

**THE 14th INTERNATIONAL CONFERENCE
ON PHOTONICS AND APPLICATIONS
(ICPA-14)**

*Quy Nhon University,
Quy Nhon Nam Ward, Gia Lai Province, Vietnam
September 30 –October 03, 2026*

PROGRAM

<https://iop.vast.vn/icpa/2026/>

2026

CONTENTS

CONFERENCE INFORMATION

<i>The 14th International Conference on Photonics and Applications (ICPA-14)</i>	03
Organizers	03
Organizing Committee	04
Sponsors	06
Conference Topics	07
Conference Secretariat	07

PROGRAM SCHEDULE **08**

Plenary Session	10
Session A	13
Session B	28
Poster I	43
Poster II	56
Poster III	69

**THE 14th INTERNATIONAL CONFERENCE
ON PHOTONICS AND APPLICATIONS
(ICPA-14)**

ORGANIZERS

**Institute of Physics (IOP), VAST
Quy Nhon University**

CO-ORGANIZERS

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Vietnam National University, Ho Chi Minh City
Vietnam Physical Society
Vietnam Society of Optics & Spectroscopy
International Centre for Physics, IOP, VAST**

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Prof. Nguyen Dai Hung (VPS, VietNam)

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Prof. Tae Joong Eom (Pusan National University, Korea)

Prof. Elmer S. Estacio (University of the Philippines Diliman, Philippines)

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Prof. Ha Thanh Hai (Quy Nhon University)

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Prof. Pham Hong Minh (Institute of Physics, VAST)

Prof. Tran Quoc Tien (Institute of Material Sciences, VAST)

Prof. Nguyen The Toan (University of Science, HUS, VNU)

Prof. Le Vu Tuan Hung (University of Science - VNUHCM)

Prof. Ngo Quang Minh (University of Science and Technology of Hanoi, USTH)

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International Centre for Physics (ICP), IOP - VAST
Advanced Photonics Research Institute (APRI), GIST**

CONFERENCE SECRETARIAT

Nguyen Thi Khanh Van

Nguyen Van Thang

Duong Thi Man

Le Huyen Trang

Conference E-mail: icpa.ncos.14@gmail.com

Tel: (+84) 94 5656 799; Fax: (+84 024) 37669 050

THE 14th INTERNATIONAL CONFERENCE ON PHOTONICS AND APPLICATIONS (ICPA-14)

CONFERENCE TOPICS

Optics and Optical Physics

Photonics and Integrated Photonics

Spectroscopy and Optical Characterization

Advanced Laser Sources and Technologies

Nonlinear Optics and Ultrafast Phenomena

Photonic Materials, Nanostructures and Devices

Optoelectronics and Optical Communications

Applications of Optics, Photonics and Spectroscopy

BRIEF PROGRAM

Note: - *SESSION A: PHOTONICS AND APPLICATIONS*
 - *SESSION B: OPTICS AND SPECTROSCOPY*

<i>Date</i> <i>Time</i>	WEDNESDAY <i>30 September 2026</i>	THURSDAY <i>01 October 2026</i>	FRIDAY <i>02 October 2026</i>	SATURDAY <i>03 October 2026</i>
8:00 - 12:15		- <i>Registration</i> - <i>Official Opening</i> - <i>PLENARY SESSION</i>	- <i>SESSION A</i> - <i>SESSION B</i> - <i>SESSION POSTER II</i>	<i>Social Program</i>
		<i>LUNCH (offered by Conference Organizing Committee)</i>		
13:30 - 18:15	<i>Registration</i> (Quy Nhon Nam Ward, Gia Lai Province, Vietnam)	- <i>SESSION A</i> - <i>SESSION B</i> - <i>SESSION POSTER I</i>	- <i>SESSION A</i> - <i>SESSION B</i> - <i>SESSION POSTER III</i> (<i>Official Closing</i>)	<i>Social Program</i>
19:00 - 20:30		<i>Welcome Party offered by the ICPA Organizing Committee</i>		

PROGRAM

PLENARY SESSION

PROGRAM

October 01, 2026 (Thursday)

07:30 - 08:30 Registration

08:30 - 09:00 Official Opening (Nguyen Thanh Binh & Tran Quoc Tien)

Welcoming speech of Local Governor

Speech by Prof. Nguyen Dai Hung (Conference President)

Speech by Prof. Nobuhiko Sarukura (Osaka University, Japan)

Speech by Prof. Doan Duc Tung (Quynhon University)

Speech by Dr. Yeung Lak Lee (APRI, GIST, Korea)

Speech by Prof. Dinh Van Trung (Institute of Physics, VAST)

09:00-09:15 CONFERENCE PHOTOGRAPH/COFFEE BREAK

PLENARY SESSION

Chairperson:

Prof. Ngoc Diep Lai (Université Paris-Saclay, France)

Prof. Elmer Estacio (University of the Philippines, Philippines)

**PL-01 COLOUR CENTRES IN SILICON AS PROMISING SINGLE-
09:15 - 9:45 PHOTON EMITTERS AT TELECOM WAVELENGTHS**

Hai Son Nguyen

*Ecole Centrale de Lyon, CNRS International NTU THALES Research
Alliance (CINTRA IRL 3288) Singapore*

**PL-02 HALIDE DEFECT PASSIVATION IN PEROVSKITE
9:45 - 10:15 NANOCRYSTALS BY THE FRIEDEL-CRAFTS REACTION**

Chang-Lyoul Lee

*Advanced Photonics Research Institute (APRI), Gwangju Institute of
Science and Technology (GIST), Gwangju 61005, Republic of Korea*

**PL-03 DEVELOPMENT OF GaN-BASED VCSELs
10:15 - 10:45 Baoping Zhang, Yang Mei, Leiying Ying**

*Southern University of Science and Technology, Shenzhen 518055, China
Xiamen University, Xiamen 361100, China*

PL-04 **LASER CRYSTAL APPLICATION WORK WITH ASEAN
10:45 - 11:15 RESEARCHERS**

Nobuhiko Sarukura

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

*New Industry Creation Hatchery Center, Tohoku University, Sendai 980-
8579, Japan*

PL-05 **QUANTUM PHOTONICS FOR SPACE – APPLICATIONS,
11:15 - 11:45 CHALLENGES AND SOLUTIONS**

Andreas Wicht

Ferdinand-Braun Institut (FBH), Berlin, Germany

PL-06 **DEVELOPMENT OF ULTRA-HIGH SPATIAL RESOLUTION
11:45 - 12:15 GLASS SCINTILLATORS FOR X-RAYS IMAGING
APPLICATION**

Jakrapong Kaewkhao

*Center of Excellence in Glass Technology and Materials Science
(CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom 73000,
Thailand*

12:15-13:30 LUNCH

SESSION A

PHOTONICS AND APPLICATIONS

SESSION A:
PHOTONICS & APPLICATIONS
October 01, 2026 (Thursday)

Chairperson:

Prof. Jakrapong Kaewkhao (Nakhon Pathom Rajabhat University, Thailand)

Prof. Pham Hong Minh (Insitute of Physics, VAST)

A-01 LIGHT MATTER INTERACTION ENHANCEMENT BY
13:30 - 13:50 POLYMER BASED RESONANT WAVEGUIDE GRATINGS

(Invited Talk)

Ngoc Diep Lai

*Laboratoire Lumiere, Matiere et Interfaces (Lumin), Umr 9024,
Ens Paris-Saclay, 4, Avenue Des Sciences, 91190 Gif-Sur-Yvette, France*

A-02 FEMTOSECOND LASER IONIZATION MASS
13:50 - 14:10 SPECTROMETRY FOR THE EVALUATION OF FERMENTED
RED-YEAST RICE PRODUCTS

(Invited Talk)

**Tomoko Imasaka, Katsunori Yoshinaga, Cheng-Huang Lin, and
Totaro Imasaka**

*Faculty of Design, Kyushu University,
Kyushu University,
Hikari Giken, Co., Fukuoka, Japan*

A-03 MULTIFUNCTIONAL EMBEDDED ALUMINUM MESH IN
14:10 - 14:30 POROUS ANODIC ALUMINA ON GLASS: ULTRALOW-
RESISTANCE TRANSPARENT CONDUCTOR WITH TUNABLE
MID-INFRARED RESPONSE

(Invited Talk)

**Quang Minh Ngo, Hoang Minh Luong, Gia Kien Ngo, Thanh Son
Pham, Huu Tu Nguyen, Thanh Binh Pham, Anh Tu Tran, Thu Trang
Hoang, Duc Cuong Nguyen, Dzmitry Sasinovich, Vladislav Dudich,
Sergey Zavadski, and Serguei Lazarouk**

*University of Science and Technology of Hanoi, Vietnam Academy of
Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam
Centre for Integrated Materials, Processes & Structures, Department of
Mechanical Engineering, University of Bath, Bath, BA2 7AY, United
Kingdom*

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay, Hanoi, 100000, Vietnam

School of Electrical and Electronic Engineering, Hanoi University of Industry, 298 Cau Dien, Tay Tuu, Hanoi, Vietnam

Viet Duc College of Medicine and Medical Device, Viet Duc University Hospital, 1/89 Luong Dinh Cua, Kim Lien, Hanoi, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

Belarusian State University of Informatics and Radioelectronics, P. Browka 6, 220013 Minsk, Belarus

**A-04 GAS PHASE RELAXATION DYNAMICS OF TETRACENE AND
14:30 - 14:45 PENTACENE**

Oriane Shviro, Jonas Fackelmayer, Audrey Scognamiglio, Lou Barreau, Constant Schouder, Ingo Fischer and Lionel Poisson

Université Paris-Saclay, CNRS, Institut des Sciences Moléculaires d'Orsay, 91405, Orsay, France.

Institute of Physical and Theoretical Chemistry, University of Würzburg, Am Hubland, 97074 Würzburg, Germany.

**A-05 EXPERIMENTAL CHARACTERIZATION OF CHROMATIC
14:45 - 15:00 DISPERSION IN SILICA-BASED PHOTONIC CRYSTAL FIBER
 USING A MACH-ZEHNDER INTERFEROMETER**

Tham Hong Tran, Linh Nguyen Thuy, Hue Thi Nguyen, Bien Chu Van, Ngoc Vo Thi Minh, Phuong Nguyen Thi Hong, The Tai Le Xuan, Lanh Chu Van, Van Thuy Hoang, Hieu Van Le

Department of Physics, Vinh University, 182 Le Duan, Truong Vinh Ward, Nghe An Province, Viet Nam

Faculty of Natural Sciences, Hong Duc University, 565 Quang Trung, Hac Thanh Ward, Thanh Hoa Province, Vietnam

Yersin Da Lat University, 27 Ton That Tung, Lam Vien Ward, Lam Dong Province, Vietnam

Faculty of Physics and Chemistry, The University of Danang, University of Science and Education, Da Nang Province, Vietnam

Atomic Molecular and Optical Physics Research Group, Science and Technology Advanced Institute, Van Lang University, Ho Chi Minh City, Vietnam

**A-06 THE ANALYZE STRUCTURAL AND OPTICAL PROPERTIES
15:00 - 15:15 OF Ce³⁺, Tb³⁺ IONS CO-DOPED STRONTIUM ALUMINATE
BOROTELLURITE GLASS**

Tran Ngoc, Phan Van Do

*Institute of Research and Development, Duy Tan University, Da Nang,
550000, Vietnam*

*Faculty of Natural Sciences, Duy Tan University, Da Nang, 550000,
Vietnam*

Thuyloi University, 175 Tay Son, Dong Da, Hanoi, Vietnam

**A-07 EUROPIUM (III)-MODIFIED CARBON NANOSTRUCTURES
15:15 – 15:30 FORMED BY ELECTRICAL DISCHARGE IN LIQUID**

A. Shumejko, V. Lapina, A. Nevar, T. Pavich

Plasma Physics Center,

Fundamental Interactions and Astrophysics Center,

*Nonlinear Optics and Activated Materials Center, B.I. Stepanov Institute
of Physics of NAS of Belarus, Ave. Nezalezhnasti 68-2, 220072 Minsk,
Belarus*

15:30-15:45 COFFEE BREAK

Chairperson:

Prof. Sarukura Nobuhiko (The University of Osaka, Japan)

Prof. Ngo Quang Minh (Univ. of Sci. & Techn. of Hanoi - USTH, VAST)

**A-08 ULTRAFAST LASER MICROMACHINING OF THROUGH-
15:45 – 16:05 DRILL HOLE FOR SEMICONDUCTOR APPLICATION**

(Invited Talk)

Joo Jae Young

Korea Photonics Technology Institute

**A-09 TERAHERTZ-PUMP AND X-RAY-PROBE SPECTROSCOPY OF
16:05-16:25 FERROELECTRICS**

(Invited Talk)

N. Kida

Japan Synchrotron Radiation Research Institute (JASRI)

RIKEN SPring-8 Center

**A-10 TEMPERATURE EFFECTS ON SOLAR PV SYSTEM ENERGY
16:25– 16:45 GENERATION**
(Invited Talk)

Arvin Escultero, Carl Michael F. Odulio
EEE Institute, University of the Philippines Diliman, Quezon City

**A-11 FABRICATION AND CHARACTERIZATION OF AL-DOPED
16:45 - 17:00 MG₂SN FILMS BY RF MAGNETRON SPUTTERING**

**Thi Hai Yen Nguyen, Phuong N. Nguyen, Hoai Phuong Pham,
Hai Dang Ngo**

*Faculty of Science, Dong Nai University, 4 Le Quy Don Street, Tam Hiep
Ward, Dong Nai province, Vietnam*

*Institute of Applied Materials Science, Vietnam Academy of Science and
Technology (VAST), 29TL Street, Thanh Loc Ward, District 12, Ho Chi
Minh City 7000, Viet Nam*

*Nguyen Tat Thanh University, Center for Hi-Tech Development, Saigon
Hi-Tech Park, Ho Chi Minh City 715100, Vietnam*

*NTT Hi-Tech Institute, Nguyen Tat Thanh University, Ho Chi Minh City
700000, Vietnam*

*Faculty of Applied Sciences, Ho Chi Minh University of Technology and
Education, 720700 Ho Chi Minh City, Vietnam.*

**A-12 SPECTROSCOPIC PROPERTIES OF ANTHOCYANINS IN
17:00 – 17:15 PURPLE SWEET POTATOES**

**Nguyen Thi Thu Hien, Trang Huynh Dang Khoa, Bui Quoc Trung,
Le Mai Trinh, Dinh Thi Hai Thuan, Dinh Son Thach**

*Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City,
Vietnam*

Graduate University of Science and Technology, Vietnam

**A-13 PHYSICAL MULTI-LAYER MODEL FOR DETERMINISTIC
17:15 - 17:30 IMAGE RECONSTRUCTION THROUGH HIGHLY
SCATTERING MEDIA**

**Dinh Hoang Tran, Thi Van Anh Nguyen, Sungsam Kang, Jin Hee
Hong, and Wonshik Choi**

Department of Physics, Korea University, Seoul 02841, Republic of Korea

**A-14 CONFOCAL REFLECTANCE ENDOMICROSCOPE THROUGH
17:30 - 17:45 A FLEXIBLE FIBER BUNDLE VIA ADAPTIVE PHASE
CORRECTION**

**Tran Thinh Le, Anh, Taeil Yun, Hoang, Danial Yang,
Youngwoon Choi, and Wonshik Choi**

Department of Physics, Korea University, Seoul 02841, Republic of Korea

A-15 17:45 - 18:00 DESIGN, COMMISSIONING, AND OPTICAL CHARACTERIZATION OF A HIGH-RESOLUTION MODULAR ASTRONOMICAL SPECTROGRAPH AT QUY NHON OBSERVATORY

Phan Thanh Hien, Nguyen Thi Thao, Nguyen Van Tue, Le Quang Thuy

University of Science and Technology of Hanoi, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Vietnam National Space Center, Vietnam Academy of Science and Technology, Hanoi, Vietnam

ExploraScience Quy Nhon, Gia Lai Department of Science and Technology, Vietnam

A-16 18:00 - 18:15 ENHANCEMENT OF PIEZOELECTRIC PERFORMANCE BY RELIEVING SUBSTRATE CLAMPING THROUGH FEMTOSECOND-LASER MICROMACHINING

Ryosuke Fujii, Jundong Song, Hiumi Terashima, Naoki Shibao, Takashi Nakajima, Takashi Iijima, Takashi Harumoto, Ji Shi, Shingo Ono, Soichiro Okamura

Department of Physical Science and Engineering, Nagoya Institute of Technology, Gokiso-cho, Showa-ku, Nagoya, Aichi 466-8555, Japan

Department of Applied Physics, Tokyo University of Science, 6-3-1 Niijuku Katsushika-ku, Tokyo 125-8585, Japan

Department of Materials Science and Engineering, Institute of Science Tokyo, 2-12-1 Ookayama, Meguro-ku, Tokyo 152-8550, Japan

19:00 WELCOME CONFERENCE PARTY

SESSION A:
PHOTONICS & APPLICATIONS

October 02, 2026 (Friday)

Chairperson:

Prof. Joo Jae Young (Korea Photonics Techn. Institute, Republic of Korea)

Prof. Tran Quoc Tien (IMS, VAST)

**A-17 08:00 - 08:20 HIGH-EFFICIENCY CERAMIC PHOSPHORS FOR LASER
LIGHTING: SUPPRESSION OF PROCESS-INDUCED CARBON
CONTAMINATION**

(Invited Talk)

**Noriko Chikumoto, Hisashi Minemoto, Hiroshi Fuji,
Kazuhiko Yamamoto**

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

**A-18 08:20 - 08:40 BIAS VOLTAGE FREQUENCY DEPENDENCE OF THE
TERAHERTZ EMISSION SPECTRAL CHARACTERISTICS OF
GaAs PHOTOCONDUCTIVE ANTENNA DEVICES**

**Orlee Catay, Joshua Omar Pestaño, Joaquin Ivan Cedrick Verona,
Arcturus Gabriel Mendenilla, Gian Carlo Carrillo, John Paul
Ferrolino, Masaki Yoshimura, Aito Tamura, Arvin Lester Cornejo
Jusi, Ryosuke Onogi, Yuta Shimizu, Mary Clare Escaño, Hideaki
Kitahara, Masahiko Tani, Hannah Bardolaza, Armando Somintac,
Arnel Salvador, and Elmer Estacio**

*National Institute of Physics, University of the Philippines Diliman,
Quezon City, Philippines
Research Center for Development of Far-Infrared Region, University of
Fukui, Japan*

**A-19 08:40 - 09:00 CURRENT STATUS OF ZHAGA STANDARDIZATION OF
KOREAN LIGHTING TECHNOLOGY**

(Invited Talk)

Meeryoung Cho

*Digital Lighting Research Division, Korea Photonics Technology
Institute, 9, Cheomdan Venture-ro 108beon-gil, Buk-gu, Jeonnam-
Gwangju Special Metropolitan City*

A-20 **NUMERICAL ANALYSIS OF EFFECTIVE MODE AREA AND**
09:00 - 09:15 **CONFINEMENT LOSS IN C₂H₄Br₂-FILLED As₂S₃ SUSPENDED-**
CORE PHOTONIC CRYSTAL FIBER

Tham Tran Hong, Lanh Chu Van, Nam Nguyen Trong, Vinh Nguyen Thanh, Trung Le Canh, Trang Do Mai, Thien Nguyen Minh, Ngo Vinh Doan The, Hieu Le Van, Ben Chu Van

Department of Physics, Vinh University, Nghe An, Vietnam

Faculty of Natural Sciences, Hong Duc University, 565 Quang Trung Street, Hac Thanh Ward, Thanh Hoa Province, Vietnam

Faculty of Electronic Engineering I, Posts and Telecommunications Institute of Technology, Hanoi, Vietnam

A-21 **RECENT ADVANCES IN OXIDE-BASED PHOTOELECTRODES**
09:15 - 09:30 **FOR SOLAR WATER SPLITTING: PERSPECTIVES FROM OUR**
RESEARCH

Hoang V. Le, Duc N. Nguyen, Ly T. Le, Phong D. Tran

Institute of Science and Technology, TNU-University of Sciences, Thai Nguyen, Vietnam.

