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| SESSION C: OPTICS, LASER AND APPLICATIONS |
| <i>November 27, 2012 (Tuesday)</i> |

Chairperson: Prof. Dr. Tran Ba Chu (Academy of Military Sci. & Tech, Hanoi)

Dr. Nguyen Huy Bang (Vinh University)

- (C-01)
13:30 – 13:55 **HOLOGRAPHIC ZONE PLATES: FABRICATION AND APPLICATION IN OPTICAL SIGHTS**
(Invited talk)
Duong Chi Dung, Le Duy Tuan, Phan Nguyen Nhue, Le Hoang Hai
Le Qui Don Technical University Hanoi
- (C-02)
13:55 – 14:20 **MICRO HOLOGRAPHIC RECORDING IN PHOTOPOLYMER**
(Invited talk)
Van-Thai Pham, Ki-Soo Lim
Institute of Materials Science, VAST
- (C-03)
14:20 – 14:35 **DEVELOPMENT OF A COMPACT, VARIABLE PULSE-WIDTH NANOSECOND DIODE LASER**
Dam Trung Thong, Dinh Van Trung, Nguyen Dinh Hoang
Institute of Physic,VAST
- (C-04)
14:35 – 14:50 **ENHANCEMENT FOR THE TRANSMISSION IN NEAR-IR REGION OF HIGHLY-CONDUCTING ZnO THIN FILMS USED FOR TRANSPARENT ELECTRODES**
Phạm Duy Phong, Tran Cao Vinh, Ta Thi Kieu Hanh, Cao Thi My Dung, Nguyen Huu Truong, Vu Thi Diu, Vo Thi Kim Loan
HCM University of Science, VNU HCM
- (C-05)
14:50 – 15:05 **DESIGN A MIRROR-LENS OBJECTIVE FOR VARIABLE MAGNIFICATION TELESCOPE**
Ha Nguyen Binh, Pham Hong Tuan, Nguyen Ngoc Tu, Nguyen Tuan Vu
NACENTEC, Hanoi
- (C-06)
15:05 – 15:20 **MULTI-TRIPS PULSE COMPRESSION BY THE SYSTEM OF NONLINEAR COUPLER AND OPTICAL AMPLIFICATION FIBER WITH CW PUMP**
Chu Van Bien, Chu van Lanh, Le Thi Ngoc Hieu
Hong Duc University, Thanh Hoa
- 15:20 – 13:35** **Coffee Break**

Chairperson: Prof. Dr. Vu Doan Mien (IMS, VAST)
Dr. Nguyen Cong Thanh (IOP, VAST)

- (C-07)
15:35 – 16:00 **THE APPLICATION OF LOW POWER SEMICONDUCTOR LASER ON THE REHABILITATION TREATMENT FOR DIABETICS TYPE II GET A CEREBROVASCULAR ACCIDENT**
(Invited talk)
Tran Minh Thai, Can Van Be, Ngo Thi Thien Hoa
University of Technology, VNU HCM City
- (C-08)
15:00 – 16:25 **SPECTRAL DYNAMICS OF ALL SOLID -STATE ULTRAVIOLET Ce: LiCaF LASER EMISSIONS**
Pham Hong Minh, Pham Huy Thong, Nguyen Phan Nhat, Nguyen Dai Hung, Nobuhiko Sarukura
(Invited talk)
Institute of Physics, VAST, Hanoi
- (C-09)
16:25 – 16:40 **MAKING AND INVESTIGATION OF THE SECOND HARMONIC GENERATION EFFECT OF KDP SINGLE CRYSTALS**
Vinh Phan Trung, Anh Quynh Le, Tran Le and Khoa Nhat Phan,
Ho Chi Minh City University of Science, VNU HCM
- (C-10)
16:40 – 17:55 **FIBER-COUPLED 670 nm AND 940 nm HIGH-POWER DIODE LASER MODULES FOR MEDICAL APPLICATIONS**
Tong Quang Cong, Pham Van Truong, Do Thi Thanh, Vu Doan Mien and Tran Quoc Tien
Institute of Materials Science, VAST
- (C-11)
16:55 – 17:10 **STUDY OF ACTIVE LIGHT OPTICAL SYSTEM IN KINECT CAMERA**
Van Vu Nguyen, Ngoc Tu Nguyen, Hong Tuan Pham
National Center for Technology Progress- NACENTEC.
- (C-12)
17:10 – 17:25 **SIMULATION OF SHACK – HARTMANN PATTERNS FOR STUDY OF WAVEFRONT SENSOR**
Vu Van Huyen, Le Duy Tuan, Le Hoang Hai
Le Qui Don Technical University, Hanoi
- 18:00** **CONFERENCE PARTY**

