

## 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  $H_3^+$**   
**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** **LiCaAlF<sub>6</sub> AND LiSrAlF<sub>6</sub> 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*

# The 9<sup>th</sup> International Conference on Photonics and Applications

(ICPA-9)

Hall B

*November 8, 2016 (Tuesday)*

## Chairperson:

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

**Prof. Thibaut Sylvestre** (*Université de Franche – Comté, Besancon, France*)

*B-01*

**8:30 - 9:00 TUNABLE PERFECT ABSORBERS FOR WAVELENGTH  
SELECTIVE INFRARED DEVICES**

*(invited talk)*

**Tadaaki Nagao**

*International Center for Materials Nanoarchitectonics (MANA),  
National Institute for Materials Science (NIMS), Tsukuba, Japan*

*B-02*

**9:00 - 9:30 SIZE-DEPENDENT ELECTRON MOBILITY OF ZnO  
NANOPARTICLES BY ROOM TEMPERATURE LIQUID PHASE  
SYNTHESIS**

*(invited talk)*

**Chun-Yuan Huang, Ming-Hsuan Martin Liu, Jia-Hua Lai,  
Zih-Yan Yang**

*Department of Applied Science, National Taitung University, R.O.C*

*B-03*

**09:30 - 10:00 ELECTRON INTERACTIONS AND VIBRATIONS IN METALLIC  
CLUSTERS**

*(invited talk)*

**T. Stoll, P. Maioli, A. Crut, N. Del Fatti and F.Vallée**

*FemtoNanoOptics Group, Institut Lumière Matière, CNRS and Université  
de Lyon, France*

B-04

**10:00 - 10:20 LASER SURFACE ROUGHENING ON SELECTIVE AREA OF COPPER PLATE**

**Noriah Bidin and Mohd Zulfahmi Bahaudin**

*Laser center, Institute Ibnu Sina, Universiti Teknologi Malaysia*

**10:20 - 10:35 Coffee break**

**Chairperson:**

**Prof. Tadaaki NAGAO (NIMS, Japan)**

**Prof. S. Tikhomirov (B.I.Stepanov IOP, Belarus)**

B-05

**10:35 - 11: 05 USING THE TRANSIENT ABSORPTION PHENOMENON FOR A FAST TIMING IN NUCLEAR INSTRUMENTATION**

*(invited talk)*

**O. Buganov\*, S. Tikhomirov, M. Korjik, A. Fedorov,  
V. Mechinsky, G. Tamulaitis**

*B.I. Stepanov Inst. Of Physics, Minsk, Belarus*

B-06

**11:05 - 11:35 STUDY OF THE RAMAN SPECTRA OF SOOT IN THE GAS PHASE**

*(invited talk)*

**Thi Kim Cuong Le, Christophe Lefumeux and Thomas Pino**

*Institut des Sciences Moléculaires d'Orsay, CNRS, Université Paris Sud,  
91405 Orsay, France*

B-07

**11:35 - 11:55 HIGHLY EFFICIENT HYBRID WHITE ORGANIC LIGHT-EMITTING DIODES USING SIMPLY SEPARATED DOUBLE EMITTING-LAYERS**

**Hoang-Tuan Vu, Hsin-Chieh Yua, Fuh-Shyang Juang, Yan-Kuin Su**

*Institute of Microelectronics and Advanced Optoelectronic Technology  
Center, National Cheng Kung University, Taiwan*

B-08

**11:55 - 12:15 LUMINESCENCE ENHANCEMENT OF CDSES QUANTUM DOTS  
IN LaF<sub>3</sub>:Ce/CDSES NANOCOMPOSITES FOR RADIATION  
DETECTION**

**Phan Van Cuong and Do-Hyung Kim**

*Department of Physics, Nha Trang University, 02 Nguyen Dinh Chieu  
Street, Nha Trang, Vietnam*