University of Science and Technology of Hanoi, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Hanoi, 100000 Vietnam.

A-22 **OPTICAL BISTABILITY IN A FOUR-LEVEL CASCADE-TYPE**
09:30 – 09:45 **ATOMIC SYSTEM**

Nguyen Van Ai, Luong Thi Yen Nga, Le Quang Trung, Nguyen Tuan Anh, Nguyen Thi Thu Hien, Trang Huynh Dang Khoa, Le Nguyen Mai Anh, and Le Van Doai

Ha Tinh University, 26/3 Street, Ha Tinh Province, Vietnam

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam.

Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City, Vietnam

Nong Lam University, Ho Chi Minh City, Vietnam

09:45 - 10:00 **COFFEE BREAK**

Chairperson:

Prof. Baoping Zhang (Southern Univ. of Science and Technology, China)

Prof. Nguyen Thanh Binh (Institute of Physics, VAST)

A-23 ANALYSIS OF BENZODIAZEPINES BY GAS
10:00 - 10:20 CHROMATOGRAPHY COUPLED WITH FEMTOSECOND
LASER IONIZATION MASS SPECTROMETRY

(Invited Talk)

**Totaro Imasaka, Cheng-Huang Lin, Katsunori Yoshinaga, and
Tomoko Imasaka**

Kyushu University, Fukuoka, Japan

Faculty of Design, Kyushu University, Fukuoka, Japan

A-24 TERAHERTZ EMISSION AND DETECTION FROM LT-GaAs
10:20 - 10:40 PHOTOCONDUCTIVE ANTENNA WITH ALAS CONFINEMENT
LAYER

(Invited Talk)

**Lourdes Nicole Dela Rosa, Gerald Angelo Catindig, Jose Mari
Sebastian Arcilla, Ivan Cedrick Verona, John Paul Ferrolino, Roni
Andig, Dean Von Johari Narag, Jonel Francisco, Gian Carlo Carrillo,
Craig Egan Allistair Tan, Hong Minh Pham, Mary Clare Escaño,
Hannah Bardolaza, Armando Somintac, Hideaki Kitahara, Masahiko
Tani, Arnel Salvador, and Elmer Estacio**

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

*Materials Science and Engineering Program, University of the Philippines,
Diliman, Quezon City, Philippines*

*Institute of Physics, Vietnam Academy of Science and Technology, Hanoi,
Vietnam*

*Research Center for Development of Far-Infrared Region, University of
Fukui, Japan*

A-25 THERMALLY CROSS-LINKED PVA/STARCH SUBSTRATES
10:40 – 11:00 FOR REUSABLE AND STABLE POWDERED PHOTOCATALYST
SYSTEMS

(Invited Talk)

Nguyen Van Minh

Hanoi National University of Education, Vietnam

A-26 pH- AND TEMPERATURE-DEPENDENT CONFORMATIONAL
11:00 - 11:15 REMODELING OF AMYLOID- β 42 IN LIPID MEMBRANES:
EVIDENCE FROM CIRCULAR DICHROISM, RAMAN
SPECTROSCOPY, AND MOLECULAR DYNAMICS
SIMULATIONS

Khlood A. A. Abdeljawaad, Yersultan Arynbek, Kahramon Mamatkulov, Huy Le Duc, and Grigory Arzumanyan

Joint Institute for Nuclear Research, Dubna, Russia

Academy of Scientific Research & Technology (ASRT), Cairo, Egypt

Chemistry Department, Faculty of Science, Minia University, Minia, Egypt

A-27 11:15 – 11:30 SIMULATION AND PARAMETERIZATION OF CHERENKOV-PHASE-MATCHED EO SAMPLING IN LiNbO_3 FOR THz DETECTION

Gabrielle D. Fernandez, Lourdes Nicole F. Dela Rosa, Hannah R. Bardolaza, and Elmer S. Estacio

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

A-28 11:30 – 11:45 DUAL-LIQUID ELLIPTICAL-CORE PHOTONIC CRYSTAL FIBER WITH HIGH BIREFRINGENCE FOR NEAR-INFRARED POLARIZATION-MAINTAINING SUPERCONTINUUM GENERATION

Ngoc Thi Minh Vo, Ha Le Ngan Trinh, Thanh Vo Nhat Nguyen, Hoang Nguyen Tuan, Tham Hong Tran, Hue Thi Nguyen, Hieu Van Le, Lanh Chu Van

Faculty of Physics and Chemistry, The University of Danang, University of Science and Education, Da Nang, Vietnam

Department of Natural Science, Foundational Science Faculty, Military College of Special Forces, Tran Phu, Hanoi, Vietnam

Department of Physics, Vinh University, 182 Le Duan, Vinh, Nghe An, Vietnam

Faculty of Natural Sciences, Hong Duc University, 565 Quang Trung, Hac Thanh, Thanh Hoa, Vietnam

A-29 11:45 – 12:00 REVIEW OF EXPERIMENTAL OBSERVATIONS OF GROUP INDEX IN A MULTI-LEVEL Rb ATOMIC MEDIUM UNDER ELECTROMAGNETICALLY INDUCED TRANSPARENCY

Ho Hai Quang, Nguyen Huy Bang, Nguyen Van Ai, Phan Van Thuan, Le Canh Trung, Dinh Xuan Khoa, Luong Thi Yen Nga, Do Mai Trang and Le Van Doai

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

Nam Dinh University of Technology Education, 172 Phu Nghia Street, Ninh Binh Province, Vietnam

Ha Tinh University, Ha Tinh Province, Vietnam

Department of Education and Training of Nghe An, Nghe An Province, Vietnam

A-30 12:00 – 12:15 INVESTIGATION OF A SAFE HYDROTHERMAL ETCHING PROCESS FOR MXenes ($\text{Ti}_3\text{C}_2\text{T}_x$) SYNTHESIS FROM Ti_3AlC_2 MAX PHASE

Thi-Yen Giap, Thi-Thu Quynh, Do-Chung Pham, Thi-Mai-Oanh Le, Thi-Hang Lam

Department of Physics, Hanoi National University of Education, 136 Xuan Thuy Street, Cau Giay District, Hanoi, Vietnam.

12:15 - 13:30 LUNCH

Chairperson:

Prof. Chang-Lyoul Lee (APRI, GIST, Republic of Korea)

Prof. Le Van Doai (Vinh University, Vinh, VN)

A-31 13:30 - 13:50 SIMULATIONS OF QUANTUM BLOCH-ZENER OSCILLATIONS WITH BINARY WAVEGUIDE ARRAYS

(Invited Talk)

Truong X. Tran

Department of Physics, Le Quy Don Technical University, 236 Hoang Quoc Viet street, Hanoi, Vietnam

A-32 13:50 - 14:10 ALL-OPTICAL SWITCHING AND ULTRAFAST DEMAGNETIZATION IN NiCo_2O_4 THIN FILMS

(Invited Talk)

Ryunosuke Takahashi, Kaede Yamada, Harjinder Singh, Yann Le Guen, Kanata Watanabe, Suguru Nakata, Junta Igarashi, Julius Hohlfeld, Jon Gorchon, Grégory Malinowski, Lingling Xie, Daisuke Kan, Yuichi Shimakawa, Takayuki Ishibashi, Stéphane Mangin, and Hiroki Wadati

Department of Materials Science, Univ. of Hyogo, Ako, Hyogo 678-1297, Japan

Institut Jean Lamour, CNRS UMR 7198, Universit'e de Lorraine, F-54506 Nancy, France

Department of Electrical, Electronics and Information Engineering, Nagaoka University of Technology, Nagaoka 940-2188, Japan

Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan

Division of Applied Chemistry, Graduate School of Engineering, The University of Osaka, Suita 565-0871, Osaka, Japan.

Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan

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

A-33 **DECOUPLING LIGHT-MATTER INTERACTIONS:**
14:10 - 14:30 **DIELECTRIC METASURFACES FOR SHAPING PEROVSKITE**
NANOCRYSTAL EMISSION

(Invited Talk)

Quynh Le-Van

VinUni-Illinois Smart Health Center, VinUniversity, Hanoi, Vietnam.

Centre of Materials Innovation and Technology, VinUniversity, Hanoi, Vietnam

Center for Environmental Intelligence, VinUniversity, Hanoi, Vietnam

College of Engineering and Computer Science, VinUniversity, Hanoi, Vietnam

A-34 **EXPLOITATION OF CHERENKOV-PHASE MATCHED**
14:30 - 14:45 **OPTICAL RECTIFICATION IN THE SIMULATION AND**
PARAMETRIZATION OF THz GENERATION IN BULK LN
CRYSTALS

Aldrin D. Correa, Lourdes Nicole F. Dela Rosa, Hannah R. Bardolaza, and Elmer S. Estacio

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

A-35 **LOCALIZATION PHENOMENA IN ONE-DIMENSIONAL**
14:45 - 15:00 **NONLINEAR DISORDERED SYSTEMS: FROM ANDERSON TO**
POWER-LAW LOCALIZATION

Ba Phi Nguyen and Kihong Kim

Department of Basic Sciences, Mien Trung University of Civil Engineering, Vietnam and Mathematics and Physics Research Group, Mien Trung University of Civil Engineering, Vietnam

Department of Physics, Ajou University, Korea and School of Physics, Korea Institute for Advanced Study, Korea

A-36 **ELECTRONIC STRUCTURE, VISIBLE-LIGHT RESPONSE AND**
15:00 - 15:15 **PHOTO-FENTON ACTIVITY OF A 16-COMPONENT ULTRA-**
HIGH-ENTROPY RARE-EARTH ORTHOFERRITE

Bui Manh Long, Pham Kim Dao, Bui Anh Thuc, Pham Quang Hieu

Department of Special Chemical Synthesis Technology, Institute of Propellants and Explosives, 192 Duc Giang Street, Viet Hung Ward, Hanoi, Vietnam

Department of Electrochemical Technology, Institute of Materials, Biology and Environment, 17 Hoang Sam Street, Nghia Do Ward, Hanoi, Vietnam

A-37 **MODERATE-TERAHERTZ-INDUCED PLATEAU EXPANSION**
15:15 - 15:30 **OF HIGH-ORDER HARMONIC GENERATION TO SOFT X-RAY**
REGION

Doan-An Trieu

*Institute of Fundamental and Applied Sciences, Duy Tan University,
Vietnam*

15:30 – 15:45 **COFFEE BREAK**

Chairperson:

Prof. Yeongkyo Seo (Inha University, Republic of Korea)

Dr. Do Hoang Tung (IOP, VAST)

A-38 **PREDICTIONS OF HIGH TEMPERATURE PRESSURE-**
15:45 - 16:05 **BROADENING COEFFICIENTS FOR EXOPLANET**
ATMOSPHERE STUDIES

(Invited Talk)

Ha Tran, Faten Hendaoui, Pascale Chelin, Xavier Landsheere

*Laboratoire de Météorologie Dynamique, IPSL, Sorbonne Université,
École Normale Supérieure, Université PSL, École polytechnique, Institut
Polytechnique de Paris, CNRS, Paris, France*

*Université de Tunis, Laboratoire de Spectroscopie et Dynamique
Moléculaire, École Nationale Supérieure d'Ingénieurs de Tunis, 5 Av.
Taha Hussein, 1008 Tunis, Tunisia*

*Univ Paris Est Créteil and Université Paris Cité, CNRS, LISA, F-94010
Créteil, France*

A-39 **OPTIMIZING THE COMPOSITION OF STRONTIUM BARIUM**
16:05 - 16:25 **ZINC BORATE GLASS DOPED WITH Eu_2O_3 FOR X-RAY**
IMAGING APPLICATIONS

(Invited Talk)

**C. Mutuwong, P. Meejitpaisan, W. Chaiphaksa,
F. Khongchaiyaphum, P. Pakawanit, C. Phoovasawat,
W. Cheewasukhanont, S. Kothan, and J. Kaewkhao**

*Physics Program, Faculty of Science and Technology, Nakhon Pathom
Rajabhat University, Nakhon Pathom 73000, Thailand*

*Center of Excellence in Glass Technology and Materials Science
(CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom 73000,
Thailand*

*Synchrotron Light Research Institute (Public Organization), 111
University Avenue, Nakhon Ratchasima 30000, Thailand
Center of Radiation Research and Medical Imaging, Department of
Radiologic Technology, Faculty of Associated Medical Sciences, Chiang
Mai University, Chiang Mai 50200, Thailand*

Office of Research Administration, Chiang Mai University, Chiang Mai
50200, Thailand

A-40
16:25 - 16:45 **EXTENDING THE LIMITS OF FREQUENCY METROLOGY:
HIGH-PRECISION MID-INFRARED ROVIBRATIONAL
SPECTROSCOPY OF TRIOXANE**

(Invited Talk)

**Dang-Bao-An Tran, Pierre Asselin, Andrey Goncharov, Alexander
Shelkovnikov, Sean K Tokunaga, Olivier Lopez, Anne Amy-Klein,
Mathieu Manceau, and Benoît Darquié**

*Université Sorbonne Paris Nord, Laboratoire de Physique des Lasers,
LPL, CNRS, UMR 7538, F-93430, Villetaneuse, France*

Sorbonne Université, CNRS, MONARIS, UMR 8233, Paris, France

*Current address: Time and Frequency Department, Quantum and Timing
Business Unit, National Physical Laboratory, TW11 0LW, Teddington,
United Kingdom*

A-41
16:45 - 17:00 **HIGH-SMSR TUNABLE OPTICAL MODE FILTERING USING
AN EDFA AND ODL INTEGRATED VERNIER CAVITY FOR
THz-WAVE GENERATION**

**Masayuki Higaki, Yoshiaki Nakajima, Yu Tokizane, Eiji Hase,
Naoya Kuse, Takeshi Yasui**

*Institute of Post-LED Photonics (pLED), Tokushima University, 2-1,
Minami-Josanjima, Tokushima 770-8506, Japan*

*Department of Physics, Toho University, 2-2-1 Miyama, Funabashi,
Chiba 274-8510, Japan*

A-42
17:00 - 17:15 **OPTICAL AND LUMINESCENCE PERFORMANCE OF RICE
HUSK ASH DERIVED SAMARIUM-DOPED BOROSILICATE
GLASSES FOR LED ENCAPSULATION**

**Nattaporn Mahingsa, Nattapon Srisittipokakun, Jakrapong
Kaewkhao and Keerati Kirdsiri**

*Physics Program, Faculty of Science and Technology, Nakhon Pathom
Rajabhat University, Nakhon Pathom, 73000, Thailand*

*Center of Excellence in Glass Technology and Material Science (CEGM),
Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand*

A-43
17:15 - 17:30 **SOLUTION PLASMA-ASSISTED PREPARATION OF STABLE
GO-AgNP NANOFLUIDS WITH ENHANCED THERMAL AND
PHOTOTHERMAL PERFORMANCE**

**Nguyen Thi Ngoc Mai, Do Tuan, Pham Van Nhat, Pham The Tan,
Phan Ngoc Minh, Pham Van Trinh Nguyen Van Hao**

Thai Nguyen University of Sciences, Thai Nguyen, Vietnam

*Institute of Materials Science, Vietnam Academy of Science and
Technology, Hanoi, Vietnam*

University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam

Hung Yen University of Technology and Education, Hung Yen, Vietnam

Graduate University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam

A-44 17:30 - 17:45 EXPLORATION OF THE PROPERTIES OF Fe, Ni, Co NANOCOMPOSITE POWDERS SYNTHESIZED BY THE CHEMICAL-METALLURGICAL METHOD WITH VARIABLE NICKEL-CONTENT

Nguyen Tien Hiep, Nguyen Van Minh, Gopalu Karunakaran, Nguyen Manh Hung

Department of Materials Science and Engineering, Le Quy Don Technical University, Hanoi, Vietnam

Institute of Technology, Hanoi, Vietnam

Department of Biotechnology, K.S. Rangasamy College of Arts and Science, KSR Kalvi Nagar, Tiruchengode-637-215, Namakkal Dist, Tamil Nadu, India

A-45 17:45 - 18:00 A STUDY OF Er:SiO₂ CLAD ON THIN Si-PADDED Si₃N₄ WAVEGUIDES

Gia Kien Ngo, Ming-Chang M. Lee, Minh Quy Tran, Quang Anh Do
Faculty of Engineering Physics, University of Engineering and Technology, Vietnam National University, 144 Xuan Thuy Street, Cau Giay Ward, Hanoi, Vietnam

Department of Electrical Engineering and Institute of Photonics Technologies, National Tsing Hua University, No.101, Section2, Kuang-Fu Road, Hsinchu, Taiwan 30013, China

Faculty of Physics, Hanoi University of Science, Vietnam National University, 334 Nguyen Trai Street, Thanh Xuan Ward, Hanoi, Vietnam

18:00 – 18:30 PLENARY SESSION

Official Closing

SESSION B

OPTICS AND SPECTROSCOPY

SESSION B:
OPTICS AND SPECTROSCOPY

October 01, 2026 (Thursday)

Chairperson:

Prof. Tran Xuan Truong (Le Quy Don University)

Prof. Mitsuru Inada (Kansai University, Japan)

**B-01 13:30 - 13:50 PLASMA A-LAB: DEVELOPMENT OF AN AUTONOMOUS
PLASMA LABORATORY FOR DATA-DRIVEN
NANOMATERIAL DISCOVERY**

(Invited Talk)

**Nhat-Linh Nguyen, Hoang-Tung Nguyen, Thi Mai Nguyen, Hue-Van
Nguyen, Quynh-Chi Nguyen, Quang-Minh Vu, Thi-Huyen Nguyen,
and Thanh-Tung Nguyen**

*Institute of Materials Science, Vietnam Academy of Science and
Technology (VAST), 18 Hoang Quoc Viet, Nghia Do Ward, Hanoi,
Vietnam*

*Graduate University of Science and Technology, Vietnam Academy of
Science and Technology (VAST), 18 Hoang Quoc Viet, Nghia Do Ward,
Hanoi, Vietnam*

**B-02 13:50 - 14:10 “RGB-AND MULTI-SPECTRAL SENSORS FOR INTELLIGENT
AND ADAPTIVE LIGHTING SOLUTIONS IN BUILDINGS AND
GREENHOUSES”**

(Invited Talk)

Tran Quoc Khanh, Felix Wirth

*Adaptive Lighting systems and Visual Processing, Technical University
Darmstadt, Germany*

**B-03 14:10 - 14:30 EXTREME FIELD GENERATION IN STRUCTURED TARGETS
VIA RELATIVISTIC LASER-PLASMA INTERACTIONS**

(Invited Talk)

**Myles Allen H. Zosa, Arrianne Norfela Logarta, and
Jessa Jayne Miranda**

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

B-04 **SYNTHESIS, CHARACTERIZATION, AND PHOTOCATALYTIC**
14:30 - 14:45 **ACTIVITY OF Al/g-C₃N₄ COMPOSITES FOR ANTIBIOTIC**
REMOVAL UNDER SIMULATED SUNLIGHT

Dao-Lan Bui, Thai-Son Than, Thi-Mai-Oanh Le, Do-Chung Pham
Faculty of Physics, Hanoi National University of Education, 136 Xuan
Thuy Road, Cau Giay Ward, Hanoi, Viet Nam

B-05 **Size-Selected VO₂ Nanoparticles Enabling Tunable Plasmonic and**
14:45 - 15:00 **Thermochromic Behavior for Smart Glazing**

Thi Hang Hoang, Amirmostafa Amirjani, Didier Grandjean,
Minh Vuong Nguyen, Kristiaan Temst, Loan Le Thi Ngoc,
Ewald Janssens
Quantum Solid State Physics, Department of Physics and Astronomy, KU
Leuven, 3001 Leuven, Belgium.
Department of Physics-Materials Science, Faculty of Natural Sciences,
Quy Nhon University, Quy Nhon, Vietnam.
IMEC, Kapeldreef 75, 3001 Leuven, Belgium.