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| SESSION C: OPTICS, LASER AND APPLICATIONS |
| <i>November 28, 2012 (Wednesday)</i> |

Chairperson: Prof. Dr. Ho Quang Quy (Academy of Military Sci. & Tech, Hanoi)

Dr. Tran Quoc Tien(IMS, VAST)

(C-13)

08:30 - 08:55

DESIGN AND SIMULATION OF THE DIAL LIDAR SYSTEM FOR MEASURING TROPOSPHERIC OZONE

(Invited talk)

Pham Minh Tien and Dinh Van Trung

Ho Chi Minh City Institute of Physics, VAST

(C-14)

08:55 - 09:20

APPLICATION OF COLLIMATION TECHNOLOGY USING INFRARED IN THE HIGH-ACHIEVEMENT SHOOTING SIMULATOR

(Invited talk)

Pham Chi Hieu, Giang Manh Khoi, Vũ Văn Liệu, Trần Xuân Thịnh

Center for Technology Development and Transfer, Hanoi

(C-15)

09:20 - 09:35

DESIGN OF A VARIABLE MAGNIFICATION TELESCOPE

Ha Nguyen Binh, Pham Hong Tuan, Nguyen Ngoc Tu, Nguyen Tuan Vu

National Center for Technology Progress- NACENTEC.

(C-16)

09:35 - 09:50

LUMINESCENCE DATING OF ARCHAEOLOGICAL MATERIALS – DETERMINATION OF ANNUAL DOSE USING HIGH RESOLUTION GAMMA SPECTROMETRY

Bui Huu Thai, Le Hong Khiem

College of Military Aviation officers, Nha Trang, Khanh Hoa

(C-17)

09:50 - 10:05

MEASURING ON SIX EFFECTIVE PARAMETERS OF BIO-OPTICAL MATERIALS USING STOKES PARAMETERS

Pham Thi Thu Hien and Huynh Quang Linh

Ho Chi Minh City University of Technology, HCM

(C-18)

10:05 - 10:20

SIMULATION OF THE THERMAL QUENCHING EFFECT IN THERMOLUMINESCENCE STUDY

Bui Thi Bich Hanh, Le Hong Khiem, Le Thi Quynh Huong

Nha Trang Pedagogic College, Nha Trang, Khanh HOa

- (C-19)
10:20 - 10:35 **MOLECULAR CONSTANTS OF THE 21P STATE IN NaLi MOLECULE**
 Le Canh Trung, Nguyen Tien Dung, Phan Van Thuan, Dinh Xuan Khoa, Nguyen Huy Bang
 Vinh University
- 10:35 – 10:45** **Coffee Break**

Chairperson: Prof. Dr. Trinh Dinh Chien (VNU Hanoi)
Prof. Dr. Ta Van Tuan (NACENTECH, Hanoi)

- (C-20)
10:45 - 11:10 **BISTABILITY CHARACTERISTICS OF THE REFLECTED SIGNAL THROUGH A SYMETRIC NONLINEAR MICHELSON INTERFEROMETER**
(Invited talk)
Nguyen Manh An and Nguyen Van Hoa
 Hong Duc University, Thanh HOa City
- (C-21)
11:10 - 11:35 **SOME MEDICAL IMAGING APPLICATIONS USING IRRADIATION OF NEAR INFRARED LED ON LIVING TISSUE**
(Invited talk)
Huynh Quang Linh, Tran Van Tien, Nguyen Kim Chung, Nguyen Van Hung, Pham Thi Hai Mien
 Ho Chi Minh City University of Technology, HCM city
- (C-22)
11:35- 11:50 **DEVELOPMENT OF A RAYLEIGH LIDAR SYSTEM FOR STUDYING CHARACTERISTICS OF STRATOSPHERIC LAYER ABOVE HANOI**
Nguyen Xuan Tuan, Dinh Van Trung, Dam Trung Thong, Bui Van Hai
 Institute of Physics. VAST
- (C-23)
11:50- 11:05 **Q-SWITCH ACTIVE Nd:YVO₄ LASER WITH FAST CHOPPER MODULATION**
Do Quoc Khanh, Nguyen Dinh Hoang, Dinh Van Trung, Nguyen Van Hao, and Nguyen Dai Hung
 Institute of physics, VAST, HaNoi
- (C-24)
11:05- 12:20 **THE NON- UNIFORMITY OF THE INFRARED IMAGING SYSTEMS USING FPA AND SOME ITS CORRECTION TECHNIQUES**