B-09

**12:15-12:35 GOOS-HÄNCHEN SHIFT ON POROUS THIN FILM**

**Cherrie May Olaya\* and Nathaniel Hermosa**

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

**12:35 -13:30 LUNCH**

**Chairperson:**

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

**Dr. Pham Hong Minh** (*Institute of Physics, VAST, Vietnam*)

**13.30-17.30 POSTER SESSION I**

**Chairperson:**

**Prof. Bernard Bourguignon** (*University Paris 11, France*)

**Prof. Buganov Oleg** (*B.I Stepanov Institute of Physics, Belarus*)

B-10

**13:30 - 14:00 SUPERCONTINUUM GENERATION – THE FLAGSHIP  
APPLICATION OF PHOTONIC CRYSTAL FIBERS**

*(invited talk)*

**Cao Long Van, Dinh Xuan Khoa, Marek Trippenbach,  
Ryszard Buczyński**

*Institute of Physics, University of Zielona Gora, Poland*

*B-11*

**14:00 - 14:30 MICRO-LENSED FIBERS FOR COUPLING OPTIMIZATION IN OPTICAL FIBERS AND PHOTONIC INTEGRATED CIRCUITS**

*(invited talk)*

**Sy Dat Le\***, Enguerran Delcourt , Pauline Girault, Aldo Gutierrez-Arroyo, Paul Azuelos, Nathalie Lorrain, Loïc Bodiou, Luiz Poffo, Jean-Marc Goujon, Yannick Dumeige, Isabelle Hardy, et al.

*Foton UMR CNRS 6082, Université de Rennes 1, France*

*B-12*

**14:30 – 15:00 PROGRESS IN OPTICALLY PUMPED GAS LASERS FOR BEAM COMBINERS**

*(invited talk)*

**Amarin Ratanavis**

*Faculty of Applied Science, Lasers and Optics Research Group (LANDOS), Science and Technology Research Institute, King Mongkut's University of Technology North Bangkok, Bangkok, Thailand*

*B-13*

**15:00 - 15:20 INFLUENCE OF CONCENTRATION AND TEMPERATURE ON DISPERSION PROPERTIES OF PHOTONIC CRYSTAL FIBERS INFILTRATED WITH WATER - ETHANOL MIXTURES**

**Quang Ho Dinh, Hieu Le Van, Khoa Dinh Xuan, Ryszard Buczyński, Van Cao Long, Quy Ho Quang, Luu Mai Van, Thanh Thai Doan**

*Centre for Practice and Experiment, Vinh University, Vinh City, Viet Nam*

**15.20-15.30 Coffee break**

**Chairperson:**

**Prof. Sergey Kudryashov** (*P.N. Lebedev Inst. of Physics, Moscow, Russia*)

**Dr. Lemthong Lathdavong**, (*National University of Laos*)

*B-14*

**15: 30- 16:00 SURFACE BRILLOUIN SCATTERING IN OPTICAL MICROFIBERS**

*(invited talk)*

**Thibaut Sylvestre**

*Institute Femto-st, Université de Franche-Comté, UFR Sciences - Route de Gray - Besançon, France*

*B-15*

**16:00 - 16:30 DEVELOPMENT AND CHARACTERIZATION OF A CMOS ASIC DETECTOR FOR SPECKLE ANALYSIS – TIME RESOLUTION IN BIOLOGICAL TISSUES**

*(invited talk)*

**Tinet E.\*, Barjean K, Nghiem T.H.L., Etti D. and Tualle J.-M.**

*Laboratoire de Physique des Lasers, CNRS, Université Paris 13, Institut Galilée, France*

*Institute of Physics, 10 Daotian, Badminh, Hanoi, Vietnam*

*B-16*

**16:30 - 16:50 DEVELOPMENT OF A LASER PULSE AMPLIFIER BASED ON CHIRPED PULSE AMPLIFICATION TECHNIQUE FOR ULTRASHORT TITAN-SAPPHIRE LASER PULSES**

**Pham Hong Minh, Pham Huy Thong, Hoang Ba Ngoc, Nguyen Xuan Tu, Pham Van Duong, Vu Thi Bich, Buganov Oleg, S.A. Tikhomirov**

*Center for Quantum Electronic, Institute of Physics, Vietnam Academy of Science and Technology, Hanoi, Vietnam*