B-06 **THE LASER-INDUCED DAMAGE OF A CMOS IMAGE SENSOR**
15:00 - 15:15

Doan Cat Cong, Nguyen Thi Thu Huong, Nguyen Trong Nghia
Graduate University of Science and Technology, 18 Hoang Quoc Viet
Road, Hanoi, Vietnam.
Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao
Tan Road, Giang Vo, Hanoi, Vietnam.
Tay Ho high school, 41 Phu Thuong road, Phu Thuong, Hanoi, Vietnam.

B-07 **ULTRASENSITIVE OPTICAL DETECTION OF DOPAMINE**
15:15 – 15:30 **USING A Nafion/UiO-66-NH₂/ZnO HYBRID MEMBRANE**
COUPLED WITH The FOX2 ASSAY

Pham Van Thanh, Do Van Dang, Hanh Hong Mai
Faculty of Physics, University of Science, Vietnam National University,
Hanoi, Vietnam
Faculty of Chemistry, University of Science, Vietnam National University,
Hanoi, Vietnam
Faculty of Electronics and Communications, University of Engineering
and Technology, Vietnam National University, Hanoi, Vietnam

15:30-15:45 **COFFEE BREAK**

Chairperson:

Prof. Nguyen Thanh Tung (Institute of Materials Science, VAST)
Prof. Tran Quoc Khanh (Technical University Darmstadt, Germany)

**B-08 15:45 – 16:05 FROM DEFECT STATES TO HETEROINTERFACES:
ENGINEERING OPTICAL RESPONSE IN OXIDE
SEMICONDUCTOR NANOSTRUCTURES**
(Invited Talk)

**Trinh Duc Thien, Le T.M. Cham, Mai Van Tuan, Nguyen Dang Co,
Ho Thi Anh, Pham Van Vinh, Nguyen Duc Cuong, Nguyen Tuan Canh,
Duong Van Pham, Minh Hong Pham, Nguyen Dinh Lam**

*Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy
Road, Cau Giay District, Hanoi, 100000, Vietnam*

*Faculty of Engineering Physics and Nanotechnology, VNU-University of
Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi,
100000, Vietnam*

*Faculty of Natural Sciences, Electric Power University, 235 Hoang Quoc Viet,
Bac Tu Liem District, Hanoi, Vietnam*

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

**B-09 16:05-16:25 PHOTOPHYSICS AND PHOTOREDOX REACTIVITY OF A
METAL - FREE TRIAZATRIANGULENIUM
PHOTOSENSITIZER**
(Invited Talk)

**Daniel H. Cruz Neto, Thi Huyen My Dang, Jérôme Fortage,
Marie-Noëlle Collomb, Philippe P. Lainé, Annamaria Quaranta,
Zakaria Halime, Thomas Pino, Eric Vauthey, Minh-Huong Ha-Thi**

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

*Department of Physical Chemistry, University of Geneva - Geneva,
Switzerland*

*Département de Chimie Moléculaire (DCM), Université Grenoble Alpes,
CNRS - Grenoble, France*

iTODYS, Université Paris-Cité, CNRS - Paris, France

*Institute for Integrative Biology of the Cell (I2BC), Université Paris-
Saclay, CEA, CNRS - Gif-sur Yvette, France*

*Institut de Chimie Moléculaire et des Matériaux d'Orsay (ICMMO),
Université Paris-Saclay, CNRS - Orsay, France*

**B-10 OPTICAL CHARACTERIZATION AND APPLICATIONS OF
16:25– 16:45 COMPOUND SEMICONDUCTORS**
(Invited Talk)

Kazunobu Kojima

*Graduate School of Engineering, The University of Osaka, Yamada-oka
2-1, Suita, Osaka, Japan*

**B-11 ENHANCED MID-INFRARED REFRACTIVE-INDEX SENSING
16:45 - 17:00 IN TOLUENE-INFILTRATED $\text{As}_{38.8}\text{Se}_{61.2}$ SUSPENDED-CORE
PHOTONIC CRYSTAL FIBER**

**Ngoc Thi Vo Thi Minh, Nhat Thanh Vo Nguyen, Tu Oanh Thi Luong,
Vu Tran Quoc, Thanh Thai Doan, Thuan Bui Dinh, Huyen Nguyen
Thi Cam, Khoa Trang Huynh Dang, Nga Pham Thi Quynh,
Ben Chu Van**

*Faculty of Physics and Chemistry, The University of Danang, University
of Science and Education, Da Nang, Vietnam*

Faculty of Education, Nghe An University, Nghe An, Vietnam

*Thu Khoa Nghia High School for The Gifted, Chau Doc, An Giang,
Vietnam*

*Ho Chi Minh city university of industry and trade, Ho Chi Minh city,
Vietnam*

Department of Physics, Vinh University, Nghe An, Vietnam

*Faculty of Electronic Engineering I, Posts and Telecommunications
Institute of Technology, Hanoi, Vietnam*

**B-12 AN AUTOMATED COMPUTATIONAL WORKFLOW FOR
17:00 – 17:15 PASSIVE ATHERMALIZATION OF OPTICAL SYSTEMS**

Van Dat Nguyen

Independent researcher

**B-13 EXPERIMENTAL CHARACTERIZATION OF CHROMATIC
17:15 - 17:30 DISPERSION IN SILICA-BASED PHOTONIC CRYSTAL FIBER
USING A MACH-ZEHNDER INTERFEROMETER**

**Tham Hong Tran, Linh Nguyen Thuy, Hue Thi Nguyen,
Bien Chu Van, Ngoc Vo Thi Minh, Phuong Nguyen Thi Hong,
The Tai Le Xuan, Lanh Chu Van, Van Thuy Hoang¹, Hieu Van Le**

*Department of Physics, Vinh University, 182 Le Duan, Truong Vinh Ward, Nghe
An Province, Viet Nam*

*Faculty of Natural Sciences, Hong Duc University, 565 Quang Trung, Hac
Thanh Ward, Thanh Hoa Province, Vietnam*

*Yersin Da Lat University, 27 Ton That Tung, Lam Vien Ward, Lam Dong
Province, Vietnam*

*Faculty of Physics and Chemistry, The University of Danang, University of
Science and Education, Da Nang Province, Vietnam*

Atomic Molecular and Optical Physics Research Group, Science and Technology Advanced Institute, Van Lang University, Ho Chi Minh City, Vietnam

B-14 17:30 - 17:45 INVESTIGATE THE EFFECTIVE REFRACTIVE INDEX OF TOLUENE-FILLED As_2S_3 SUSPENDED-CORE PHOTONIC CRYSTAL FIBER

Nam Nguyen Trong, Lanh Chu Van, Tham Tran Hong, Thien Nguyen Minh, Vinh Nguyen Thanh, Hai Hoang Dinh, Hoang Nguyen Huy, Huy Do Viet, Thanh Thai Doan, Ben Chu Van

Department of Physics, Vinh University, Nghe An, Vietnam

Nghe An University, No 51 Ly Tu Trong street, Vinh Phu Ward, Nghe An Province

Phan Boi Chau High School for the Gifted, 119 Le Hong Phong, Truong Vinh, Nghe An

Chi Lang High School, Gia Lai Province, Vietnam

Ho Chi Minh city university of industry and trade

Faculty of Electronic Engineering I, Posts and Telecommunications Institute of Technology, Hanoi, Vietnam

B-15 17:45 - 18:00 ALUMINUM-MODIFIED GRAPHITIC CARBON NITRIDE FOR EFFICIENT REMOVAL OF TETRACYCLINE FROM AQUEOUS SOLUTION

Nguyen Tien Dung, Doan Viet Tuyen, Than Thai Son, Bui Dao Lan, Lam Thi Hang, Le Thi Mai Oanh, Pham Do Chung, Nguyen Van Minh

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy, Cau Giay Ward, Hanoi, Vietnam, 100000

Faculty of Applied Sciences and Engineering, Electric Power University, 235 Hoang Quoc Viet, Nghia Do Ward, Hanoi 10000, Vietnam

B-16 18:00 - 18:15 TAILORING THE FUNCTIONALITIES OF NEAR-INFRARED SURFACE PLASMON RESONANCES IN HYBRID METAL-DIELECTRIC METASURFACES

Dinh Hoai Nam, Ngo Quang Minh

University of Science and Technology of Hanoi, A21 Building, Vietnam

Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi.

19:00 WELCOME CONFERENCE PARTY

SESSION B: OPTICS AND SPECTROSCOPY October 02, 2026 (Friday)

Chairperson:

Prof. Kazunobu Kojima (The University of Osaka, Osaka, Japan)
Prof. Nguyen Dinh Lam (VNU-Univ. of Engi. and Techn., Vietnam)

B-17 08:00 - 08:20 CONCENTRATION-DEPENDENT ENERGY TRANSFER IN Tb³⁺ AND Dy³⁺ DUAL-ACTIVATED PHOSPHOSILICATE OXYFLUORIDE GLASSES FOR PHOTONIC APPLICATION
(Invited Talk)

P. Meejitpaisan, Ramachari Doddoji, S. Kothan, H.J. Kim, J. Kaewkhao

Physics Program, Faculty of Science and Technology, Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand

Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand

Institute of Research and Development, Duy Tan University, Da Nang 550000, Vietnam

Faculty of Natural Sciences, Duy Tan University, Da Nang 550000, Vietnam

Center of Radiation Research and Medical Imaging, Department of Radiologic Technology, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand

Department of Physics, Kyungpook National University, Daegu, 41566, Republic of Korea

B-18 08:20 - 08:40 ML-GUIDED OPTIMIZATION OF METAL OXIDE-DECORATED LASER-INDUCED GRAPHENE FOR ENERGY STORAGE
(Invited talk)

Ye Chan, Nann Mong Longe, Hnin Wut Yi

University of Yangon, Myanmar, 11041

B-19 08:40 - 09:00 DEVELOPMENT OF ACHROMATIC NANOSTRUCTURED MICRO-VORTEX PHASE COMPONENTS USING COMMERCIAL GLASSES

(Invited Talk)

Hue Thi Nguyen

Hong Duc University, 565 Quang Trung, Thanh Hoa, Vietnam

B-20 09:00 - 09:15 DUAL-WAVELENGTH UPCONVERSION IN RARE-EARTH-DOPED CaF_2 FOR NIR-TO-MIR INFRARED DETECTION

Ziyao Wang, Yugo Akabe, Keito Shinohara, Marilou Cadatal-Raduban, Akira Yoshikawa, Toshihiko Shimizu, Kosaku Kato, Verdad C. Agulto, Makoto Nakajima, Nobuhiko Sarukura, Benchaphorn Damdee, Jakrapong Kaewkhao, Kohei Yamanoi

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

Unitec Institute of Technology, 139 Carrington Road, Mount Albert, Auckland 1025, New Zealand

Institute for Material Research, Tohoku University, 2 -1-1, Sendai 980-8577, Japan

Center of Excellence in Glass Technology and Materials Science, Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand

B-21 09:15 - 09:30 REVIEW OF EXPERIMENTAL OBSERVATIONS OF GROUP INDEX IN A MULTI-LEVEL RB ATOMIC MEDIUM UNDER ELECTROMAGNETICALLY INDUCED TRANSPARENCY

Ho Hai Quang, Nguyen Huy Bang, Nguyen Van Ai, Phan Van Thuan, Le Canh Trung, Dinh Xuan Khoa, Luong Thi Yen Nga, Do Mai Trang and Le Van Doai

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

Nam Dinh University of Technology Education, 172 Phu Nghia Street, Ninh Binh Province, Vietnam

Ha Tinh University, Ha Tinh Province, Vietnam

Department of Education and Training of Nghe An, Nghe An Province, Vietnam

B-22 09:30 - 09:45 MANIPULATION OF A QUANTUM DOT BASED SINGLE PHOTON SOURCE BY COUPLING TO POLYMERIC PHOTONIC STRUCTURES

Alexandra

Institut des Sciences Moléculaires d'Orsay - ISMO

09:45 - 10:00 COFFEE BREAK

Chairperson:

Prof. Le Vu Tuan Hung (Science University - VNUHCM)
Prof. Satoki Matsushita (Institute of Astronomy & Astrophysics (ASIAA),
Taiwan)

B-23 **SELLMEIER DISPERSION OF SUCROSE SOLUTIONS FOR**
10:00 - 10:20 **REFRACTIVE INDEX MEASUREMENT**
(Invited Talk)

Mayuko Koga, Hiroki Nakata, Hanayo Takenaka, Yugo Akabe,
Marilou Cadatal-Raduban, Nobuhiko Sarukura, Noriko Chikumoto
and Toshihiko Shimizu

Graduate school of Engineering, University of Hyogo, Himeji, Hyogo 671-
2280, Japan

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

Unitec Institute of Technology, 139 Carrington Road, Auckland, 1025 New
Zealand

B-24 **QUANTUM COMMUNICATION IN THAILAND**
10:20 - 10:40 *(Invited Talk)*

Pruet Kalasuwan

Prince of Songkla University, Thailand

B-25 **ODD-EVEN HIGH-HARMONIC GENERATION AS A**
10:40 - 11:00 **SYMMETRY-RESOLVED PROBE OF INTRINSIC MOLECULAR**
ASYMMETRY: FROM SPECTRA TO SUB-CYCLE
INTERFEROMETRY
(Invited Talk)

Kim-Ngan H. Nguyen, Thanh Tran, Doan-An Trieu,
Duong D. Hoang-Trong, Cam-Tu Le, Lan Nguyen Tran,
Van-Hoang Le & Ngoc-Loan Phan

Duy Tan University, Vietnam

Ho Chi Minh City University of Education, Vietnam

Van Lang University, Vietnam

Ton Duc Thang University, Vietnam

University of Science, Vietnam National University, Ho Chi Minh City
Vietnam

B-26 **ADVANCE OPTICAL FIBER SENSORS BASED ON**
11:00 - 11:15 **NANOCOMPOSITES/MULTILAYER MATERIALS FOR**
SENSITIVE DETECTION OF ENVIRONMENTAL HAZARDS

Tran Thi Nhu Hoa, Hanh Kieu Thi Ta, Le Hong Tho, Trinh Kieu The Loan, Do Thao Anh, Nguyen Khanh Vi, Ly Hoang Chau, Nguyen Thi Kieu Vy, Bach Thang Phan

Faculty of Materials Science and Technology, University of Science, Ho Chi Minh City, Viet Nam

Vietnam National University, Ho Chi Minh City, Viet Nam

Advanced Materials Technology Institute Vietnam National University Ho Chi Minh City, Ho Chi Minh City Vietnam

University of Health Sciences, Vietnam National University Ho Chi Minh City, Viet Nam

B-27 11:15 – 11:30 LIGHT YIELD AND SCINTILLATION DECAY TIME OF Ce³⁺ DOPED SILICO-PHOSPHATE GLASS FOR ALPHA DETECTION

Nolaphan Paprajong, Wuttichai Chaiphasa, Jakrapong Kaewkhao

Physics Program, Faculty of Science and Technology, Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand

Center of Excellence in Glass Technology and Material Science (CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand

B-28 11:30 – 11:45 LUMINESCENT PROPERTIES OF Eu³⁺-CONTAINING CARBON NANOSTRUCTURES FORMED BY ELECTRICAL DISCHARGE

A. Shumejko, A. Nevar, V. Lapina, T. Pavich

Plasma Physics Center, b) Fundamental Interactions and Astrophysics Center, c) Nonlinear Optics and Activated Materials Center, B.I.