Minh Nguyen Quang, Thanh Nguyen Van, Thi Nguyen Ba

National Center for Technology Progress, Hanoi

(C-25)
12:20 -12:35

**CONTROLLING ABSORPTION AND DISPERSION OF THE FIVE-
LEVEL CASCADE SCHEME IN RUBIDIUM ATOMS BASED ON
ELECTROMAGNETICALLY INDUCED TRANSPARENCY**

**Pham Van Trong, Le Van Doai, Le Nguyen Mai Anh, Nguyen Huy Bang
and Dinh Xuan Khoa**

Vinh University

12:35-13:30

Lunch Buffer

**Chairperson: Prof. Dr. Pham Hong Tuan (NACENTECH, Hanoi)
Dr. Le Hoang Hai (Le Quy Don Uni., Hanoi)**

(C-26)
13:30 – 13:55

**SIMULATION THE DYNAMIC OF THE DIELECTRIC NANO-
PARTICLE IN OPTICAL TWEEZER USING COUNTER-
PROPAGATING PULSES**

(Invited talk)

Quang Quy Ho, Dinh Hai Hoang and Mai Van Luu

Pedagogical University Nghean, Vinh City, Nghe An

(C-27)
13:55 – 14:20

**SELF-QUENCHING CAVITY IN PICOSECOND LASER PULSE
GENERATION BY NOBLE METALLIC NANO-PARTICLES**

(Invited talk)

N.T.H. Lien, N.T.M. An, V. Duong, D.Q. Hoa,

Institute of Physic, VAST, Hanoi

(C-28)
14:20 – 14:35

**THE APPLICATION OF LOW POWER SEMICONDUCTOR LASER
THERAPY FOR THE REHABILITATE INJURED LIVER OF
DIABETICS TYPE II**

Tran Minh Thai, Can Van Be, Ngo Thi Thien Hoa, Tran Thien Hau

University of Technology, Hochiminh City

(C-29)
14:35 – 14:50

**AUTO FLUORESCENCE OF TUMOUR LIVER AND NORMAL LIVER
TISSUE**

Nguyen Dinh Hoang, Nguyen Thi Khanh Van and Nguyen Thanh Binh

Institute of physics, VAST

(C-30)
14:50 – 15:05 **DETERMINATION OF ATMOSPHERIC AEROSOL EXTINTION
PROFILES WITH A RAMAN LIDAR SYSTEM OVER HANOI**
**Bui Van Hai, Dinh Van Trung, Nguyen Xuan Tuan, Nguyen Dinh Hoang,
Dam Trung Thong and Nguyen Thanh Binh**

Institute of physics, VAST

(C-31)
15:05 – 15:20 **INVESTIGATION OF EIT ENHANCED KERR NONLINEARITY IN
THE FIVE-LEVEL CASCADE SCHEME OF RB85 COLD ATOMS**
Le Van Doai, Pham Van Trong, Dinh Xuan Khoa and Nguyen Huy Bang
Vinh University

15:20 – 15:35 **Coffee Break**

Chairperson: Prof. Dr. Nguyen Manh An (Hongduc Uni. Thanh Hoa)
Prof. Dr. Do quang Hoa (IOP, VAST)

(C-32)
15:35 – 16:00 **DESIGN CONSIDERATIONS OF A SIMPLE OPTICAL LWIR
IMAGING SYSTEM**
(Invited talk)

Minh Nguyen Quang, Tuan Ta Van, Binh Nguyen Van

National Center for Technology Progress, Hanoi

(C-33)
16:00 – 16:15 **SOME CHARACTERISTICS OF THE SOLID-STATE LASER
USING Nd:YVO₄ CRYSTAL PUMPED BY HIGH-POWER
LASER DIODE**

