

SESSION B:
SPECTROSCOPY OF CONDENSED MATTER AND NANO – MATERIALS
<i>November 27, 2012 (Tuesday)</i>

Chairperson: Prof. Dr. Vu Xuan Quang (Duy Tan Uni., Da Nang)

Prof. Dr. Luc Huy Hoang (Hanoi Uni. of Edu., Vietnam)

- (B-01)
13:30 – 13:55 **PROGRESSES IN NANOMATERIALS STUDIES**
(Invited talk)
Pham Van Huong and Huynh Thanh Dat
University of Bordeaux 1, France
- (B-02)
13:55 – 14:20 **SYNCHROTRON RADIATION RESEARCH AND APPLICATION AN OVERVIEW**
(Invited talk)
Nguyen Thanh Binh
Institute of Physics, VAST, Ha Noi
- (B-03)
14:20 – 14:35 **STRUCTURAL AND OPTICAL PROPERTIES OF CuWO₄ SYNTHESIZED BY THE CHEMICAL MICROWAVE-ASSISTED METHOD**
Pham Van Hanh, Nguyen Ngoc Dien, Pham Van Hai and Luc Huy Hoang
Hanoi National University of Education, Ha Noi
- (B-04)
14:35 – 14:50 **FABRICATION OF ZnO p-n HOMOJUNCTION DEVICE GROWN BY SPUTTERING MAGNETRON DC,**
Dao Anh Tuan, Phan Thi Kieu Loan and Le Vu Tuan Hung
Ho Chi Minh City University of Science - VNU HCMC
- (B-05)
14:50 – 15:05 **EFFECT OF HF CONCENTRATION IN THE ELECTROCHEMICAL ETCHING SOLUTION ON THE PHOTOLUMINESCENCE OF AMORPHOUS SiC**
Cao Tuan Anh, Dao Tran Cao, and Luong Truc Quynh Ngan
Institute of Physics, VAST
- (B-06)
15:05 – 15:20 **STUDY ON PROPERTIES OF BULK-HETEROJUNCTION SYSTEM OF ITO/ ZnO NRS/ P3HT: PCBM AND ITO/ ZnO FILM/ ZnO NRs/ P3HT: PCBM**
Son Hoang Cao Tran, Quoc Kien Luu, Ngoc Pham Kim, Top Khac Le, Nhan Thuc Chi Ha, Dinh Nang Nguyen, Hieu Van Le
Ho Chi Minh City University of Science - VNU HCMC

15:20 – 13:35

Coffee Break

Chairperson: Prof. Dr. Le Vu Tuan Hung (VNU Ho Chi Minh)
Dr. Nguyen Thanh Binh (IOP, VAST)

- (B-07)
15:35 – 16:00 **THE SYNTHESIS OF MnWO₄/SBA-15 AND ITS PHOTOCATALYTIC APPLICATION**
(Invited talk)
Pham Van Hanh, Nguyen Thi Huong, Pham Van Hai and Luc Huy Hoang
Hanoi National University of Education, Ha Noi
- (B-08)
15:00 – 16:25 **PHOTOLUMINESCENCE CHARACTERISTICS OF La₂O₃ AND SiO₂ COATED La₂O₃ NANOPARTICLES SYNTHESIZED BY RESINATE SOL-GEL METHOD**
Dinh Son Thach, Dau Tran Anh Nguyet, Le Thai Duy
Ho Chi Minh City University of Science - VNU HCMC, HCM City, Vietnam
- (B-09)
16:25 – 16:40 **GROWTH OF MgO THIN FILMS ON GLASS SUBSTRATES**
Nguyen Van Khanh
Hanoi National University of Education, Hanoi
- (B-10)
16:40 – 17:55 **THE OPTICAL AND ELECTROCHEMICAL PROPERTIES OF ZnS/CdSe CO-SENSITIZED TiO₂ SOLAR CELLS,**
HUYNH Chi Cuong, HA Thanh Tung, LAM Quang Vinh, NGUYEN Thai Hoang, DUONG Ai Phuong
Ho Chi Minh City University of Science - VNU HCMC
- (B-11)
16:55 – 17:10 **INFLUENCE OF RE³⁺ ION ON PHOSPHORESCENCE PROPERTIES IN SrAl₂O₄: Eu³⁺, Dy³⁺, Re³⁺,**
Tran Thi Hoai Giang, Tran Ngoc
Quang Binh University, Quang Binh
- (B-12)
17:10 – 17:25 **RESEACH AND FABRICATION PHOTOCATALYST MATERIALS SYSTEM THIN FILM ZnO/ZnO ROD/TiO₂**
Vo Kien Trung, Pham Thi Thu Quyen, Lam Quang Vinh, Vu Thi Hanh Thu
Ho Chi Minh City University of Science - VNU HCMC
- 18:00 **CONFERENCE PARTY**