**The 9<sup>th</sup> International Conference  
on Photonics and Applications**

**(ICPA-9)**

**Hall B**

*November 9, 2016 (Wednesday)*

**Chairperson:**

**Prof. Marie Pierre Aupart** (*ISMO, CNRS, France*)

**Prof. Cao Long Van** (*University of Zielona Gora, Poland*)

*B-17*

**8:30 - 9:00** **UBIQUITOUS PHENOMENON OF FOUR WAVE MIXING**

*(invited talk)*

**Marek Trippenbach**

*Faculty of Physics, University of Warsaw, Warsaw, Poland*

*B-18*

**9:00 - 9:30** **ADVANCED CHEMO-AND BIOSENSING: LASER-ASSISTED  
FABRICATION AND OPERATION PRINCIPLES OF SENSORS,  
RECENT ADVANCES**

*(invited talk)*

**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**

*Lebedev Physical Institute, Moscow, Russia*

*B-19*

**09:30 - 09:50** **REALIZATION OF PORTABLE MULTI-WAVELENGTH  
EQUIPMENT USING FIBER COUPLED DIODE LASERS FOR  
PHOTO-THERAPY AND REHABILITATION**

**Nguyen Thanh Phuong, Do Duc Hung, Pham Quang Ngan  
Nguyen Manh Hieu, Tran Quoc Tien**

*Institute of Materials Science (IMS), VAST, Vietnam*

B-20

**09:50 - 10:10 RECENT RESEARCH AND DEVELOPMENT OF ALL SOLID-STATE ULTRAVIOLET LASERS USING Ce:LiCAF CRYSTAL**

**Pham Van Duong, N. Van Diep, N. Xuan Loi, Hoang Tien Son,  
N. T. Minh Tam, Nguyen Xuan Tu, Pham Hong Minh,  
Nobuhiko Sarukura and Nguyen Dai Hung**

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

*Institute of Laser Engineering, Osaka University, Suita Osaka 565-0871  
Japan*

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

**Chairperson:**

**Prof. Marek Trippenbach (*University of Warsaw, Poland*)**

**Prof. Tinet Eric (*Université Paris 13, France*)**

B-21

**10:30 - 11:00 NR – FILLER INTERACTIONS IN AQUEOUS CONDITION BY MULTI-MODAL FLUORESCENCE AND ELECTRONIC MICROSCOPIES**

*(invited talk)*

**A. Chan, K. Steenkeste, M. Eloy, A. Canette, F. Alousque, S. Ceccia,  
F. Gaboriaud, M.P. Fontaine-Aupart**

*Institut des Sciences Moléculaires d'Orsay (ISMO), CNRS, Université Paris-Sud, Orsay Cedex, France*

B-22

**11:00 - 11:30 DESIGNABLE NONLINEAR OPTICAL FREQUENCY CONVERSION PROCESS**

*(invited talk)*

**Jian Zheng, Chiaki Ohae and Masayuki Katsuragawa**

*Department of Engineering Science, University of Electro-Communications  
Institute of Advanced Science, University off Electro-Communications  
JST ERATO-IOS*

B-23

**11:30 - 11:50 DEVELOPMENT AN ALL SOLID-STATE MULTI-WAVELENGTH SEFL - RAMAN CONVERSION LASER BASED ON Ba(NO<sub>3</sub>)<sub>2</sub> CRYSTAL**

**Do Quoc Khanh\*, Pham Van Duong, Nguyen Xuan Tu, Vu Thi Bich, Nguyen Thanh Binh, S. Voiltikov, A.S. Grabtchikov, V.A. Orlovich and Nguyen Dai Hung**

*Institute of Physics, Viet Nam Academy of Science and Technology*

*B.I. Stepanov Institute of Physics, National Academy of Science of Belarus*

B-24

**11:50 - 12:10 EFFECT OF DISSOLVED CATIONS ON STRUCTURE OF LANGMUIR MONOLAYER-WATER INTERFACE PROBED BY SUM-FREQUENCY VIBRATIONAL SPECTROSCOPY USING A PICO-SECOND LASER**

**Nguyen Thi Hue, Vu Thanh Tam, Nguyen Anh Tuan\***

*VNU University of Science, Hanoi, Vietnam*

B-32

**12:10 - 12:30 HIGH INDEX DIELECTRIC OPTICAL META-SURFACES WITH BROKEN VERTICAL SYMMETRY**

**Hai Son Nguyen, Florian Dubois, Xavier Letartre, Jean-Louis Leclercq, Christian Seassal, Pierre Viktorovitch**

*Univ Lyon, Institut des Nanotechnologies de Lyon (INL) UMR 5270 CNRS-INSAs-ECL-UCBL, Ecole Centrale de Lyon, Ecully, France*