Stepanov Institute of Physics of NAS of Belarus, Ave. Nezalezhnasti 68-2, 220072 Minsk, Belarus

B-29 11:45 – 12:00 ENHANCEMENT OF PIEZOELECTRIC PERFORMANCE BY RELIEVING SUBSTRATE CLAMPING THROUGH FEMTOSECOND-LASER MICROMACHINING

Ryosuke Fujii, Jundong Song, Hiumi Terashima, Naoki Shibao, Takashi Nakajima, Takashi Iijima, Takashi Harumoto, Ji Shi, Shingo Ono, Soichiro Okamura

Department of Physical Science and Engineering, Nagoya Institute of Technology, Gokiso-cho, Showa-ku, Nagoya, Aichi 466-8555, Japan

Department of Applied Physics, Tokyo University of Science, 6-3-1 Niijuku Katsushika-ku, Tokyo 125-8585, Japan

Department of Materials Science and Engineering, Institute of Science Tokyo, 2-12-1 Ookayama, Meguro-ku, Tokyo 152-8550, Japan

B-30 12:00 – 12:15 DEVELOPMENT OF BROADBAND HIGH-RESOLUTION GAS SPECTROSCOPY SYSTEM USING HETERODYNE DETECTION

Takashi Furuya, Hideaki Kitahara, and Masahiko Tani
University of Fukui, Fukui, Bunkyo 3-9-1, Japan

12:15 - 13:30 LUNCH

Chairperson:

Prof. Mayuko Koga (University of Hyogo, Japan)
Prof. Pham Van Hoi (Institute of Materials Science, VAST)

B-31 13:30 - 13:50 PHYSICS-INFORMED MACHINE LEARNING FOR UNDERSTANDING ELECTRONIC DIELECTRIC RESPONSE IN OXIDE MATERIALS
(Invited Talk)

Mega Novita
Graduate Program of Natural Science Education, Universitas PGRI Semarang, Jl. Sidodadi Timur No. 24 Semarang 50232, Central Java Indonesia

B-32 13:50 - 14:10 EXPLORING NOVEL APPLICATIONS OF GYROTRONS: THZ VORTEX BEAM GENERATION, THZ DISCHARGES, AND VISIBLE-LIGHT EMISSION FROM CARBON FIBER.
(Invited talk)

Masafumi Fukunari
University of Fukui, Japan

B-33 14:10 - 14:30 MULTI-DIMENSIONAL OPTICAL IMAGING WITH POLARIZATION SENSITIVITY
(Invited talk)

Tae Joong Eom
Pusan National University, Korea

B-34 14:30 - 14:45 ELECTROMAGNETICALLY INDUCED TRANSPARENCY IN AN ASYMMETRIC FOUR-LEVEL N-TYPE Cs ATOMIC SYSTEM

Nguyen Van Phu, Nguyen Huy Bang, Luong Thi Yen Nga, Ho Hai Quang, Le Quang Trung, Phan Duc Thuan, Nguyen Thi Quynh Anh, Nguyen Thi Ngoc Anh and Le Van Doai
Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam
Nam Dinh University of Technology Education, 172 Phu Nghia Street, Ninh Binh Province, Vietnam
Hong Lam Technology and Economics College, Nghe An Province, Vietnam

**B-35 GREEN-EMITTING Tb³⁺-DOPED GLASSES FOR DISPLAY
14:45 - 15:00 DEVICES APPLICATIONS**

P. Saengka, N. Srisittipokakun, J. Kaewkhao

*Physics program. Faculty of Science and Technology, Nakhon Pathom
Rajabhat University, Nakhon Pathom 73000 Thailand.*

*Center of Excellence in Glass Technology and Material Science (CEGM),
Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand*

**B-36 FABRICATION OF MICROSTRUCTURES FOR REFRACTIVE-
15:00 - 15:15 INDEX CONTROL IN ZINC OXIDE USING ULTRASHORT-
PULSE LASER MICROMACHINING**

**Ryosuke Fujii, Haruto Miura, Hiumi Terasima, Verdad C. Agulto,
Shiyu Feng, Kosaku Kato, Makoto Nakajima, Ono Shingo**

*Department of Physical Science and Engineering, Nagoya Institute of
Technology, Gokiso-cho, Showa-ku, Nagoya, Aichi 466-8555, Japan
Institute of Laser Engineering, Osaka University, 2-6 Yamadaoka, Suita,
Osaka 565-0871, Japan*

**B-37 COLOSSAL CROSS-KERR NONLINEARITY IN A FOUR-LEVEL
15:15 - 15:30 CASCADE-TYPE ATOMIC SYSTEM**

**Le Van Doai, Dinh Xuan Khoa, Nguyen Thi Quynh Anh, Ho Hai
Quang, Nguyen Van Ai, Phan Van Thuan, Nguyen Thi Thu Hien, and
Thai Van Thanh**

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

Ha Tinh University, 26/3 Street, Ha Tinh Province, Vietnam

*Department of Education and Training of Nghe An, Nghe An Province,
Vietnam*

*Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City,
Vietnam*

*Vinh Long University of Technology and Education, 73 Nguyen Hue
Street, Vinh Long Province, Vietnam*

15:30 – 15:45 COFFEE BREAK

Chairperson:

Prof. Mega Novita (Universitas PGRI Semarang, Indonesia)

Prof. Mai Hong Hanh (VNU-Univ. of Eng. and Techn., Vietnam)

**B-38 ALL-OPTICAL SWITCHING AND ULTRAFAST
15:45 - 16:05 DEMAGNETIZATION IN NiCo_2O_4 THIN FILMS**

(Invited Talk)

Ryunosuke Takahashi, Kaede Yamada, Harjinder Singh, Yann Le Guen, Kanata Watanabe, Suguru Nakata, Junta Igarashi, Julius Hohlfeld, Jon Gorchon, Grégory Malinowski, Lingling Xie, Daisuke Kan, Yuichi Shimakawa, Takayuki Ishibashi, Stéphane Mangin, and Hiroki Wadati

Department of Materials Science, Univ. of Hyogo, Ako, Hyogo 678-1297, Japan

Institut Jean Lamour, CNRS UMR 7198, Universit'e de Lorraine, F-54506 Nancy, France

Department of Electrical, Electronics and Information Engineering, Nagaoka University of Technology, Nagaoka 940-2188, Japan

Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan

Division of Applied Chemistry, Graduate School of Engineering, The University of Osaka, Suita 565-0871, Osaka, Japan.

Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan

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

**B-39 ADVANCED NANOMATERIALS@QNU-ASMD: FROM
16:05 - 16:25 MATERIALS DESIGN TO PRACTICAL APPLICATIONS**

Thanh Hai Phan, Nhat Hieu Hoang, Van Nghia Nguyen, Minh Vuong Nguyen, Vien Vo, Thi Ngoc Loan Le, Thi Xuan Huynh Nguyen, Thao Vien Le and Thi Mien Trung Huynh

Advanced semiconductor materials and devices group, Quy Nhon University (QNU-ASSMD), 170 An Duong Vuong, Quy Nhon Nam, Gia Lai

**B-40 SPECTRAL LINE SURVEYS OF CARBON STARS AND STAR-
16:25 - 16:45 FORMING REGIONS WITH A ULTRA-WIDEBAND, HIGH-
SENSITIVITY Q-BAND RECEIVER, EQ**

(Invited talk)

Fumitaka Nakamura, Kotomi Taniguchi (NAOJ), Chau-Ching Chiong, Sheng-Yuan Liu (ASIAA), Quang Nguyen Luong (SAGI/Sacley) and eQ team

National Astronomical Observatory of Japan, Japan

B-41 16:45 - 17:00 FUNDAMENTAL DISSIPATIVE SOLITONS WITH CUBIC-QUINTIC-SEPTIC NONLINEARITIES IN CONVENTIONAL AND $\mathcal{PT}$ -SYMMETRIC GAIN-LOSS LANDSCAPES

Tran Ky Vi, Le Xuan The Tai, Bui Duc Tinh, Tran Ngoc Bao, and Nguyen Viet Hung

School of Materials Science and Engineering, Hanoi University of Science and Technology, 1 Dai Co Viet Street, Hai Ba Trung District, Hanoi 100000, Vietnam.

Atomic, Molecular and Optical Physics Research Group, Science and Technology Advanced Institute, Van Lang University, 69/68 Dang Thuy Tram Street, Binh Thanh District, Ho Chi Minh City 700000, Vietnam.

Faculty of Applied Technology, Van Lang School of Technology, Van Lang University, 69/68 Dang Thuy Tram Street, Binh Thanh District, Ho Chi Minh City 700000, Vietnam.

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Street, Cau Giay District, Hanoi 100000, Vietnam.

Faculty of Mathematics and Informatics, Hanoi University of Science and Technology (HUST), 1 Dai Co Viet Street, Hanoi 100000, Vietnam.

B-42 17:00 - 17:15 AgAu NANOPARTICLES-ENRICHED ZnO NANOPATES AS A SERS SUBSTRATE FOR THE SENSITIVE DETECTION OF METHYLENE BLUE

Thi Thu Ha Pham, Pham Thi Nga, Nguyen Thi Huong, Nguyen Dac Dien, Tran Thu Trang, Xuan Hoa Vu

Faculty of Sciences and Technology, TNU-University of Sciences, Phan Dinh Phung ward, Thai Nguyen province, Vietnam

Faculty of Secondary School, Hoa Lu University, 2 Xuan Thanh street, Hoa Lu ward, Ninh Binh province, Vietnam

Faculty of Occupational Safety and Health, Vietnam Trade Union University, 169 Tay Son street, Kim Lien ward, Hanoi city, Vietnam

Institute of Science and Technology, TNU-University of Sciences, Phan Dinh Phung ward, Thai Nguyen province, Vietnam

B-43 17:15 - 17:30 BEYOND LOCALIZATION IN SUPER-RESOLUTION MICROSCOPY: FROM 3D POSITION TO MOLECULAR IDENTITY

S. Lévêque-Fort

ISMO, Université Paris-Saclay, CNRS, UMR 8214, Orsay, France

**B-44 BURST DEVELOPMENT AND ANALYSIS: TRANSFER OF
17:30 - 17:45 CALIBRATION WITH NOISE SOURCE EMITTER**

Thanh Thy Bui-Le, Kai-Yang Lin

*International University - Vietnam National University Ho Chi Minh City,
Vietnam*

Institute of Astronomy & Astrophysics, Academia Sinica, Taipei, Taiwan

**B-45 BLADE PCB FRONT-END MODULE
17:45 - 18:00 Nguyen Tung Lam, Pham Viet Dung, Phan Thanh Hien,
Nguyen Luong Quang**

*Department of Space and Earth Science, University of Science and
Technology of Ha Noi, A21 building, Vietnam Academy of Science and
Technology, 18 Hoang Quoc Viet, Nghia Do Ward, Hanoi*

18:00 – 18:30 PLENARY SESSION

Official Closing

SESSION POSTER I

SESSION POSTER I

October 01, 2026 (Thursday)

Chairperson:

Prof. Chu Van Lanh (Vinh Univ., Vietnam)
Prof. Le Van Hieu (Hong Duc University, Vietnam)

PI-01 REAL-TIME MONITORING OF O₃ DEGRADATION UNDER LABORATORY CONDITIONS USING A DOAS SYSTEM BASED ON A MODELESS Ce:LiCAF LASER

Quan Le Minh, Tu Xuan Nguyen, Diep Van Nguyen, Nobuhiko Sarukura, Minh Hong Pham

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

Tran Quoc Tuan University, Xuan Phuong, Hanoi, Vietnam

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

Faculty of Education, Ha Tinh University, Cam Binh, Ha Tinh, Viet Nam

PI-02 OPTICAL DESIGN AND PERFORMANCE EVALUATION OF AN F-0 LENS FOR HIGH-SPEED LASER PROCESSING SYSTEMS

Vo Quang Sang

Department of Optical Devices, Le Quy Don Technical University

PI-03 STRUCTURAL AND CS₂-INFILTRATION EFFECTS ON CONFINEMENT LOSS IN As₃₉Se₆₁ SUSPENDED-CORE FIBERS

Hong Phuong Nguyen Thi, Lanh Chu Van, Thien Nguyen Minh, Tham Tran Hong, Nam Nguyen Trong, Vinh Nguyen Thanh, Hai Hoang Dinh, Yen Vo Thi Hong, Nhan Duong Truyen, Ben Chu Van

Department of Physics, Vinh University, Nghe An, Vietnam

Nghe An University, No 51 Ly Tu Trong street, Vinh Phu Ward, Nghe An Province

Chau Thanh 1 High School, National Route 80, Tan Nhuan Dong Commune, Dong Thap, Vietnam

Nguyen Thi Dieu High School, 12 Tran Quoc Toan Street, Xuan Hoa Ward, Ho Chi Minh City, Vietnam.

Faculty of Electronic Engineering I, Posts and Telecommunications Institute of Technology, Hanoi, Vietnam

PI-04 FABRICATION OF PERIODIC MICRO/NANO STRUCTURE USING TWO-PHOTON DIRECT LASER WRITING AND METAL SPUTTERING

Xuan Bach NGUYEN

University of Science and Technology of Hanoi, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi

PI-05 STABILIZATION of KERR MICROCOMB REPETITION RATE by USING FIBER REFERENCE

R. Shikata, T. Mori, M. Talara, Y. Tokizane, M. Higaki, E. Hase, I., N. Kuse, and T. Yasui

Tokushima Univ., 2-1, Minami-Josanjima, Tokushima 770-8506, Japan

PI-06 COMPARATIVE STRUCTURE, OPTICAL AND ELECTRICAL CHARACTERISTICS OF SOL-GEL-DEPOSITED Mn-, Co-, AND Sn-DOPED CuO THIN FILMS

Nguyen Van Loi, Vu Thi Huyen Trang

Academy of Cryptography Techniques, Department of Foundation, 141 Chien Thang, Thanh Liet, Hanoi, Vietnam

Vietnam National University, Hanoi, University of Science, Faculty of Physics, 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam.

Dai Nam University, Faculty of Pharmacy, 1 Pho Xom, Phu Luong, Hanoi, Vietnam

PI-07 DEVELOPMENT OF IMAGE QUALITY EVALUATION CRITERIA FOR EYEPIECES USED FOR MICRODISPLAY VIEWING IN AIMING AND OBSERVATION DEVICES

Nguyen Duc Tung

Institute of Defense Equipment, Academy of Military Science and Technology

PI-08 FABRICATION AND PERFORMANCE OF A LOW-COST ZnO-BASED UV SENSOR ON PCB

Toan Van Nguyen, Duc -Nam Duyen Ha, Tue-Nghia Thac Nguyen, Sam Linh Duong, Minh Quang Nguyen, Huy Minh Nguyen, Phat Gia Vu, Hung Dang Nguyen and Nam Thanh Nguyen

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

Le Quy Don High School, Hanoi, Vietnam

Hanoi – Amsterdam High School for the Gifted, Hanoi, Vietnam

Nguyen Tat Thanh High School, Hanoi, Vietnam

Quang Trung High School, Hanoi, Vietnam

Pham Hong Thai High School, Hanoi, Vietnam

HUS High School for Gifted Students, VNU University of Science, Hanoi, Vietnam

PI-09 SU-8 MICROFIBER LASERS FABRICATED BY DIRECT DRAWING

Son Huy Le, Toan Van Nguyen, and Van Duong Ta

Faculty of Engineering and Environment, Hanoi Metropolitan University, Hanoi, Vietnam

Department of Quantum Optics, Faculty of Physics, Vietnam National University, Hanoi, Vietnam

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

Department of Optical Devices, Le Quy Don Technical University, Hanoi, Vietnam

PI-10 EFFECT OF OXYGEN-NITROGEN ANNEALING ENVIRONMENT ON PHOTOELECTRIC PROPERTIES OF CuO THIN FILMS FABRICATED BY SPUTTERING

Vu Thi Huyen Trang, Nguyen Van Loi

Dai Nam University, Faculty of Pharmacy, 1 Pho Xom, Phu Luong, Hanoi, Vietnam

Academy of Cryptography Techniques, Department of Foundation, 141 Chien Thang, Thanh Liet, Hanoi, Vietnam

Vietnam National University, Hanoi, University of Science, Faculty of Physics, 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam.

PI-11 SIZE-CONTROLLED POROUS PVA MICROSPHERES FOR MICROSCALE RANDOM LASERS

Lien Thi Ngo, Tien Van Nguyen, Lien Ha Thi Nghiem, Van Duong Ta

Graduate University of Science and Technology, Vietnam Academy of Science and Technology, Hanoi, Viet Nam

Department of Physics, Le Quy Don Technical University, Hanoi, Viet Nam

Institute of Physics, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Department of Optical Devices, Le Quy Don Technical University, Hanoi, Vietnam

PI-12 INTERFERENCE-BASED NONLINEAR OPTICAL TWEEZERS FOR DYNAMICALLY SCALABLE 2D NEUTRAL ATOM ARRAYS

Anh Tuan Nguyen, Tien Bao Tran, Thanh Lam Nguyen and Vu Nam Le

Institute of Defense Equipment, Academy of Military Science and Technology, Hanoi, Vietnam

PI-13 GROUP VELOCITY DISPERSION CONTROL IN AN $\text{As}_{38.8}\text{Se}_{61.2}$ -BASED SUSPENDED-CORE PHOTONIC CRYSTAL FIBER WITH CS_2 -FILLED AIR HOLES

Thien Nguyen Minh, Lanh Chu Van, Tham Tran Hong, Nam Nguyen Trong, Thuy Le Thi, Vinh Nguyen Thanh, Hai Hoang Dinh, Khanh Huynh Nhat, Thuy Hoang Van, Ben Chu Van

Department of Physics, Vinh University, Nghe An, Vietnam

Nghe An University, No 51 Ly Tu Trong street, Vinh Phu Ward, Nghe An Province

Phan Van Hoa High School, Hamlet 6, Cai Ngang Commune, Vinh Long Province, Vietnam.

Faculty of Electronic Engineering I, Posts and Telecommunications Institute of Technology, Hanoi, Vietnam

PI-14 EFFECTS OF SUPPLEMENTAL LED LIGHTING DURATION ON GROWTH AND BIOACTIVE PROPERTIES OF PATCHOULI (POGOSTEMON CABLIN) ESSENTIAL OIL

Thi Nghiem Vu, Ha Thi Thu Chu, Tran Quoc Tien, Pham Van Truong

Faculty of Natural Sciences, Electric Power University, Ha Noi, Viet Nam

Institute of Materials Science, Vietnam Academy of Science and Technology (VAST), 18.Hoang Quoc Viet, Nghia Do, Ha Noi, Viet Nam

Institute of Biology, VAST, 18.Hoang Quoc Viet, Nghia Do, Ha Noi, Viet Nam

PI-15 MBE GROWTH OF InGaAsSb FOR SWIR PHOTODETECTORS AND MID-INFRARED LEDs

Tien Dai Nguyen, Vu Thi Bich, Pham Van Duong, Nguyen Thanh Binh, Bui Hong Van, Jun Oh Kim, and Sang Jun Lee

Institute of Theoretical and Applied Research, Duy Tan University, Hanoi, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, 10 Doi Can, Hanoi, Vietnam

VNU University of Sciences, Vietnam National University-Hanoi, Hanoi, Vietnam

Division of Interdisciplinary Materials Measurement Institute, Korea Research

Institute of Standard Science, Daejeon, 34113, South Korea

PI-16 ENHANCED EXTERNAL QUANTUM EFFICIENCY IN SILICON-BASED PHOTODETECTOR VIA A LAYER-BY-LAYER PHOTO-MULTIPLICATION HETEROJUNCTION

Manh Hoang Tran

Institute of Advanced Technology, Vietnam Academy of Science and Technology,

1B TL29 Street, An Phu Dong Ward, Ho Chi Minh City 700000, Viet Nam

PI-17 EFFECT OF GAUSSIAN BEAM WAIST ON SPHERICAL ABERRATION IN NONLINEAR ASPHERICAL LENSES

Pham Thanh Quang, Ho Quang Quy

Academy of Military Science and Technology, 17 Hoang Sam Nghia Do Ha Noi

PI-18 LASER WAVELENGTH SELECTION AND PARAMETER DESIGN FOR LONG-RANGE ELECTRO-OPTICAL DETECTION

Pham Thanh Quang

Academy of Military Science and Technology, 17 Hoang Sam, Nghia Do, Ha Noi

PI-19 KERR NONLINEAR EFFECT IN A SEMICONDUCTOR QUANTUM DOT WITH THREE-LEVEL V-CONFIGURATION

Nguyen Tien Dung, Pham Van Vinh, Tran Cong Phong

College of Engineering and Technology, Vinh University

Division of Physics, School of Education, Dong Thap University

Atomic Molecular and Optical Physics Research Group, Institute for Advanced Study in Technology (IAST), Ton Duc Thang University;

Faculty of Electrical and Electronics Engineering, Ton Duc Thang University

PI-20 CONTROL OF LIGHT GROUP VELOCITY IN AN EIT MEDIUM FOR A V-CONFIGURATION THREE-LEVEL SEMICONDUCTOR QUANTUM DOT

Nguyen Tien Dung, Pham Manh Toan

College of Engineering and Technology, Vinh University

PI-21 SIMULATION THE STABLE SPACE OF LOW – INDEX NANOPARTICLE UNDER HOLLOW- GAUSSIAN BEAM TRAP

Cong Mai Nguyet, Quy Ho Quang, Quang Ho Dinh, Nhue Phan Nguyen, Kien Bui Xuan

Academy of Military Science and Technology, 17 Hoang Sam, Ha Noi

Vinh University, 182 Le Duan, Truong Vinh, Nghe An

Military Technical Academy, 100 Hoang Quoc Viet, Hanoi

Electric Power University, 235 Hoang Quoc Viet, Ha Noi

PI-22 DESIGN, DEVELOPMENT AND PERFORMANCE EVALUATION OF A LOW-COST HANDHELD THERMAL CAMERA BASED ON THE MLX90640 INFRARED SENSOR

Phan Nguyen Nhue, Duong Chi Dung, Bui Dinh Bao, Vo Quang Sang, Vo Thanh Hai, Phan Thi Minh Hao, Nguyen Minh Hue