SESSION B:	
SPECTROSCOPY OF CONDENSED MATTER AND NANO – MATERIALS	
<i>November 28, 2012 (Wednesday)</i>	

Chairperson: Dr. Lam Quang Vinh (VNU Ho Chi Minh)
Dr. Vu Phi Tuyen (IMS, VAST, Vietnam)

(B-13)
08:30 - 08:55

**INVESTIGATION OF ANATASE TiO₂ PROPERTIES USING
GENERALIZED GRADIENT APPROXIMATION**

(Invited talk)

**Duong Quoc Van, Nguyen Minh Thuy, Bui Thanh Liem and Nguyen
Huy Viet**

Hanoi National University of Education, Hanoi

(B-14)
08:55 - 09:20

**OPTICAL PROPERTIES OF QUANTUM DOT ZsS:Mn AND THE
ROLE OF IMPURITY CONCENTRATION**

(Invited talk)

**Nguyen Ngoc Phuong, Nguyen Phuong Binh, Nguyen Manh Tuan and
Nguyen Thanh Hoang**

Ho Chi Minh City Institute of Physics,

(B-15)
09:20 - 09:35

**THE EFFECTS OF METHANE PRECURSOR CONCENTRATION
ON STRUCTURAL AND OPTICAL CHARACTERIZATIONS OF
AMORPHOUS SILICON CARBIDE FILMS DEPOSITED BY
PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION
(PECVD)**

**Ngo Quang Khai, Nguyen Do Minh Quan, Pham Hoai Phuong, Pham
Kien Trung, Tran Quang Trung**

Ho Chi Minh City University of Science - VNU HCMC

(B-16)
09:35 - 09:50

**PREPARATION OF HIGHLY VISIBLE-LIGHT EFFICIENT N-
DOPED TiO₂ PHOTOCATALYST FOR INACTIVATION
BACTERIA BY HYDROLYSIS METHOD**

**Do Minh Thanh, Nguyen Thi Thuy Hang, Nguyen Cao Khang, Nguyen
Thi Khanh Hoa, Pham Thi Van, Duong Van Lam and Nguyen Van
Minh**

Hanoi National University of Education, Hanoi

(B-17)
09:50 - 10:05

**STRUCTURAL AND OPTICAL PROPERTIES OF ZnWO₄:Er³⁺
CRYSTALS**

Nguyen Manh Hung, Du Thi Xuan Thao and Nguyen Van Minh

University of Mining – Geology, Hanoi.

(B-18)
10:05 - 10:20

PHOTOCATALYTIC ACTIVITY ENHANCING FOR TiO₂ THIN FILM UNDER VISIBLE LIGHT BY CO-DOPED NITROGEN AND CHROMIUM

Phung Nguyen Thai Hang, Duong Ai Phuong and Le Vu Tuan Hung
Ho Chi Minh City University of Science - VNU HCMC

(B-19)
10:20 - 10:35

ROOM TEMPERATURE FERROMAGNETISM IN CO-DOPED PbBTiO₃ LOW TEMPERATURE SOL-GEL MATERIALS

Le Thi Mai Oanh and Nguyen Van Minh
Hanoi National University of Education

10:35 – 10:45

Coffee Break

Chairperson: Prof. Dr. Vu Thi Kim Lien (Thai Nguyen Uni. Edu.)
Dr. Nghiem Thi Ha Lien (IOP, VAST)