**Nguyen Van Hao, Le Thị Kim Cuong, Liamorkamar Keryang,
A.Grabtchikov, Pham Long and Nguyen Dai Hung**

Institute of Physics, VAST

(C-34)
16:15 – 16:30 **CALCULATION OF THE INFRARED RADIATION CAVITY USING
FOR NON-UNIFORMITY CORRECTION (NUC) OF THE LWIR
CAMERA**
**Minh Nguyen Quang, Thanh Nguyen Van, Thi Nguyen Ba, Tuan Ta Van,
Binh Nguyen Van**

National Center for Technology Progress, Hanoi

16:30 – 17:30 **POSTER I**

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| SESSION C: OPTICS, LASER AND APPLICATIONS |
| <i>November 29, 2012(Thursday)</i> |

Chairperson: Prof. Dr. Dinh Xuan Khoa (Vinh University)

Prof. Dr. Tran Minh Thai (University of Technology, HCM)

- (C-35)
08:30 - 08:55 **MEASURING SINGLE MOLECULE DIFFUSION TIME USING FLUORESCENCE CORRELATION SPECTROSCOPY**
(Invited talk)
Nguyen Thi Thanh Bao, Dinh Van Trung
Institute of Physics, VAST, Hanoi
- (C-36)
08:55 - 09:20 **FINITE DIFFERENCE TIME DOMAIN METHOD FOR ANALYSES OF PHOTONIC CRYSTAL VERTICAL CAVITY SURFACE EMITTING LASER**
(Invited talk)
Vu Ngoc Hai and Tran Quoc Tien
NTT Institute of Hi-Technology, Nguyen Tat Thanh College
- (C-37)
09:20 - 09:35 **INFLUENCE OF THE PARAMETERS OF THE NONLINEAR MEDIUM ON THE OPTICAL BISTABLE SYSTEM**
Nguyen Thanh Lam, Le Thi Quynh Anh, Tran Ba Chu
Ho Chi Minh City University of Science, VNU, HCM
- (C-38)
09:35 - 09:50 **PHOTOLUMINESCENCE OF VERTICAL ALIGNED SILICON NANOWIRE ARRAYS PREPARED BY METAL-ASSISTED ELECTROCHEMICAL ETCHING**
Dao Tran Cao, Luong Truc Quynh Ngan, and Cao Tuan Anh
Institute of Materials Science, VAST
- (C-39)
09:50 - 10:05 **INFLUENCE OF NONLINEAR FREQUENCY CHIRP ON PULSE-PARAMETERS FOR THE SUPER-GAUSSIAN SHAPE PULSE IN THE ACTIVE MEDIUM OF THE CPM DYE LASER**
Trinh Dinh Chien, Giang Manh Khoi, Be Thu Thuy, Bui Xuan Kien
Hanoi University of Science, VNU Hanoi,
- (C-40)
10:05 - 10:20 **LASER-INDUCED SYNTHESIS OF Au-Ag ALLOY NANOPARTICLES IN DISTILLED WATER**
Trinh Thi Hue, Nguyen The Binh, Tran Trong Duc
University of Science, VNU Hanoi

(C-41)
10:20 - 10:35

**NEGATIVE INDEX OF REFRACTION IN RB85 ATOMIC GAS
UNDER ELECTROMAGNETICALLY INDUCED TRANSPARENCY
REGIME**

Phan Van Dao, Le Van Doai, Dinh Xuan Khoa and Nguyen Huy Bang

Dong Nai University of Technology, Bien Hoa City, Vietnam

(C-42)
10:35 - 10:50

**EFFECT OF PARTICLE SIZE DEPENDENCE IN SURFACE
PLASMON BASED FLUORESCENCE ENHANCEMENT AND
QUENCHING**

**Chu Viet Ha, Pham Minh Tan, J.C. Brochon, Nghiem Thi Ha Lien,
Nguyen Thi Thuy and Tran Hong Nhung**

Institute of Physics, VAST, Ha Noi, Vietnam

10:50 – 11:00

Coffee Break

11:00 – 12:30

POSTER II

12:30 – 13:30

Lunch Buffer