Department of Optical Devices, Le Quy Don Technical University

Faculty of Physics, Le Quy Don Technical University, Hanoi, Vietnam

PI-23 DESIGN AND EXPERIMENTAL EVALUATION OF A 940-nm FREE-SPACE OPTICAL LINK FOR AUDIO AND LOW-RATE DATA TRANSMISSION

Vo Thanh Hai, Duong Chi Dung, To Minh Hao, Nguyen Tran Long Khanh, Nguyen Minh Hue, Phan Nguyen Nhue

Department of Optical Devices, Le Quy Don Technical University

Faculty of Physics, Le Quy Don Technical University, Hanoi, Vietnam

PI-24 DESIGN AND EXPERIMENTAL CHARACTERIZATION OF A QUADRANT PHOTODETECTOR RECEIVER FOR LASER SPOT TRACKING

Le Di Khang, Duong Chi Dung, Nguyen Minh Hue, Phan Nguyen Nhue

Department of Optical Devices, Le Quy Don Technical University

Faculty of Physics, Le Quy Don Technical University, Hanoi, Vietnam

PI-25 SIZE-CONTROLLED FABRICATION AND OPTICAL PROPERTIES OF INKJET-PRINTED PVA/RHODAMINE B MICROSPHERES

Tien Van Nguyen, Lien Thi Ngo, Duy Thanh Nguyen, Toan Duc Nguyen, Lien Ha Thi Nghiem, Van Duong Ta

Department of Physics, Le Quy Don Technical University, Hanoi, Viet Nam

Graduate University of Science and Technology, Vietnam Academy of Science and Technology, Hanoi, Viet Nam

Institute of Physics, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Department of Optical Devices, Le Quy Don Technical University, Hanoi, Vietnam

PI-26 ADVANCED OPTICAL SENSORS BASED ON PLASMONIC NANOMATERIALS FOR ENVIRONMENTAL MONITORING

Le Thanh Tam, Le Hong Tho, Hanh Kieu Thi Ta, Do Thao Anh, Kieu The Loan Trinh, Hieu Trung Vu, Tran Tan Phat, Le Vu Ha, Le Thi Huyen Thuong, Nguyen Huynh Bien Gioi, Bach Thang Phan, Tran Thi Nhu Hoa

Faculty of Materials Science and Technology, University of Science, Ho Chi Minh City, Vietnam

Vietnam National University, Ho Chi Minh City, Vietnam

Advanced Materials Technology Institute Vietnam National University Ho Chi Minh City, Ho Chi Minh City Vietnam

University of Health Sciences, Vietnam National University Ho Chi Minh City, Vietnam

PI-27 STABLE SPACE OF THE DIELECTRIC NANOPARTICLE IN NONLINEAR OPTICAL TWEZERS

Nam Tran Hai, Thang Nguyen Manh, Kien Bui Xuan

VNU University of Science, High School for Gifted Students, 182 Luong The Vinh, Hanoi, Vietnam

Academy of Military Science and Technology, 17 Hoang Sam, Nghia Do, Hanoi, Vietnam

Electric Power Univessity, 235 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

PI-28 DESIGN AND NUMERICAL INVESTIGATION OF A NOVEL Ce:LiCAF LASER CAVITY FOR TUNABLE DUAL-WAVELENGTH NARROW-LINEWIDTH UV EMISSION

Diep Van Nguyen, Quan Le Minh, Tu Xuan Nguyen, Nobuhiko Sarukura, Minh Hong Pham

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

Tran Quoc Tuan University, Xuan Phuong, Hanoi, Vietnam

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

PI-29 PHOTOLUMINESCENCE-BASED BIOSENSING OF URIC ACID AND DOPAMINE USING SEMICONDUCTOR NANOMATERIALS: ZnO, CuO, AND g-C₃N₄

Hanh Hong Mai, Tuan Duy Nguyen Duc, Loan Le Thi

Faculty of Electronics and Communications, University of Engineering and Technology, Vietnam National University, Hanoi, Vietnam

Faculty of Physics, University of Science, Vietnam National University, Hanoi, Vietnam

PI-30 COMPARATIVE ANALYSIS OF THE EFFECTIVE MODE AREA IN PBG-08 GLASS SUSPENDED-CORE FIBERS WITH AIR-FILLED AND CS₂-INFILTRATED CONFIGURATIONS

Trong Dang Van, Bao Tran Le Tran, Cuong Phan Van, Duc Duoc Phan Nguyen, Nguyen Phan Nhat, Lanh Chu Van

School of Engineering and Technology, Nha Trang University, 02 Nguyen Dinh Chieu, Khanh Hoa Province, Vietnam

University of Khanh Hoa, 01 Nguyen Chanh, Khanh Hoa Province, Vietnam

Department of Physics, Vinh University 182 Le Duan, Nghe An Province, Vietnam

PI-31 PROPAGATION CHARACTERISTICS AND DISPERSION PROPERTIES OF As₂Se₃ SUSPENDED-CORE FIBERS WITH VARYING BRIDGE-TO-CORE RATIO

Tran Le Tran Bao, Trong Dang Van, Xuan Huy Nguyen, Lanh Chu Van

Department of Education, University of Khanh Hoa, 01 Nguyen Chanh, Khanh Hoa Province, Vietnam

School of Engineering and Technology, Nha Trang University, 02 Nguyen Dinh Chieu, Khanh Hoa Province, Vietnam

Department of Physics, Vinh University, 182 Le Duan, Nghe An Province, Vietnam

PI-32 EFFECT OF H^+ ION CONCENTRATION ON THE MICROSTRUCTURE OF TITANIUM DIOXIDE MATERIALS

Do Khac Thinh, Hoang Nhat Linh, Lam Thi Hang, Pham Do Chung, Le Thu Mai Oanh, Nguyen Van Minh

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy, Hanoi

Faculty of Applied Sciences and Engineering, Electric Power University, 235 Hoang Quoc Viet, Hanoi

PI-33 CONCENTRATION- AND SOLVENT-DEPENDENT FLUORESCENCE PROPERTIES OF AMPHOTERICIN B FOR POTENTIAL PHOTSENSITIZER APPLICATIONS

Pham Thi Lien, Tran Quoc Tien, Tong Quang Cong, Nguyen Thanh Huong, Hoang Thi Khuyen, Aliaksandr Mikulich, Raman Nahorny

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

B.I. Stepanov Institute of Physics of NASB, 68-2 Nezavisimosti Ave., Minsk, Belarus

PI-34 EFFECTS OF pH AND Eu^{3+} DOPING ON THE STRUCTURE, MORPHOLOGY, AND OPTICAL PROPERTIES OF $BiVO_4$

Bui Thanh Phong, Pham Thi Lien, Tong Quang Cong, Nguyen Thanh Huong, Hoang Thi Khuyen, Dinh Manh Tien, Nguyen Vu

University of Engineering and Technology, Vietnam National University, Hanoi, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

PI-35 SYNTHESIS, INVESTIGATION OF OPTICAL PROPERTIES OF TiO_2 NANOROD COMPOSITES FOR OPTOELECTRONIC APPLICATIONS

Nguyen Trung Kien, Duong Thuy Trang, Le Thi Kim Anh, To Phuong Linh, Bui Hong Van, Nguyen Van Manh, Pham Duy Long, Nguyen Duc San, Do Minh Hieu, Pham Van Duong, Tien Dai Nguyen, Vu Thi Bich

VNU University of Sciences, Vietnam National University-Hanoi, 334 Nguyen Trai, Hanoi, Vietnam

Faculty of Chemical Technology, Hanoi University of Industry, 298 Cau Dien, Hanoi, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Hanoi

Institute of Physics, Vietnam Academy of Science and Technology, 10 Doi Can, Hanoi, Vietnam

Institute of Theoretical and Applied Research, Duy Tan University, Hanoi, Vietnam

PI-36 EFFECT OF CO INCORPORATION ON THE STRUCTURAL, OPTICAL, AND PHOTOCATALYTIC PROPERTIES OF $\text{CuO}/\text{Zn}_{1-x}\text{Co}_x\text{O}$ NANOCOMPOSITES

H.V. Thanh, N.T.M. Duyen, N.N. Huyen, L.T.M. Cham, D.T.N. Minh, T.D. Thien, M.V. Tuan, N.D. Lam

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

PI-37 COBALT INDUCED MODULATION OF STRUCTURAL AND PHOTOCATALYTIC PROPERTIES IN $\text{Cu}_2\text{O}/\text{Zn}_{1-x}\text{Co}_x\text{O}$ HETEROSTRUCTURES

H. V. Thanh, L. T. T. Linh, N.T.M. Duyen, N.N. Huyen, L.T.M. Cham, D.T.N. Minh, T. D. Thien, M. V. Tuan, N. D. Lam

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

PI-38 EFFECT OF METAL DOPING AND THERMAL TREATMENT ON THE STRUCTURE, SPECTROSCOPIC PROPERTIES, AND PHOTOCATALYTIC ACTIVITY OF Cu_2O

Mai Van Tuan, Trinh Duc Thien, Hoang Van Thanh, Le T.M. Cham, Pham Tuan Kien, Le Duc Tho, Nguyen Dinh Lam

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

Faculty of Applied Sciences and Engineering, Electric Power University, 235 Hoang Quoc Viet, Nghia Do District, Hanoi, Vietnam

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

PI-39 EFFECTS OF CDOTS ON THE STRUCTURAL AND SPECTROSCOPIC PROPERTIES OF $\text{ZnO}/\text{Cu}_2\text{O}$ NANOCOMPOSITES

Mai Van Tuan, Trinh Duc Thien, Hoang Van Thanh, Le T.M. Cham, Phi Ngoc Tuan, Le Quoc Duy, Le Doan Dung, Tran Van Cuong, Nguyen Nhu Duc, Dinh T.N. Minh, Nguyen Dinh Lam

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

Faculty of Applied Sciences and Engineering, Electric Power University, 235 Hoang Quoc Viet, Nghia Do District, Hanoi, Vietnam

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

PI-40 MLP SURROGATE-ASSISTED OPTIMIZATION OF BRAGG MIRRORS WITH REDUCED INTERFACE ELECTRIC-FIELD INTENSITY FOR HIGH-POWER LASER APPLICATIONS

Nguyen Van Ba, Nguyen Van Thuong, Luong Van Cuong, Ngo The Vinh

School of Mechanical and Automotive Engineering, Hanoi University of Industry, Hanoi, Vietnam

Academy of Military Science and Technology, Hanoi, Vietnam

PI-41 MULTIBAND THERMAL CAMOUFLAGE ENABLED BY BAYESIAN-OPTIMIZED METAMATERIAL EMITTERS

Nguyen Phon Hai, Nguyen Hai Anh, Bui Xuan Khuyen, Bui Son Tung, Vu Dinh Lam

Graduate University of Science and Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Faculty of Basic Sciences, Air Defense–Air Force Academy, Hanoi, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Vietnam National Space Center, Vietnam Academy of Science and Technology, Hanoi, Vietnam

PI-42 FACILE SYNTHESIS OF METHYLAMMONIUM LEAD IODIDE PEROVSKITE NANOWIRES VIA A TWO-STEP DISSOLUTION-RECRYSTALLIZATION METHOD

Nguyen Xuan Thau, Phung Dinh Hoat, Nguyen Van Cuong, Nguyen Van Hoang, Tien-Anh Nguyen, and Pham Tien Hung

Department of Physics, Le Quy Don Technical University, No. 236 Hoang Quoc Viet Street, Nghia Do Ward, Hanoi 100000, Vietnam

Department of Materials Science and Engineering, Le Quy Don Technical University, No. 236 Hoang Quoc Viet Street, Nghia Do Ward, Hanoi 100000, Vietnam

PI-43 FACILE FABRICATION OF BiI_3 NANOPlates FOR HIGHLY SELECTIVE NO_2 GAS SENSING AT ROOM TEMPERATURE

Hoang Minh Truong, Nguyen Huu Trang, Phung Dinh Hoat, Do Hong Minh, Nguy Phan Tin, Nguyen Ngoc Trung, and Pham Tien Hung

Department of Physics, Le Quy Don Technical University, No. 236 Hoang Quoc Viet Street, Nghia Do Ward, Hanoi 100000, Vietnam

Faculty of Engineering Physics, Hanoi University of Science and Technology, No. 01 Dai Co Viet Street, Bach Mai Ward, Hanoi 100000, Vietnam

**PI-44 SUPERCONTINUUM GENERATION IN ETHANOL-INFILTRATED
FOUR-HOLE SUSPENDED-CORE FIBERS**

**Toan Ngo Duc, Thuy Do Thanh, Anh Tran Thi Ngoc, Phong Bui Van,
Hieu Le Manh, Thao Bach Vu Thu, Vinh Nguyen Thanh, Thuan Bui Dinh,
Dung Nguyen Tien, Trung Le Canh**

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

**PI-45 SYNTHESIS AND NEAR-INFRARED PHOTOLUMINESCENCE
PROPERTIES OF Cr³⁺-DOPED Zn₂SnO₄ PHOSPHOR**

Dam Quang Hoc, Nguyen Van Quang, Le Tien Ha

TNU-University of Sciences, Thai Nguyen, Vietnam

*Department of Chemistry, Hanoi Pedagogical University 2, Xuan Hoa, Phu Tho,
Viet Nam*

**PI-46 EFFECT OF Eu³⁺ CONCENTRATION ON THE OPTICAL PROPERTIES
AND JUDD-OFELT PARAMETERS OF MgAl₂O₄:Eu³⁺ PHOSPHORS**

Hoang Minh Tuan, Tran Quoc Xuan, Nguyen Van Quang, Le Tien Ha

TNU-University of Sciences, Thai Nguyen, Vietnam

Ha Long University, Quang Ninh, 20000, Vietnam

*Department of Chemistry, Hanoi Pedagogical University 2, Xuan Hoa, Phu Tho,
Viet Nam*

**PI-47 SELF-BROADENED LINE-SHAPE PARAMETERS OF CO₂ LINES AT
ROOM TEMPERATURE**

**Nguyen Thanh Thao, Nguyen Thi Huyen Trang, Le Minh Thu,
Le Cong Tuong, Ngo Ngoc Hoa**

*Faculty of physics, Hanoi National University of Education, 136 XuanThuy,
CauGiay, Hanoi, Vietnam*

**PI-48 NEW LINE-SHAPE PARAMETERS OF CO LINES BROADENED BY AIR
AT ROOM TEMPERATURE**

Nguyen Thi Huyen Trang, Le Minh Thu, Le Cong Tuong, Ngo Ngoc Hoa

*Faculty of Physics, Hanoi National University of Education, 136 XuanThuy,
CauGiay, Hanoi, Vietnam*

**PI-49 FABRICATION OF AN MXene CHITOSAN-BASED
ELECTROCHEMICAL SENSOR FOR NITRITE DETECTION IN
WATER**

Vu Quoc Trung, Nguyen Dang Phu, Luc Huy Hoang

*Department of Physics, Hanoi National University of Education, 136 Xuan Thuy
Street, Cau Giay District, Hanoi, Vietnam.*

**PI-50 IN-SITU RAMAN-ELECTROCHEMICAL CORRELATION OF
DOPAMINE OXIDATION ON Ag/ZnO/ITO Electrodes**

**Nguyen Hong Linh, Ho Thi Ngoc Diem, Nguyen Thanh Trung,
Le Thi Thanh Lieu, Hoang Nhat Hieu, Nguyen Van Nghia, Le Thi Ngoc Loan**
*Faculty of Natural Sciences, Quy Nhon University, 170 An Duong Vuong, Quy
Nhon Nam, Gia Lai, Vietnam*

SESSION POSTER II

SESSION POSTER II

October 02, 2026 (Thursday)

Chairperson:

Prof. Nguyen Van Hao (Thai Nguyen University of Sciences, Vietnam)

Dr. Le Canh Trung (Vinh University, Vietnam)

**PII-01 BLADE: BROADBAND LOW-FREQUENCY ASTRONOMICAL
DETECTION EXPERIMENT - SYSTEM DESIGN, SITE SURVEY, AND
SCIENCE CASE FOR A NEW RADIO TELESCOPE IN VIETNAM**

Khoi Doan-Minh, Quang Nguyen-Luong, Hien Phan-Thanh, Viet Dung Pham

Institute for Astronomy and Space Quantum Communications (IAS), Vietnam

*Simons Astrophysics Group at ICISE, Institute for Interdisciplinary Research in
Science and Education (IFIRSE), ICISE, 07 Science Avenue, Quy Nhon Nam, Gia
Lai, Vietnam*

*Université Paris-Saclay, Université Paris Cité, CEA, CNRS, AIM, 91191 Gif-sur-
Yvette, France*

University of Science and Technology of Hanoi, Hanoi, Vietnam

*Center for Space Technology Research and Development, Vietnam National Space
Center, Hanoi, Vietnam*

**PII-02 ENERGY TRANSFER PROCESS IN $\text{Ce}^{3+}/\text{Tb}^{3+}$ CO-DOPED BARIUM
MAGNESIUM SILICATE PHOSPHORS**

**Tran Thi Hong, Ho Van Tuyen, Ho Thi Thuy Ngan, Nguyen Thi Thu Ha,
Tran Thi Kim Ngan, Dang Thi Kim Anh, Huynh Y Tuyet Lan, Nguyen Ha
Quyen, Mai Thi Kieu Lien, Le Xuan Hung**

*The University of Danang, University of Science and Education, Da Nang City,
550000, Vietnam*

*Institute of Research and Development, Duy Tan University, Da Nang, 550000,
Vietnam*

Faculty of Natural Sciences, Duy Tan University, Da Nang, 550000, Vietnam

**PII-03 DEVELOPMENT AND EXPERIMENTAL INVESTIGATION OF A SAND-
BASED THERMAL ENERGY STORAGE SYSTEM INTEGRATED WITH
SOLAR ENERGY**

**Nam Thanh Nguyen, Cuong Vu Le, Bao-Hoang Nguyen Phan, Phuc Minh
Bui, Binh Khang Vu, Hieu Minh Nguyen, and Toan Van Nguyen**

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

HUS High School for Gifted Students, Hanoi, Vietnam

Nguyen Hue High School for the Gifted, Hanoi, Vietnam

Hanoi-Amsterdam High School for the Gifted, Hanoi, Vietnam
Phan Huy Chu - Dong Da High School, Hanoi, Vietnam

PII-04 LUMINESCENCE PROPERTIES, JUDD-OFELT PARAMETERS, AND ENERGY TRANSFER MECHANISMS IN Tb³⁺/Eu³⁺ CO-DOPED Zr-BDC METAL-ORGANIC FRAMEWORKS

Lam Thi Kieu Giang, Nguyen Thanh Huong, Pham Thi Lien, Hoang Thi Khuyen, Anna Świdorska-Środa, Witold Łojkowski, and Łukasz Marciniak
Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam
Institute of High Pressure Physics, Polish Academy of Sciences, Warsaw, Poland
Institute of Low Temperature and Structural Research, Polish Academy of Sciences, Wrocław, Poland

PII-05 DUAL-MODE PHOTOLUMINESCENCE PROPERTIES OF MULTI-LANTHANIDE-FUNCTIONALIZED GD-BASED METAL-ORGANIC FRAMEWORKS

Lam Thi Kieu Giang, Pham Thi Lien, Hoang Thi Khuyen, P. N. B. Tri, and G. Arzumany
Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam
Frank Lab of Neutron Physics, Joint Institute for Nuclear Research, Dubna, Moscow, Russia