**12:30 – 13:30 LUNCH**

**Chairperson:**

**Prof. Nguyen The Binh (VNU Hanoi, VN)**

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

**13:30- 17.30 POSTER SESSION II**

**Chairperson:**

**Prof. Fabrice Vallee** (*LASIM, CNRS, France*)

**Prof. Thomas Pino** (*ISMO, CNRS, France*)

*B-25*

**13:30 - 14:00 DIRECT LASER WRITING OF PLASMONIC, MAGNETIC AND PHOTONIC NANOSTRUCTURES**

*(invited talk)*

**Ngoc Diep LAI**

*Laboratoire de Photonique Quantique et Moléculaire, Ecole Normale Supérieure de Cachan, Université Paris-Saclay, France*

*B-26*

**14:00 - 14:30 PROGRESSES IN PHOTONIC APPLICATIONS**

*(invited talk)*

**Pham Van Huong**

*University Bordeaux-1, Talence, France*

*B-27*

**14:30 – 15:00 CARRIER DYNAMICS IN GaAs/AlGaAs ASYMMETRIC DOUBLE QUANTUM WELLS INVESTIGATED VIA PHOTOLUMINESCENCE AND OPTICAL PUMP-TERAHERTZ PROBE TECHNIQUE**

*(invited talk)*

**Jessica Afalla, Kaoru Ohta, Shunrou Tokonami, Elizabeth Ann Prieto, Gerald Catindig, Karl Cedric Gonzalez, Rafael Jaculbia, John Daniel Vasquez, Armando Somintac, Arnel Salvador, Elmer Estacio\*, et al.**

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

*B-28*

**15:00-15:20 ns-MOPA DUAL WAVELENGTH AT 965 nm WITH 16 W PEAK POWER SUITABLE FOR WATER VAPOR DETECTION**

**Thi Nghiem Vu\*, Andreas Klehr, Bernd Sumpf, Tran Quoc Tien, Thanh Phuong Nguyen, Günther Tränkle**

*Institute of Materials Science (IMS), VAST, Vietnam*

**15:20 – 15:35 Coffee break**

**Chairperson:**

**Prof. Natalia Del Fatti** (*University of Lyon 1, France*)

**Prof. Ngoc Diep Lai** (*ENS de Cachan, France*)

*B-29*

**15:35 -16:05 FROM PHOTONIC CRYSTALS TO PSEUDO-DISORDERED STRUCTURES, ADVANCED LIGHT CONTROL FOR SOLAR ENERGY**

*(invited talk)*

**Christian Seassal\*, Loïc Lalouat, He Ding, Romain Champor, Ngoc Vu Hoang, Thierry Deschamps, Abdelmounaim Harouri , Hai-Son Nguyen, Régis Orobttchouk, Alain Fave, Fabien Mandorlo, Emmanuel Drouard, Antonio Pereira, Bernard Moine**

*Institute des Nanotechnologies de Lyon, Ecole Centrale de Lyon, FRANCE*

*B-30*

**16:05 -16:35 MICROSTRUCTURED LIGHT DISTRIBUTER DESIGN FOR NATURAL LIGHT ILLUMINATION SYSTEM**

*(invited talk)*

**Ngoc Hai Vu, Tran Quoc Tien, Thanh Phuong Nguyen, Thanh Tuan Pham, Seoyong Shin**

*Department of Information and Communications Engineering, Myongji University, South Korea*

*B-31*

**16:35-16:55 FLUORESCENCE OF RHODAMINE 6G IN PRESENCE OF Au NANOPARTICLES**

**Trong Duc Tran, The Binh Nguyen, Gia Long Ngo, Nhu Anh Nguyen, Ha My Hoang**

*Hanoi University of Science, Vietnam National University, Hanoi, Vietnam*

**17:00-17:30 OFFICIAL CLOSING  
PLENARY SESSION (HALL C)**