(B-20)
10:35 - 11:00

OPTICAL PROPERTIES OF Dy³⁺ DOPED K₂GdF₅ HOST

(Invited talk)

Phan Van Do, Vu Phi Tuyen, N. M. Khaidukov, Vu Xuan Quang, Nguyen Trong Thanh

Water resources University, Ha Noi

(B-21)
11:00 - 11:25

PHOTOSTABILITY OF CdSe QUANTUM DOTS DISPERSED IN AQUEOUS SOLUTION

(Invited talk)

Chu Viet Ha, Tran Anh Duc, Tran Quang Huy, Le Tien Ha and Vu Thi Kim Lien

Thai Nguyen University of Education, Thai Nguyen, Vietnam

(B-22)
12:15- 11:40

RESISTANCE SWITCHING BEHAVIOR IN AMORPHOUS TiO₂ THIN FILMS

Kim Ngoc Pham, Trung Do Nguyen, Thi Kieu Hanh Ta, Duy Phong Pham, Van Hieu Le, Bach Thang Phan

Ho Chi Minh City University of Science - VNU HCMC

(B-23)
11:40- 11:55

ULTRASONIC REPEATED SPRAY PYROLYSIS OF CuInS₂ FILMS: ABSORBER LAYERS FOR SOLAR CELLS

Nguyen Duc Hieu, Tran Thanh Thai, Luu Thi Lan Anh, Doan Minh Thuy, Vo Thi Thanh Tuyen, Vu Thi Bich and Vo Thach Son

Quy Nhon University, Binh Dinh

(B-24)
11:55- 12:10 **STUDY STRUCTURAL, OPTICAL AND MAGNETIC
PROPERTIES OF Sm-DOPED BiFeO₃ MULTIFERROICS
PREPARED BY SOL - GEL METHOD**

Dao Viet Thang, Nguyen Van Minh and Du Thi Xuan Thao
University of Mining – Geology, Hanoi.

(B-25)
12:10 -12:25 **EFFECT OF WET-CHEMICAL PROCESSING OF SILICON
SUBSTRATE TO CHARACTERISTIC OF A-SI:H/C-SI
HETEROJUNCTION SOLAR CELLS**

Pham Kien Trung, Pham Hoai Phuong and Tran Quang Trung
Ho Chi Minh City University of Science - VNU HCMC

12:25-13:30 **Lunch Buffer**

Chairperson: Prof. Dr. Tran quang Trung (VNU HoChiMinh)
Prof. Dr. Pham Van Ben (VNU Hanoi)

(B-26)
13:30 – 13:55 **LATEST DEVELOPMENT IN RAMAN SPECTROSCOPY FOR THE
CHARACTERIZATION OF NANO- STRUCTURED MATERIALS**

(Invited talk)

Shifeng Liu, Jing Shen, Ramdane Benferhat, Renata Lewandowska
HORIBA Jobin Yvon S.A.S France

(B-27)
13:55 – 14:20 **TECHNOLOGY AND OPTICAL PROPERTIES OF QDs CdSe FOR
APLYCATION IN SOLAR CELLS**

(Invited talk)

**Tung Ha Thanh, Quang Vinh Lam, Thai Hoang Nguyen, Thanh Dat
Huynh**

Ho Chi Minh City University of Science - VNU HCMC

(B-28)
14:20 – 14:35 **STUDYING AND MANUFACTURE TCO/Cu/TCO MULTILAYER
TRANSPARENT CONDUCTIVE FILMS BY DC MAGNETRON
SPUTTERING**

**Tran Hoang Cao Son, Pham Van Thinh, Vu Thi Hanh Thu, Le Tran,
Nguyen Nang Dinh**

Ho Chi Minh City University of Science - VNU HCMC

(B-29)
14:35 – 14:50 **PbS QUANTUM DOTS SENSITIZED TiO₂ ELECTRODES FOR
PHOTOVOLTAIC CELLS ,Tung T. HA, Nhi T. T. NGUYEN**

Vinh. Q. LAM, Cuong C. HUYNH, Hoang T. NGUYEN, Dat T. HUYNH
Ho Chi Minh City University of Science - VNU HCMC