PII-06 THỦY TINH ALUMINOSILICATE PHA TẠP Mn²⁺: QUY TRÌNH CHẾ TẠO VÀ TÍNH CHẤT QUANG

Hồ Văn Tuyển, Lê Xuân Hùng, Nguyễn Thị Phương Thảo, Trần Thị Hồng, Nguyễn Thị Thái An, Nguyễn Ngọc Trác, Lê Văn Khoa Bảo, Phan Văn Độ
Viện nghiên cứu & Phát triển Công nghệ cao, Đại học Duy Tân, Đà Nẵng, Việt Nam
Khoa Khoa học Tự nhiên, Đại học Duy Tân, Đà Nẵng, Việt Nam
Trường đại học Sư phạm, Đại học Đà Nẵng, Đà Nẵng, Việt Nam
Trường Cao đẳng Công nghiệp Huế, Huế, Việt Nam
Ban Khoa học Công nghệ, Đại học Duy Tân, Đà Nẵng, Việt Nam
Trường Đại học Thủy Lợi, Hà Nội, Việt Nam

PII-07 ENERGY TRANSFER PROCESS IN Ce³⁺/Tb³⁺ CO-DOPED BARIUM MAGNESIUM SILICATE PHOSPHORS

Tran Thi Hong, Ho Van Tuyen, Ho Thi Thuy Ngan, Nguyen Thi Thu Ha, Tran Thi Kim Ngan, Dang Thi Kim Anh, Huynh Y Tuyen Lan, Nguyen Duy, Nguyen Ha Quyen, Mai Thi Kieu Lien, Le Xuan Hung

The University of Danang, University of Science and Education, Da Nang City, 550000, Viet Nam

Institute of Research and Development, Duy Tan University, Da Nang, 550000, Viet Nam

Faculty of Natural Sciences, Duy Tan University, Da Nang, 550000, Viet Nam

PII-08 DUAL-WAVELENGTH UPCONVERSION IN RARE-EARTH-DOPED CaF_2 FOR NIR-TO-MIR INFRARED DETECTION

Ziyao Wang, Yugo Akabe, Keito Shinohara, Marilou Cadatal-Raduban, Akira Yoshikawa, Toshihiko Shimizu, Kosaku Kato, Verdad C. Agulto, Makoto Nakajima, Nobuhiko Sarukura, Benchaphorn Damdee Jakrapong Kaewkhao, Kohei Yamanoi

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

Unitec Institute of Technology, 139 Carrington Road, Mount Albert, Auckland 1025, New Zealand

Institute for Material Research, Tohoku University, 2 -1-1, Sendai 980-8577, Japan

Center of Excellence in Glass Technology and Materials Science, Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand

PII-09 EFFECT OF PRECURSORS AND HEAT TREATMENT ON THE PHOTOELECTROCHEMICAL WATER SPLITTING PERFORMANCE OF Fe_2O_3 PHOTOANODES

Tran Tuan Vu, Lai Nhat Tan, Nguyen Tien Hiep, Nguyen Dinh Chien, Tran Van Nghia, Nguyen Minh Hieu, Nguyen Manh Hung

Department of Materials Science and Engineering, Le Quy Don Technical University, 236 Hoang Quoc Viet street, Hanoi 100000, Vietnam

Faculty of Materials Science and Engineering, Phenikaa University, Yen Nghia, Ha Dong, Hanoi 12116, Vietnam

PII-10 THE PRESENCE OF ENDOGENOUS PHOTSENSITIZERS IN CANDIDA ALBICANS CELLS AS A FACTOR MEDIATING PHOTOINACTIVATION OF THIS MICROORGANISM BY BLUE LASER LIGHT

A. L. Shmitsko, V. Y. Plavskii, A. I. Tretyakova, R. K. Nahorny, A. V. Mikulich, A. N. Sobchuk, T. S. Ananich, O. N. Dudinova, N. D. Prokopenko, L. G. Plavskaya

State Scientific Institution "B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", 68-2 Nezavisimosti Ave., 220072, Minsk, Republic of Belarus

- PII-11 GOLD NANOARCHITECTURES FOR SERS-BASED TRACE DETECTION OF INDIVIDUAL DYES AND DYE MIXTURES**
Khanh Duy Nguyen, Tri Minh Le, Cong Chi Vo, Vinh Quang Truong, Trung Minh Huynh, Hanh Thi Nguyen, Ngoc Van Le, Hung Vu Tuan Le
Faculty of Physics and Engineering Physics, University of Science, Ho Chi Minh City, 700000, Vietnam
Vietnam National University, Ho Chi Minh City, 700000, Vietnam
- PII-12 FIRST-PRINCIPLES INSIGHTS INTO RAMAN SPECTRA, RASHBA SPIN SPLITTING, AND PHONON-LIMITED CARRIER MOBILITY IN 2D JANUS MATERIALS**
Nguyen T. Hiep, Thinh D. Tran, Nguyen V. Hieu, Chuong V. Nguyen, Nguyen N. Hieu
Institute of Research and Development, Duy Tan University, Da Nang, Viet Nam
Physics Department, University of Education, Hue University, Hue, Viet Nam
The University of Danang – University of Science and Education, Da Nang, 550000, Vietnam
Le Quy Don Technical University, Ha Noi, Viet Nam
- PII-13 EFFECT OF Co-DOPING ON THE STRUCTURAL, OPTICAL AND PHOTOCATALYTIC DEGRADATION PROPERTIES OF $\text{Li}_{2-x}\text{Co}_x\text{TiO}_3$**
H.V. Thanh, L.D. Cuong, D.C. Chien, N.V. Tien, D.X.T. Hieu, P.T. Binh, T. D. Thien, N.D. Lam, T.A. Ho
Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam
Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam
- PII-14 MULTI-RESONANT HIGH-ABSORPTION METASURFACE WITH SIZE-GRADED STRUCTURE FOR NEAR-INFRARED APPLICATIONS**
V. Plavskii, A. Tretyakova, A. Mikulich, O. Dudinova, T. Ananich, V. Knyukshto
State Scientific Institution “B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus”, 68-2 Nezavisimosti Ave., Minsk, 220072, Republic of Belarus
- PII-15 PARAMETERS OF LOW-TEMPERATURE LUMINESCENCE OF CURCUMIN**
V. Plavskii, A. Sobchuk, A. Tretyakova, A. Mikulich, O. Dudinova, L. Plavskaya, T. Ananich, V. Knyukshto

State Scientific Institution "B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", 68-2 Nezavisimosti Ave., Minsk, 220072, Republic of Belarus

PII-16 METHODS OF ANTIMICROBIAL PHOTODYNAMIC THERAPY BASED ON THE EXCITATION OF ENDOGENOUS AND EXOGENOUS PHOTSENSITIZERS: ADVANTAGES AND DISADVANTAGES

V. Plavskii, A. Mikulich, A. Tretyakova, R. Nahorny, L. Plavskaya, T. Ananich, O. Dudinova, N. Prokopenko, A. Shmitsko, A. Sobchuk, I. Leusenka, S. Yakimchuk

State Scientific Institution "B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", 68-2 Nezavisimosti Ave., Minsk, 220072, Republic of Belarus

PII-17 PARAMETERS OF LOW-TEMPERATURE LUMINESCENCE OF CURCUMIN

V. Plavskii, A. Sobchuk, A. Tretyakova, A. Mikulich, O. Dudinova, L. Plavskaya, T. Ananich, V. Knyukshto

State Scientific Institution "B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", 68-2 Nezavisimosti Ave., Minsk, 220072, Republic of Belarus

PII-18 PATTERNS OF THE INHIBITORY EFFECT OF BLUE LIGHT ON THE GROWTH OF MICROORGANISMS OF THE GENUS *KLEBSIELLA*

V. Plavskii, A. Tretyakova, A. Mikulich, A. Sobchuk, L. Plavskaya, T. Ananich, O. Dudinova, I. Leusenka, S. Yakimchuk, N.V. Dudchik, O.A. Emelyanova, E. Zakhidov, I. Tadjibaev, M. Imomov

State Scientific Institution "B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", 68-2 Nezavisimosti Ave., Minsk, 220072, Republic of Belarus

Research Institute of Hygiene, Toxicology, Epidemiology, Virology, and Microbiology, 8 Akademicheskaya St., Minsk, 220072, Republic of Belarus

U. A. Arifov Institute of Ion-Plasma and Laser Technologies of the Academy of Sciences of the Republic of Uzbekistan, 33 Durmon Y'uli St., Tashkent, 100125, Uzbekistan

PII-19 STUDY ON THE EFFECT OF CRYSTALLIZATION BEHAVIOR ON SOFT MAGNETIC PROPERTIES OF LASER-ANNEALED FINEMET RIBBONS

Tran Van Nghia, Tran Bao Trung, Vu Thang Long, Pham Thi Trang, Nguyen Manh Hung

Department of Materials Science and Engineering, Le Quy Don Technical University, 236 Hoang Quoc Viet street, Hanoi 100000, Vietnam.

Department of Advanced Metallic Materials, Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Street, Nghia Do Ward, Hanoi

PII-20 FLUORESCENT-FILM IMAGING FOR TWO-DIMENSIONAL CHARACTERIZATION OF UVC LED RADIATION

Le Thi Thu Ngoc, Do Vu Bao Ngoc, Ngo Quynh Duc, Le Vu Tuan Hung, Ching-Cherng Sun

Faculty of Physics and Engineering Physics, University of Science, Ho Chi Minh City 700000, Vietnam

Vietnam National University, Ho Chi Minh City 700000, Vietnam

Department of Optics and Photonics, National Central University, Taoyuan 32001, Taiwan

PII-21 Ce-DOPED ZnO/Ag NANOSTRUCTURES AS SERS SUBSTRATES FOR MICROPLASTIC DETECTION

Pham Hoang Lam, Nguyen Thanh Dat, Luu Nguyen Quang Huy, Tran Le Anh Duc, Nguyen Bich Nhi, Nguyen Duy Khanh, Le Thi Thu Ngoc, Le Vu Tuan Hung

Faculty of Education, University of Khanh Hoa, Vietnam

Faculty of Physics and Engineering Physics, University of Science, Ho Chi Minh City 700000, Vietnam

Vietnam National University, Ho Chi Minh City 700000, Vietnam

PII-22 ADAPTIVE ILLUMINATION-CONTROLLED RESOLUTION ENHANCEMENT FOR OPTICAL MICROSCOPY

Van Nhu Le, Quang Thi Nguyen, Minh Duc Tong, Van Quan Pham, Minh Nghia Pham

Le Quy Don Technical Univetsity, Ha Noi, Vietnam

PII-23 STRUCTURAL AND OPTICAL PROPERTIES OF CdS:Tb³⁺ AND CdS:Tb³⁺/ZnS CORE/SHELL QUANTUM DOTS

T. T. T. Huong, N. T. Kien, N. T. Hien, N. T. Luyen, D. T. V. Hien, L. X. Hung, N. T. Hanh, V. H. Yen, N. T. M. Thuy, and N. X. Ca

Institute of Science and Technology, TNU-University of Sciences, Thai Nguyen, Vietnam

Department of Science and Technology, Ha Noi University of Industry, Vietnam
Faculty of Basic Sciences, Thai Binh University of Medicine and Pharmacy, Hung Yen, Vietnam
Faculty of Engineering and Technology, TNU – University of Information and Communication Technology, Thai Nguyen, Vietnam
Faculty of Physics, TNU- University of Education, Thai Nguyen, Vietnam

PII-24 SYNTHESIS, STRUCTURAL, AND OPTICAL PROPERTIES OF TYPE-II ZnO/ZnS CORE–SHELL SEMICONDUCTOR QUANTUM DOTS

L. X. Hung, N. T. Hanh, N. T. Tung, N. T. T. Hoan, N. V. Truong, P. M. Tan, N. T. Hien, N. X. Ca

Faculty of Basic Sciences, Thai Binh University of Medicine and Pharmacy, Hung Yen, Vietnam.

Institute of Science and Technology, TNU-University of Sciences, Thai Nguyen, Vietnam.

Faculty of Fundamental and Applied Sciences, Thai Nguyen University of Technology, Thai Nguyen, Vietnam.

Faculty of Fundamental Sciences, Posts and Telecommunications Institute of Technology, Hanoi city, 100000, Vietnam

PII-25 INVOLVEMENT OF REACTIVE OXYGEN SPECIES IN PHOTOINDUCED DAMAGE TO CURCUMIN-SENSITIZED TUMOUR CELLS

O. N. Dudinova, L. G. Plavskaya, N. D. Prokopenko, A. I. Tretyakova, A. N. Sobchuk, A. V. Mikulich, T. S. Ananich, Yu. V. Kruchenok, R. K. Nahorny, A. L. Shmitko, S. V. Yakimchuk, I. A. Leusenko, V. Yu. Plavskii

State Scientific Institution "B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", Minsk, Republic of Belarus

PII-26 INVOLVEMENT OF REACTIVE OXYGEN SPECIES IN THE MECHANISM OF PHOTOINDUCED DAMAGE TO TUMOR CELLS SENSITIZED WITH CURCUMIN

O. N. Dudinova, L. G. Plavskaya, N. D. Prokopenko, A. I. Tretyakova, A. N. Sobchuk, A. V. Mikulich, T. S. Ananich, Yu. V. Kruchenok, R. K. Nahorny, A. L. Shmitko, S. V. Yakimchuk, I. A. Leusenko, V. Yu. Plavskii

State Scientific Institution "B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus", Minsk, Republic of Belarus

PII-27 CONTROLLING SYNCHRONOUS AND ANTI-SYNCHRONOUS OPTICAL SWITCHING UNDER RELATIVE PHASE AND EXTERNAL MAGNETIC FIELD

Thai Doan Thanh, Le Thi Minh Phuong, Nguyen Le Thuy An, Luong Thi Yen Nga, Dinh Xuan Khoa, Trang Huynh Dang Khoa, and Hoang Minh Dong
Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City, Vietnam
Saigon University, 273 An Duong Vuong Street, Ho Chi Minh City, Vietnam
Truong An Education Consulting Company Limited, Ho Chi Minh City, Vietnam
Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

PII-28 CONTROLLING OPTICAL BISTABILITY AND MULTISTABILITY UNDER HIGH-ORDER DISPERSION AND EXTERNAL MAGNETIC FIELD

Nguyen Tuan Anh, Nguyen Huy Bang, Le Nguyen Mai Anh, Nguyen Le Thuy An, Le Van Doai, Luong Thi Yen Nga, and Hoang Minh Dong
Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City, Vietnam
Nam Dinh University of Technological Education, 172 Phu Nghia Street, Ninh Binh province
Nong Lam University, Ho Chi Minh City, Vietnam
Truong An Education Consulting Company Limited, Ho Chi Minh City, Vietnam
Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

PII-29 ENHANCING THE LIFETIME OF QUANTUM BATTERIES WITH A TRIPOD CONFIGURATION BASED ON ELECTROMAGNETICALLY INDUCED TRANSPARENCY AND BOUND STATE

Nguyen Le Thuy An, Le Thi Minh Phuong, Le Nguyen Mai Anh, Thai Doan Thanh, Nguyen Tuan Anh, and Hoang Minh Dong
Truong An Education Consulting Company Limited, Ho Chi Minh City, Vietnam
Saigon University, 273 An Duong Vuong Street, Ho Chi Minh City, Vietnam
Nong Lam University, Ho Chi Minh City, Vietnam
Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City, Vietnam

PII-30 SPECTRAL-SPATIAL CHARACTERIZATION OF CAMOUFLAGED TARGETS IN VISIBLE, RED-EDGE, NEAR-INFRARED AND LONG-WAVE INFRARED BANDS

Do Xuan Doanh, Vu Chi Thanh, Dao Hong Hai, Pham Son Lam, Do Ngoc Lam
Institute of Defence Equipment, Academy of Military Science and Technology, 17 Hoang Sam, Nghia Do, Hanoi, Vietnam
Posts and Telecommunications Institute of Technology, 96A, Tran Phu, Ha Dong, Hanoi

PII-31 PHYSICS-GUIDED FOG-STABLE BAND SELECTION FOR CPU-EFFICIENT HYPERSPECTRAL ANOMALY DETECTION

Do Xuan Doanh, Vu Chi Thanh, Dao Hong Hai, Pham Son Lam, Do Ngoc Lam

*Institute of Defence Equipment, Academy of Military Science and Technology,
17 Hoang Sam, Nghia Do, Hanoi, Vietnam
Posts and Telecommunications Institute of Technology, 96A, Tran Phu, Ha Dong,
Hanoi*

PII-32 COMPARATIVE EVALUATION OF THERMAL CAMOUFLAGE CLOTHING USING SR-5000N SPECTRAL RADIOMETRY AND FIELD THERMAL IMAGING

Nguyen Thanh Lam

*Institute of Defence Equipment, Academy of Military Science and Technology,
17 Hoang Sam, Nghia Do, Ha Noi, 11353, Viet Nam*

PII-33 Cu-DOPED CALCIUM COBALT OXIDE $\text{Ca}_3\text{Co}_{2-x}\text{Cu}_x\text{O}_6$ NANOSTRUCTURES AS NOBLE-METAL-FREE CATALYSTS FOR EFFICIENT 4-NITROPHENOL REDUCTION

Nguyen Truong Tho, Nguyen Quoc Tuan, Le Vu Truong Son, Dinh Thanh Khan, Dang Ngoc Toan, Vinh Tien Nguyen

University of Sciences, Hue University, Hue, Vietnam

Ho Chi Minh City University of Technology and Engineering, Hochiminh, Vietnam

University of Science and Education – The University of Danang, Danang, Vietnam

Duy Tan University, Danang, Vietnam

PII-34 DESIGN AND NONLINEAR PROPERTIES OF $\text{Ge}_{20}\text{Se}_{70}\text{Te}_{10}$ -BASED OCTAGONAL PHOTONIC CRYSTAL FIBERS

Nguyen Thanh Thao, Hoang Thi Thu Giang, Tran Thi Phuong Uyen, Nguyen Tuan Anh, Hoang Trong Duc, Nguyen Thi Thuy, Vo Khanh Vy

University of Education, Hue University, 34 Le Loi, Hue City, Vietnam

PII-35 FABRICATION AND STUDY OF OPTICAL PROPERTIES OF CoAl_2O_4 NANOCRYSTALS CO-DOPED WITH Tb^{3+} AND Eu^{3+} IONS

Nguyen Trung Kien, Vu Dinh Lam, Nguyen Thi Hien, Nguyen Xuan Ca

Institute of Science and Technology, TNU-University of Sciences, Thai Nguyen, Viet Nam

Vietnam National Space Center, Vietnam Academy of Science and Technology

PII-36 EFFECT OF GRAPHENE QUANTUM DOT SIZE ON THE PHOTOVOLTAIC PERFORMANCE OF SINW/PEDOT:PSS HYBRID SOLAR CELLS

Do Tuan, Pham Van Trinh, Nguyen Van Chuc, Cao Thi Thanh, Pham Van Nhat, Nguyen Van Hao, Pham The Tan, Nguyen Van Tu, Phan Ngoc Minh

Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam

University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam
Graduate University of Science and Technology, VAST, Hanoi, Vietnam
Thai Nguyen University of Sciences, Thai Nguyen, Vietnam
Hung Yen University of Technology and Education, Hung Yen, Vietnam

