design, Kyushu University,
Japan*

*Department of Applied Chemistry, Graduate School of Engineering,
Kyushu University, Fukuoka, Japan*

A-22

**12:15 -12:35 STUDY OF THE RAMAN SPECTRA OF SOOT IN THE GAS
PHASE**

Thi Kim Cuong Le, Christophe Lefumeux and Thomas Pino*

*Institut des Sciences Moléculaires d'Orsay, CNRS, Université Paris Sud,
Orsay, France*

12:35 -13:30 LUNCH

13:30-17:30

Chairperson:

Prof. Nguyen The Binh (VNU Hanoi, VN)

Dr. Tran Quoc Tien (IMS, VAST, VN)

POSTER SESSION II

Chairperson:

Prof. Dao Van Lap (Australia)

A-23

**13:30 - 14:00 AB-INITIO SIMULATION OF TIME-RESOLVED ATTOSECOND
DYNAMICS OF LASER-DRIVEN MANY-ELECTRON MOLECULES**

(invited talk)

T. Tung Nguyen-Dang*, J. Viau Trudel, E. Couture-Bienvenue, F.Dion

Department of Chimes and COPL, University Laval, Québec, Canada

A-24

**14:00 -14:30 DEVELOPMENT OF ULTRAHIGH INTENSITY LASER - TOWARD
HIGH AVERAGE POWER AND CYCLE SHORT PULSE
DURATION**

(invited talk)

Zhiyi Wei*, Zhaohua Wang, Hao Teng, Kun Zhao, X. He, Shaobo Fang

*Beijing National Lab. of Condensed Matter Physics and Institute of Physics,
Chinese Academy of Sciences, Beijing, China*

A-25

14:30 - 14:50 USING THE TRANSIENT ABSORPTION PHENOMENON FOR A FAST TIMING IN NUCLEAR INSTRUMENTATION

O. Baganov, S. Tikhomirov, M. Korjik, A. Fedorov, V. Mechinsky, G. Tamulaitis

B.I. Stepanov Inst. of Physics, Minsk, Belarus

*Institute for Nuclear Problems of BSU, Minsk,
Vilnius University, LT-10222, Vilnius, Saulėtekio 9-III*

A-26

14:50 - 15:10 ADVANCED CHEMO - AND BIOSENSING: LASER-ASSISTED FABRICATION AND OPERATION PRINCIPLES OF SENSORS, RECENT ADVANCES

Sergey I. Kudryashov*, P.A. Danilov, A.A. Ionin, R.A. Khmel'nitskii, N.N. Mel'nik, A.A. Rudenko, I.N. Saraeva, D.A. Zayarny, A.K. Ivanova, S.P. Umanskaya, A.A. Kuchmizhak, Yu.N. Kulchin, O.B. Vitrik, T.T. H. Nguyen, L.V. Nguyen

Gas Laser Laboratory, Division of Quantum Electronics, P.N. Lebedev Physics Institute, Russian Academy of Sciences, Moscow, Russia

15:10-15:30 Coffee break

15:30-17:00

Chairperson:

Prof. Ken-ichi Ueda (UEC, Japan)

Prof. Prof. Dr. Katsumi Midorikawa (RIKEN, Japan).

Prof. Fabian Rotermund (KAIST, Republic of Korea)

ASILS-9 DISCUSSION

17:00-17:30 OFFICIAL CLOSING

PLENARY SESSION (HALL C)