PII-37 DESIGN AND OPTIMIZATION OF A CASSEGRAIN-TYPE INFRARED OPTICAL SYSTEM WITH A MANGIN SECONDARY MIRROR

Bui Dinh Bao, Ha Nguyen Binh, Phan Nguyen Nhue, Duong Chi Dung, Hoang Van Phong, Tong Minh Hoa

Department of Optical Instruments, Le Quy Don Technical University, 236 Hoang Quoc Viet, Nghia Do, Hanoi
Institute of Defence Equipment, Academy of Military Science and Technology, 17 Hoang Sam, Nghia Do, Hanoi

PII-38 DESIGN AND OPTIMIZATION OF A COMPACT INFRARED CATADIOPTRIC SYSTEM WITH A MANGIN PRIMARY MIRROR

Bui Dinh Bao, Ha Nguyen Binh, Phan Nguyen Nhue, Duong Chi Dung, Hoang Van Phong, Tong Minh Hoa

Department of Optical Instruments, Le Quy Don Technical University, 236 Hoang Quoc Viet, Nghia Do, Hanoi
Institute of Defence Equipment, Academy of Military Science and Technology, 17 Hoang Sam, Nghia Do, Hanoi

PII-39 COMPARATIVE ASSESSMENT OF VIETNAMESE AND INTERNATIONAL MILITARY CAMOUFLAGE PATTERNS BASED ON THE CIELAB COLOR SIMILARITY INDEX

Tong Minh Hoa, Bui Dinh Bao

Institute of Defence Equipment, Academy of Military Science and Technology, 17 Hoang Sam, Nghia Do, Hanoi
Department of Optical Instruments, Le Quy Don Technical University, 236 Hoang Quoc Viet, Nghia Do, Hanoi

PII-40 PICOSECOND PULSE COMPRESSION AT BACKWARD STIMULATED RAMAN SCATTERING IN WATER

I.A. Khodasevich, A.I. Vodchits, L.E. Batay, S.M. Pershin, Vu Duong, Pham Hong Minh, V.A. Orlovich

B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, 68-2 Nezalezhnasti Ave., Minsk, Belarus
A.M. Prokhorov General Physics Institute of the RAS, 38 Vavilov St., Moscow, Russia
Institute of Physics of the VAST, 10 DaoTan, BaDinh, Hanoi, Vietnam

PII-41 PICOSECOND SRS IN AQUEOUS SOLUTION OF SODIUM NITRATE IN THE VISIBLE AND ULTRAVIOLET SPECTRAL RANGES

A. I. Vodchits, L. E. Batay, I. A. Khodasevich, S. M. Pershin, Vu Duong, Pham Hong Minh, V.A. Orlovich

B.I. Stepanov Institute of Physics of the NAS of Belarus, Nezavisimosti Ave. 68-2, Minsk, Belarus

Prokhorov General Physics Institute of the RAS, Vavilova Str. 38, Moscow, Russia

Institute of Physics of the VAST, 10 DaoTan, BaDinh, Hanoi, Vietnam

PII-42 INVESTIGATING THE STIMULATED RAMAN SCATTERING OF THE Nd:YAG LASER THIRD HARMONIC RADIATION IN THE MIXTURES OF WATER AND ETHANOL

L. E. Batay, A. I. Vodchits, I. A. Khodasevich, S. M. Pershin, Vu Duong, Pham Hong Minh, V. A. Orlovich

B.I.Stepanov Institute of Physics of the NASB, 68-2 Nezavisimosti Ave., 220072 Minsk, Belarus

Prokhorov General Physics Institute of the RAS, 38 Vavilov Str., 119991 GPS-1, Moscow, Russia

Institute of Physics of the VAST, 10 DaoTan, BaDinh, Hanoi, Vietnam

PII-43 PICOSECOND PULSE COMPRESSION AT BACKWARD STIMULATED RAMAN SCATTERING IN WATER

I.A. Khodasevich, A. I. Vodchits, L. E. Batay, S. M. Pershin, Vu Duong, Pham Hong Minh, V. A. Orlovich

B. I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, 68-2 Nezalezhnasti Ave., Minsk, Belarus

A.M. Prokhorov General Physics Institute of the RAS, 38 Vavilov St., Moscow, Russia

Institute of Physics of the VAST, 10 DaoTan, BaDinh, Hanoi, Vietnam

PII-44 STRUCTURAL EVOLUTION OF GRAPHENE-LIKE CARBON/Cu–Ni HYBRID MATERIALS SYNTHESIZED BY SOLUTION COMBUSTION METHOD

Cao Thi Thanh, Tran Dai Lam, Nguyen Van Tu, Pham Van Trinh, Nguyen Thi Huyen, Pham Duy Long, Do Tuan, Nguyen Van Chuc, Dam Nhan Ba, Vu Xuan Hoa, Nguyen Van Hao, Kirill Podbolotov, Le Ha Chi
Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam

TNU - University of Sciences, Thai Nguyen, Vietnam

Hung Yen University of Technology and Education, Hung Yen, Vietnam

Graduate University of Science and Technology, VAST, Hanoi, Vietnam

PII-45 FABRICATION OF PERIODIC STRUCTURES ON LITHIUM NIOBATE BY TWO-BEAM PICOSECOND-LASER INTERFERENCE

Ngo The Vinh, Nguyen Van Thuong

*Institute of Defense Equipment, Academy of Military Science and Technology
Hanoi University of Industry*

PII-46 EFFECT OF WEATHER CONDITIONS ON UAV TRACKING CAPABILITY OF SCANNING LIDAR SYSTEMS

Ngo The Vinh, Luong Van Cuong

*Institute of Defense Equipment, Academy of Military Science and Technology
Hanoi University of Industry*

PII-47 MLP SURROGATE-ASSISTED OPTIMIZATION OF BRAGG MIRRORS WITH REDUCED INTERFACE ELECTRIC-FIELD INTENSITY FOR HIGH-POWER LASER APPLICATIONS

Nguyen Van Ba, Ngo The Vinh, Nguyen Van Thuong, Luong Van Cuong

*Hanoi University of Industry, Hanoi, Vietnam
Institute of Defense Equipment, Academy of Military Science and Technology*

PII-48 EVALUATION OF GROWTH UNIFORMITY IN Tb³⁺-DOPED Lu₃Al₅O₁₂ SINGLE CRYSTALS THROUGH LUMINESCENCE AND RADIOLUMINESCENCE MEASUREMENTS

Kieu Anh Thi Doan, Takahiko Horiai, Masao Yoshino, Minh Hong Pham, Hanh Hong Mai, Akira Yoshikawa

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan, Giang Vo, Hanoi 100000, Vietnam

Graduate University of Sciences and Technology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi 100000, Vietnam

National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan

New Industry Creation Hatchery Center (NICHe), Tohoku University, 6-6-10 Aramaki Aza Aoba, Aoba-ku, Sendai, Miyagi 980-8579, Japan

Faculty of Electronics and Telecommunications, University of Engineering and Technology, Vietnam National University, 144 Xuan Thuy, Cau Giay, Hanoi 100000, Vietnam

Institute for Materials Research, Tohoku University, 2-1-1 Katahira, Aoba-ku, Sendai, Miyagi 980-8577, Japan

SESSION POSTER III

SESSION POSTER III

October 02, 2026 (Friday)

Chairperson:

Prof. Le Thi Ngoc Loan (QuyNhon University, Vietnam)

Dr. Nguyen Thi Thu Hien (HCM Univ. of Industry and Trade, Vietnam)

PIII-01 PICOSECOND SRS IN AQUEOUS SOLUTION OF SODIUM NITRATE IN THE VISIBLE AND ULTRAVIOLET SPECTRAL RANGES

A.I. Vodchits, L.E. Batay, I.A. Khodasevich, S.M. Pershin, Vu Duong, Pham Hong Minh, V.A. Orlovich

B.I. Stepanov Institute of Physics of the NAS of Belarus, Nezavisimosti Ave. 68-2, Minsk, Belarus

*Prokhorov General Physics Institute of the RAS, Vavilova Str. 38, Moscow, Russia
Institute of Physics of the VAST, 10 DaoTan, BaDinh, Hanoi, Vietnam*

PIII-02 THE STIMULATED RAMAN SCATTERING OF THE 40 ps Nd:YAG LASER THIRD HARMONIC RADIATION IN THE MIXTURES OF WATER AND ETHANOL

A.I. Vodchits, L.E. Batay, I.A. Khodasevich, S.M. Pershin, Vu Duong, Pham Hong Minh, V.A. Orlovich

B.I. Stepanov Institute of Physics of the NASB, 68-2 Nezavisimosti Ave., 220072 Minsk, Belarus

*Prokhorov General Physics Institute of the RAS, 38 Vavilov Str., 119991 GPS-1, Moscow, Russia
Institute of Physics of the VAST, 10 DaoTan, BaDinh, Hanoi, Vietnam*

PIII-03 EFFECT OF HYDROTHERMAL TEMPERATURE ON THE PHOTOELECTROCHEMICAL PROPERTIES OF α -Fe₂O₃ NANORODS ON FTO

L.V.C.Hau, N.V.Hau, N.T.Thanh, T.T.K.Chi, and L.T.H.Phong

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam.

Faculty of Physics, VNU–University of Science, 334 Nguyen Trai, Thanh Xuan, Ha Noi, Viet Nam.

School of Electrical and Electronic Engineering, Hanoi University of Industry, 298 Cau Dien, Tay Tuu, Hanoi, Viet Nam

PIII-04 RAMAN PEAK MATCHING FOR COMPONENT DETECTION IN COMPOUNDS

Dinh Thai Tuan, Nguyen Trong Hieu, Vu Duong

University of Science, Vietnam National University– Hanoi, 334 Nguyen Trai Street, Thanh Xuan Ward, Hanoi, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan Street, Giang Vo Ward, Hanoi, Vietnam

PIII-05 RAMAN SPECTROSCOPIC IDENTIFICATION OF CHEMICALS USING A CLOSED-FORM BAYESIAN MARGINAL LIKELIHOOD

Dinh Thai Tuan, Nguyen Trong Hieu, Vu Duong

University of Science, Vietnam National University– Hanoi, 334 Nguyen Trai Street, Thanh Xuan Ward, Hanoi, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan Street, Giang Vo Ward, Hanoi, Vietnam

PIII-06 ENGINEERING HIERARCHICAL Sn GAS-DIFFUSION ELECTRODES FOR EFFICIENT CO₂-TO-FORMATE CONVERSION AT HIGH CURRENT DENSITIES

Huong Thi Thu Tran, Long Van Le, Loan Thu Nguyen, Thi Van Le, Linh Chi Ha, Danh Bich Do, Thi Lim Duong, Thi Hong Le Ngo, Thanh Huong Nguyen, Thi Dieu Thuy Ung, and Liem Quang Nguyen

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

VNU University of Engineering and Technology, UET2 Building, VNU University of Engineering and Technology, VNU Town, Hoa Lac Commune, Hanoi, Vietnam
Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy, Cau Giay, Hanoi, Vietnam

Institute of Earth Sciences, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

PIII-07 DEVELOPMENT OF AN Fe₃O₄/NAFION-MODIFIED ELECTROCHEMICAL SENSOR FOR THE RAPID DETECTION OF METRONIDAZOLE ANTIBIOTIC RESIDUES IN FOOD SAMPLES

Nguyen Duc Thieu, Nguyen Nang Dinh, Nguyen Truong An, Pham Tien Thanh, Pham Quoc Nghi, Hoang Thi Bich Thuy, Pham Truong Tho, Tran Hai Duc, and Nguyen Thi Minh Hong

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, UET2 Building, VNU Town, Hoa Lac Commune, Hanoi, Vietnam

Université Paris-Saclay, CNRS, ICMMO, Orsay 91405, France

School of Chemistry and Life Sciences, Hanoi University of Science and Technology, No. 1 Dai Co Viet Street, Bach Mai Ward, Hanoi, Vietnam
Simulation in Materials Science Research Group, Science and Technology Advanced Institute, Van Lang University, Ho Chi Minh City, Vietnam
Faculty of Physics, University of Science, Vietnam National University, Hanoi, Viet Nam

PIII-08 EVALUATION OF THE EFFECTIVENESS OF USING AMPHOTERICIN B AS A PHOTSENSITIZER FOR COMBATING BACTERIAL-FUNGAL INFECTIONS

R. K. Nahorny, A. L. Shmitko, N. D. Prokopenko, A. N. Sobchuk, A. I. Tretyakova, A. V. Mikulich, T. S. Ananich, Yu. V. Kruchenok, O. N. Dudinova, L. G. Plavskaya, S. V. Yakimchuk, I. A. Leusenka, V. Yu. Plavskii, Pham Thi Lien, Tran Quoc Tien

Scientific Center "Laser-optical technologies for medicine and biology", B.I. Stepanov Institute of Physics, National Academy of Sciences, 68-2, Nezavisimosti Ave., BY-220072 Minsk, Belarus

PIII-09 EVALUATION OF THE EFFECTIVENESS OF USING AMPHOTERICIN B AS A PHOTSENSITIZER FOR COMBATING BACTERIAL-FUNGAL INFECTIONS

R. K. Nahorny, A. L. Shmitko, N. D. Prokopenko, A. N. Sobchuk, A. I. Tretyakova, A. V. Mikulich, T. S. Ananich, Yu. V. Kruchenok, O. N. Dudinova, L. G. Plavskaya, S. V. Yakimchuk, I. A. Leusenka, V. Yu. Plavskii, Pham Thi Lien, Tran Quoc Tien

Scientific Center "Laser-optical technologies for medicine and biology", B.I. Stepanov Institute of Physics, National Academy of Sciences, 68-2, Nezavisimosti Ave., BY-220072 Minsk, Belarus

PIII-10 CuO LOADING-DEPENDENT STRUCTURE-ACTIVITY RELATIONSHIPS IN CuO/TiO₂ PHOTOCATALYSTS FOR SINGLE- AND MULTICOMPONENT POLLUTANT DEGRADATION UNDER VISIBLE-LIGHT IRRADIATION

Le T.M. Cham, T. D. Thien, Bui Khanh Hanh, Dinh T.N. Minh, N.D. Lam

Faculty of Engineering Physics and Nanotechnology, VNU University of Engineering and Technology, 144 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Road, Cau Giay District, Hanoi, 100000, Vietnam

PIII-11 PEDOT:PSS-DWCNT COMPOSITE HOLE-SELECTIVE LAYERS FOR HIGH-PERFORMANCE ORGANIC-SILICON HYBRID HETEROJUNCTION SOLAR CELLS

Le Phuong Thao, Do Tuan, Nguyen Thi Thanh, Pham Van Trinh, Pham Van Nhat, Phung Viet Tiep, Nguyen Van Hao, Phan Ngoc Minh, Nguyen Van Tu
TNU - University of Sciences, Thai Nguyen, Vietnam
Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam
Vietnam National University of Agriculture, Hanoi, Vietnam
University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam
Graduate University of Science and Technology, VAST, Hanoi, Vietnam

PIII-12 SCHOTTKY CONTACT ENGINEERING IN Ta₂B MBene/Janus MoSSe HETEROSTRUCTURES FOR ADVANCED OPTOELECTRONIC APPLICATIONS

Pham T. Truong, Nguyen V. Hieu, Nguyen N. Hieu, Huynh V. Phuc, Cuong Q. Nguyen, Tran P. T. Linh, H. T. T. Le and Nguyen Van Chuong
Faculty of Physics, Hue University of Education, Hue University, Hue 530000, Vietnam
Division of Physics, School of Education, Dong Thap University, Cao Lanh 870000, Vietnam
University of Science and Education, The University of Da Nang, Da Nang 550000, Vietnam
Institute of Research and Development, Duy Tan University, Da Nang 550000, Vietnam
Faculty of Physics, Hanoi National University of Education, Hanoi 100000, Vietnam
Department of Materials Science and Engineering, Le Quy Don Technical University, Hanoi 100000, Vietnam

PIII-13 FeNdB MAGNETIC NANOPARTICLES FABRICATION AND THEIR APPLICATIONS IN SERS SENSOR USING PULSED LASER ABLATION TECHNOLOGY

Tran Trong Duc, Pham Thanh Cong, Nguyen Gia Bao, Le Van Duong, Nguyen Thi Thuy, Le Thi Van Anh, Nguyen The Binh
VNU University of Science

PIII-14 SYNTHESIS OF NITROGEN AND NICKEL CO-DOPED CARBON QUANTUM DOTS FOR BIOSENSOR APPLICATIONS

Ngoc Thuy Vo, Thanh Binh Nguyen
Faculty of Physics and Engineering Physics, University of Science, Ho Chi Minh City, Vietnam
Vietnam National University, Ho Chi Minh City, Vietnam
Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan, Giang Vo, Ha Noi, Vietnam

PIII-15 UNI- AND MULTIVARIATE UPCONVERSION FLUORESCENCE THERMOMETRY WITH ERBIUM AND YTTERBIUM-DOPED ALUMINOFLUORIDE GLASSES

S.P. Apanasevich, P.S. Kolodochk, D.A. Korolko, P.A. Kulikovskaya, E.V. Kolobkova, I.A. Khodasevich, M.A. Khodasevich

B.I.Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Nezavisimosti Ave., 68, 220072, Minsk, Belarus

ITMO University, Kronverkskii ave., 49, 197101, Saint Petersburg, Russia

PIII-16 CALIBRATING THE COMPOSITION OF BILLON ALLOYS BY LIBS AND MACHINE LEARNING METHODS WITH SPECTRAL VARIABLES SELECTION

V.A. Aseev, M.A. Khodasevich, A.A. Savchuk

ITMO University, Kronverkskii ave., 49, 197101, Saint Petersburg, Russia

B.I.Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Nezavisimosti Ave., 68, 220072, Minsk, Belarus

PIII-17 BLUE UPCONVERSION FLUORESCENCE AND LOW DIVERGENCE RADIATION IN Tm^{3+} AND Yb^{3+} - CODOPED ALUMOFLUORIDE GLASSES WITH LOW PHOSPHATE CONTENT

G. Artykova, I.A. Khodasevich, E. Kolobkova

B.I.Stepanov Institute of Physics of the NASB, 68-2 Nezalezhnasti Ave., 220072 Minsk, Belarus

Saint-Petersburg State Institute of Technology (Technical University), 26 Moskovskiy Ave., St. Petersburg, 190013, Russia

PIII-18 NUMERICAL MODELING AND EXPERIMENTAL CHARACTERISTICS OF A POWERFUL RING OPO RADIATION

A.A. Rusaka, A.A. Buia, I.A. Khodasevicha, A.P.Shkadarevichb, D. Unurbilegc, V.A. Orlovich

B.I.Stepanov Institute of Physics of the NASB, 68-2 Nezalezhnasti Ave., 220072 Minsk, Belarus

Foundation of scientific and technical center "LEMT", 23 Makaenka Str., Minsk, 190013, Belarus

Institute of Physics and Technology, Mongolian Academy of Sciences, 54B Peace Avenue, 13330 Ulaanbaatar, Mongolia

PIII-19 RELIABILITY LIMITS OF MULTIFRACTAL INFRARED CAMOUFLAGE EVALUATION UNDER PSF/MTF BLUR, NOISE, AND TARGET SAMPLING

Tran Thu Trang

*Institute of Military Equipment, Academy of Military Science and Technology,
17 Hoang Sam, Nghia Do, Hanoi, Vietnam*

PIII-20 INFLUENCE OF SPATIAL RESOLUTION AND SPECTRAL BAND ON THE DETECTABILITY OF CAMOUFLAGED PERSONNEL IN MULTISPECTRAL IMAGERY

Tran Thu Trang

*Institute of Military Equipment, Academy of Military Science and Technology,
17 Hoang Sam, Nghia Do, Hanoi, Vietnam*

PIII-21 OPTICAL-RESOLUTION-AWARE CAMOUFLAGE EFFECTIVENESS EVALUATION USING FREQUENCY-WEIGHTED MULTI-SCALE IMAGE FEATURES

Tran Thu Trang

*Institute of Military Equipment, Academy of Military Science and Technology,
17 Hoang Sam, Nghia Do, Hanoi, Vietnam*

PIII-22 STUDY ON THE PHOTOCATALYTIC DEGRADATION OF RHODAMINE B (RhB) BY CARBON QUANTUM DOTS (CQDS) AND N,S-CODOPED (N,S-CQDS)

Nguyen Duc Hai, Tran Duc Minh, Nguyen Thi Khanh Van, Do Minh Hieu, Hoang Bao Long, Le Thi Nga, Pham Van Duong, Nguyen Thi Thuy

The Faculty of Physics, VNU University of Science, Hanoi, 12116, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, Giang Vo ward, Hanoi, Vietnam

Faculty of Engineering Physics and Nanotechnology, University of Engineering and Technology, Vietnam National University, Hanoi, 144 Xuan Thuy Road, Cau Giay, Hanoi, 100000, Vietnam

Cau Giay Center for Vocational Education and Continuing Education, Hanoi, Viet Nam

Hung Yen University of Technology and Education, Hung Yen Province, Vietnam

PIII-23 OPTICAL TRANSITIONS AND EXCITED-STATE DYNAMICS OF MoS₂ QUANTUM DOTS REVEALED BY STEADY-STATE AND TIME-RESOLVED SPECTROSCOPY

Vo Hoang Vu, Nguyen Duc Hai, Tran Duc Minh, Do Minh Hieu, Nguyen Thi Khanh Van, Pham Van Duong, Nguyen Thi Thuy, Nguyen Duc Son, Hoang Bao Long

Thien Ho Duong High School, 640 National Route 62, Kien Tuong, Tay Ninh Province, Vietnam

The Faculty of Physics, VNU University of Science, Hanoi, 12116, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan Street, Giang Vo, Hanoi, Vietnam

Hung Yen University of Technology and Education, Hung Yen Province, Vietnam

VNU University of Engineering and Technology UET2 Building, VNU University of Engineering and Technology, VNU Town, Hoa Lac Commune, Hanoi, Vietnam

PIII-24 TUNING THE OPTICAL PROPERTIES AND EXCITED-STATE DYNAMICS OF CARBON QUANTUM DOTS DOPED LANTHANUM

Nguyen Van Duong, Do Dinh Trung, Nguyen Van Vinh, Vu Manh Cuong, Vo Hoang Vu, Hoang Bao Long, Le Thi Nga, Pham Van Duong

Le Quy Don Technical University, 236 Hoang Quoc Viet, Ha Noi, Viet Nam

Institute of Tropical Durability, Joint Vietnam-Russia Tropical Science and Technology Research Center, № 63 Nguyen Van Huyen Street, Nghia Do Ward, Hanoi City, Vietnam

Thien Ho Duong High School, 640 National Route 62, Kien Tuong, Tay Ninh Province, Vietnam

VNU University of Engineering and Technology UET2 Building, VNU University of Engineering and Technology, VNU Town, Hoa Lac Commune, Hanoi, Vietnam
Cau Giay Center for Vocational Education and Continuing Education, Hanoi, Viet Nam

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan Street, Giang Vo, Hanoi, Vietnam

PIII-25 OPTICAL BAND GAP AND URBACH ENERGY ANALYSIS OF CARBON QUANTUM DOTS (CQDS) AND N-DOPED TiO₂ AND CaTiO₃ COMPOSITES

Le Thi Nga, Nguyen Duc Hai, Do Minh Hieu, Nguyen Thi Khanh Van, Nguyen Thanh Binh, Tran Duc Minh

Cau Giay Center for Vocational Education and Continuing Education, Hanoi, Viet Nam

The Faculty of Physics, VNU University of Science, Hanoi, 12116, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan, Giang Vo, Hanoi, Vietnam

PIII-26 DESIGN AND INVESTIGATION OF METASURFACE-INTEGRATED OPTICAL FIBERS

Thanh Son Pham, Quoc Hung Pham, Thanh Binh Pham, Van Dai Pham, Thu Trang Hoang, Xuan Bach Nguyen, Quang Minh Ngo

School of Electrical and Electronic Engineering, Hanoi University of Industry, Hanoi, 11914, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

University of Science and Technology of Hanoi, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Hanoi, Vietnam

PIII-27 ENHANCED CONTRAST AND SENSITIVE PLASMONIC METASURFACE-BASED DUAL-BAND SENSOR WITH TRUNCATED PYRAMIC

Thu Trang Hoang, Thanh Son Pham, and Quang Minh Ngo

Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam

Hanoi University of Industry, 28 Cau Dien, Bac Tu Liem, Hanoi, Vietnam

University of Science and Technology of Hanoi, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam

PIII-28 COLOSSAL CROSS-KERR NONLINEARITY IN A FOUR-LEVEL CASCADE-TYPE ATOMIC SYSTEM

Le Van Doai, Dinh Xuan Khoa, Nguyen Thi Quynh Anh, Ho Hai Quang, Nguyen Van Ai, Phan Van Thuan, Thai Van Thanh and Nguyen Thi Thu Hien

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

Ha Tinh University, 26/3 Street, Ha Tinh Province, Vietnam

Department of Education and Training of Nghe An, Nghe An Province, Vietnam

Vinh Long University of Technology and Education, 73 Nguyen Hue Street, Vinh Long Province, Vietnam

Ho Chi Minh City University of Industry and Trade, Ho Chi Minh City, Vietnam

PIII-29 INVESTIGATION OF THERMAL CONDUCTIVITY AND PHOTOTHERMAL PERFORMANCE OF CARBON NANOTUBE-COPPER NANOPARTICLE HYBRID NANOFLUIDS

Nguyen Thi Thanh, Le Phuong Thao, Luong Minh Quan, Do Tuan, Pham Van Trinh, Nguyen Van Tu, Pham Van Nhat, Pham The Tan, Tran Thu Trang, Nguyen Thi Khanh Van, Vu Xuan Hoa, Trinh Thi Linh and Nguyen Van Hao

TNU-University of Sciences, Thai Nguyen, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Vietnam National University of Agriculture, Hanoi, Vietnam

University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam

Hung Yen University of Technology and Education, Hung Yen, Vietnam

PIII-30 CONCENTRATION-DEPENDENT TERBIUM EFFECTS ON THE TERAHERTZ OPTICAL PROPERTIES OF Ce/Tb-DOPED LuAg CRYSTALS

Phan Xuan Thien, Miezael Talara, Rikito Murakami, Masao Yoshino, Kyoung Jin Kim, Akira Yoshikawa, Nobuhiko Sarukura, and Takeshi Yasui

Institute of Post-LED Photonics (pLED), Tokushima University, Japan

Institute of Laser Engineering, Osaka University, Japan

New Industry Creation Hatchery Center (NICHe), Tohoku University, Japan

Institute for Materials Research (IMR), Tohoku University, Japan

PIII-31 SOLUTION PLASMA-ASSISTED PREPARATION OF STABLE GO-AgNP NANOFLUIDS WITH ENHANCED THERMAL AND PHOTOTHERMAL PERFORMANCE

Nguyen Thi Ngoc Mai, Do Tuan, Pham Van Nhat, Pham The Tan, Phan Ngoc Minh, Pham Van Trinh, Nguyen Van Hao

Thai Nguyen University of Sciences, Thai Nguyen, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam

University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam
Hung Yen University of Technology and Education, Hung Yen, Vietnam
Graduate University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam

PIII-32 PLASMA-ENGINEERED AUNP/DWCNT/PEDOT HYBRID COMPOSITES: FABRICATION, STRUCTURAL, AND OPTICAL CHARACTERIZATION

Le Phuong Thao, Nguyen Ngoc Anh, Cao Thi Thanh, Nguyen Thi Huyen, Do Tuan, Nguyen Thi Thanh, Pham Van Trinh, Pham Van Nhat, Phung Viet Tiep, Nguyen Van Hao, Phan Ngoc Minh, Nguyen Van Tu

TNU - University of Sciences, Thai Nguyen, Vietnam

Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Vietnam National University of Agriculture, Hanoi, Vietnam

University of Science and Technology of Hanoi, VAST, Hanoi, Vietnam

Graduate University of Science and Technology, VAST, Hanoi, Vietnam

PIII-33 SYNTHESIS AND PHOTOLUMINESCENCE PROPERTIES OF CARBON NANODOTS FROM DIFFERENT CARBON PRECURSORS

Tran Thu Huong, Lapina Viktoryia A, Ha Thi Phuong, Le Thi Vinh, Hoang Thi Khuyen, Nguyen Manh Hieu, and Nguyen Duc Van

Institute of Materials Science, Vietnam Academy of Science and Technology, 18-Hoang Quoc Viet, Hanoi, Vietnam.

Institute of Physics of the Belarus Academy of Sciences, Ave. Nezaleshnasti, 70, Minsk, 220072, Republic of Belarus.

Department of Chemistry, Hanoi Medical University, 1-Ton That Tung, Hanoi, Vietnam.

Faculty of Basic Science, Hanoi University of Mining and Geology, 18-Pho Vien, Hanoi, Vietnam.

PIII-34 INVESTIGATION OF THE OXIDASE-LIKE ACTIVITY OF PLATINUM NANOPARTICLES USING TMB AS A CHROMOGENIC SUBSTRATE

Nguyen Vu Anh Tuyet, Tran Thu Trang, Vu Xuan Hoa, Pham Thi Thu Ha, Lai Tong Anh Kiet, Đặng Hoài Nam, Ly Tien Phong, Nguyen Quang Dat, Hoang Viet Hung

TNU-University of Sciences, Phan Dinh Phung ward, Thai Nguyen province 24000, Vietnam

Hung Yen High School for the Gifted, No. 1 Chu Van An Street, An Ta Ward, Hung Yen Province, Vietnam.

PIII-35 NANOCRYSTALLINE GRAPHITIC CARBON-COATED Cu_nANOWIRES PREPARED BY LOW TEMPERATURE CHEMICAL

**VAPOR DEPOSITION AS A LOW COST, HIGHLY EFFICIENT
SURFACE ENHANCED RAMAN SCATTERING PLATFORM**

**Viet Tuyen Nguyen, Van Tan Tran, An Bang Ngac, Nguyen Hai Pham,
Van Chuc Nguyen, Trong Tam Nguyen, Nguyen Quoc Trinh Bui,
The Nam Dinh, Cong Doanh Sai, Canh Viet Nguyen, Thi Ngoc Anh Tran,
Thi Hong Nhung Nguyen, Thi Ha Tran**

*VNU University of Science, Faculty of Physics, 334 Nguyen Trai, Thanh Xuan,
Hanoi*

Hanoi University of Mining and Geology, Dong Ngac, Hanoi.

**PIII-36 OPTICAL PROPERTIES AND GROWTH KINETICS OF HIGHLY
UNIFORM 40 NM GOLD NANOPARTICLES SYNTHESIZED BY
GLUCOSE MEDIATED SEEDED GROWTH**

**Tran Thi Thu Ha, Nguyen Duc Toan, Nguyen Trong Nghia, Nguyen Thi
Thuy, Nguyen Thi Bich Ngoc, Nguyen Thi Minh Huyen, Nghiem Thi Ha Lien**
Institute of Physics, 10 Dao Tan, Giang Vo, Hanoi, Vietnam

*University of Science and Technology of Hanoi, 18 Hoang Quoc Viet, Nghia Do,
Hanoi, Vietnam*

**PIII-37 THEORETICAL MODELING AND NUMERICAL SIMULATION OF
THERMAL DRIFT IN CO-PACKAGED OPTICS (CPO)
OPTOELECTRONIC PACKAGING**

**Hai Bui Van, Ninh Dang Hai, Trang Le Ngoc, Dung Hoang Anh, Oanh Vu
Thi Kim, Tu Nguyen Xuan, Phuong Bui Thi Thu, Kha Nguyen Van, Thang
Nguyen Duc, Hoang Pham Huy**

Le Quy Don Technical University, Hanoi, Vietnam

Institute of Physics, Vietnam Academy of Science and Technology, Hanoi, Vietnam

VNU University of Engineering and Technology

Viettel High Technology Industries Corporation, Hanoi, Vietnam

**PIII-38 STRUCTURAL PARAMETER OPTIMIZATION OF As_2S_5
CHALCOGENIDE SUSPENDED-CORE FIBERS FOR MID-INFRARED
SUPERCONTINUUM GENERATION**

**Minh Nguyen Cao, Thu Duong Thi Minh, Uoc Thai Van, Linh Nguyen Kim,
Nhu Nguyen Thi Y, Vinh Doan The Ngo, Thuan Bui Dinh, Dung Nguyen Tien,
Hung Luu Tien, Thuy Do Thanh, Trung Le Canh**

Vinh University, 182 Le Duan Street, Nghe An Province, Vietnam

**PIII-39 COMPOSITION-DEPENDENT PHOTOCATALYTIC ACTIVITY AND
MAGNETIC RECOVERY OF $\text{g-C}_3\text{N}_4/\text{Fe}_3\text{O}_4$ NANOCOMPOSITES**

**Nguyen Ba Khuong, Giang Thi Thanh Thuy, Pham Trung Kien, Mai Hong
Quy, Nguyen Cao Khang, Do Danh Bich**

*Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy Street,
Cau Giay, Hanoi, Vietnam*

PIII-40 STUDY ON NON-DESTRUCTIVE EVALUATION METHODS FOR YAG CRYSTALS

Hanayo Takenaka, Ryosuke Fujii, Shingo Ono, Akira Yoshikawa, Marilou Cadatal-Raduban, Nobuhiko Sarukura, Noriko Chikumoto, Toshihiko Shimizu, and Mayuko Koga

Graduate school of Engineering, University of Hyogo, Himeji, Hyogo 671-2280, Japan

Department of Engineering, Nagoya Institute of Technology, Nagoya, Aichi 466-8555, Japan

Graduate school of Engineering, Nagoya Institute of Technology, Nagoya, Aichi 466-8555, Japan

Institute for Materials Research, Tohoku University, Sendai, Miyagi 980-8577, Japan

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

Unitec Institute of Technology, Auckland 1025, New Zealand

PIII-41 FABRICATION OF MICROSTRUCTURES FOR REFRACTIVE-INDEX CONTROL IN ZINC OXIDE USING ULTRASHORT-PULSE LASER MICROMACHINING

Ryosuke Fujii, Haruto Miura, Hiromi Terashima, Verdad C. Agulto, Shiyu Feng, Kosaku Kato, Makoto Nakajima, Ono Shingo

Department of Physical Science and Engineering, Nagoya Institute of Technology, Gokiso-cho, Showa-ku, Nagoya, Aichi 466-8555, Japan

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

PIII-42 SYNTHESIS AND PURIFICATION OF HIGHLY LUMINESCENT CsPbBr₃ PEROVSKITE NANOCRYSTALS WITH HIGH PHOTOLUMINESCENCE QUANTUM YIELD

Nguyen Ha Phuong, Tran Thi Thu Uyen, Le Huu Phuoc, Quynh Le-Van

VinUni-Illinois Smart Health Center, VinUniversity, Hanoi, Vietnam.

Centre of Materials Innovation and Technology, VinUniversity, Hanoi, Vietnam

Center for Environmental Intelligence, VinUniversity, Hanoi, Vietnam

College of Engineering and Computer Science, VinUniversity, Hanoi, Vietnam

PIII-43 ACHIEVING HIGH PLQY IN CsPbI₃ PEROVSKITE QUANTUM DOTS THIN FILMS VIA A DUAL STRATEGY

Tran Thi Thu Uyen, Nguyen Ha Phuong, Quynh Le-Van

VinUni-Illinois Smart Health Center, VinUniversity, Hanoi, Vietnam.

Centre of Materials Innovation and Technology, VinUniversity, Hanoi, Vietnam

Center for Environmental Intelligence, VinUniversity, Hanoi, Vietnam

College of Engineering and Computer Science, VinUniversity, Hanoi, Vietnam

PIII-44 OPTIC EXPRESSION: A MÖIRÉ-INTERFEROMETRIC FRAMEWORK FOR A CONCENTRATION-DEPENDENT OPTICAL ORDER PARAMETER

Chur Chin

Department of Family Medicine, Dong-eui Medical Center, Busan, Republic of Korea

PIII-45 DEEP LEARNING-BASED INTRUSION DETECTION FOR OPTICAL COMMUNICATION NETWORKS USING HYBRID CNN-LSTM ARCHITECTURE

Le Anh Tu

Academy of Military Science and Technology

PIII-46 AN EFFICIENT ITERATIVE TRIMEAN FILTERING STRATEGY FOR BORN-BASED OPTICAL TOMOGRAPHY

Nguyen Dai Hung, Luong Thi Theu, L. T. Ha, Nguyen Viet Duc Anh, Tran Quang Huy, and Tran Duc-Tan

Hoa Binh University, Bui Xuan Phai, Tu Liem, Hanoi, Vietnam

Faculty of Physics and Technology, TNU-University of Sciences, Thai Nguyen, Vietnam

Faculty of Physics, Hanoi Pedagogical University 2, Phu Tho, Vietnam

Faculty of Electrical and Electronic Engineering, Phenikaa University, Hanoi, Vietnam

PIII-47 COMPUTATIONAL DESIGN OF 2D METAL-SEMICONDUCTOR VANDER WAALS HETEROSTRUCTURES FOR NEXT-GENERATION OPTOELECTRONIC DEVICES

Pham T. Truong, Huynh V. Phuc, Nguyen V. Hieu, Nguyen N. Hieu, Tran P. T. Linh, Le M. Duc, Nguyen V. Chuong

Dong Thap University;

Danang University of Science and Education;

Duy Tan University; 4Hanoi University of Education;

Le Quy Don Technical University

PIII-48 INFLUENCE OF SUPPLEMENTAL LED LIGHT INTENSITIES ON PLANT GROWTH AND THE ANTIMICROBIAL AND ANTIOXIDANT ACTIVITIES OF *Perilla frutescens* ESSENTIAL OIL

Ha Thi Thu Chu*, Thi Nghiem Vu, Tran Quoc Tien, Quang Cong Tong, Thuy Thi Thu Dinh

Department of Plant Resources, Institute of Biology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Nghia Do, Ha Noi, Viet Nam

Email: cttha@ib.vast.vn

*Faculty of Natural Sciences, Electric Power University, 235 Hoang Quoc Viet,
Nghia Do, Ha Noi, Viet Nam*

Email: nghiemvt78@gmail.com

*Institute of Materials Science, Vietnam Academy of Science and Technology, 18
Hoang Quoc Viet, Nghia Do, Ha Noi, Vietnam*

Email: tientq@ims.vast.ac.vn (T.Q.T.); congtrq@ims.vast.ac.vn (Q.C.T.)

*Institute of Chemistry, Vietnam Academy of Science and Technology, 18 Hoang
Quoc Viet, Nghia Do, Ha Noi, Vietnam*