(B-30)
14:50 – 15:05

**FIRST PRINCIPLE STUDIES OF THE ELECTRONIC STRUCTURE
AND OPTICAL PROPERTIES OF AWO₄ GROUP MATERIALS (A=Fe,
Mn, Ni, Cu)**

Pham Van Hai, Nguyen Van Long and Luc Huy Hoang

Hanoi National University of Education, Hanoi, Vietnam

(B-31)
15:05 – 15:20

**SYNTHESIS AND CHARACTERIZATION OF NANOSTRUCTURED
MAGNETIC BEADS - QUANTUM DOTS CdSe/CdS-Fe₃O₄ FOR SOME
SPECIFIC APPLICATIONS**

**Nguyen Ngoc Phuong, Nguyen Dong Thao, Nguyen Manh Tuan, Nguyen
Thanh Hoang, Nguyen Le Hoai Phuong**

Ho Chi Minh City Institute of Physics, VAST

(B-32)
15:20 – 15:35

**STUDY DEPOSITION OF THIN FILM TiO₂ BY PULSED
MAGNETRON SPUTTERING**

Thanh Hop Nguyen, Hong Tuan Pham

National Center for Technology Progress- NACENTECH.

15:35 – 15:50

Coffee Break

15:50 – 17:30

POSTER I

SESSION B:	
SPECTROSCOPY OF CONDENSED MATTER AND NANO – MATERIALS	
<i>November 29, 2012 (Tuesday)</i>	

Chairperson: Dr. Nguyen Huy Bang (Vinh University)
Prof. Dr. Ho Quang Quy (Academy of Military Science & Technology)

- (B-33)
08:30 - 08:55 **MWO4 (M: Mn, Cu, Ni) NANOMATERIALS: SYNTHESIS, PROPERTIES AND APPLICATION**
(Invited talk)
Luc Huy Hoang, Pham Van Hanh, Pham Van Hai, Nguyen Van Phu
Hanoi National University of Education, Hanoi
- (B-34)
08:55 - 09:20 **PHOTOLUMINESCENT PROPERTIES OF ZnO, ZnO:Eu³⁺, ZnO:Tb³⁺ NANOMATERIALS**
(Invited talk)
Tran Kim Anh, Dinh Xuan Loc, Nguyen Tu, Pham Thanh Huy and Le Quoc Minh
Institute of Materials Science, VAST, Hanoi
- (B-35)
09:20 - 09:35 **RESEARCH AND FABRICATION ZnO/TiO₂ HOTOCATALYTIC THIN FILMS**
Le Phuc Quy, Le Van Hieu, Vu Thi Hanh Thu
Ho Chi Minh City University of Science, VNU HCM
- (B-36)
09:35 – 09:50 **DOPING CONCENTRATION DEPENDENCE OF LUMINESCENT PROPERTIES OF Sr₆Bp₅O₂₀:Eu³⁺ PREPARED VIA CO-PRECIIPITATION METHOD**
L. T. Ha, N. Tu, N. V. Du, N. D. Trung Kien, P. T. Huy
Advanced Institute for Science and Technology (AIST), HUST
- (B-37)
09:50 – 10:05 **EFFECT OF GRAPHENE BUFFER LAYER ON OPTICAL PROPERTIES OF ZnO NANORODS**
Le Quang Toai, Nguyen Doan Thanh Vinh, Duong Dinh Loc, Ha Hai Yen, Nguyen Thuy Ngoc Thuy and Dinh Son Thach
Ho Chi Minh City University of Science, VNU HCM
- (B-38)
10:05 – 10:20 **EFFECT OF THE QUALITY CORE/SHELL INTERFACE ON THE OPTICAL PROPERTIES OF CdS/ZnSe TYPE-II NANOCRYSTALS**
Nguyen Xuan Ca, Nguyen Trung Kien and Nguyen Xuan Nghia
University of Science – Thai Nguyen University

(B-39)
10:20 - 10:35

SHAPE RESONANCE ON THE METAL FILM PERFORATED BY PERIODIC HOLE ARRAYS,

Truong Thuy Kieu Oanh, Ngo Hai Dang, Le Van Trung, Dinh Son Thach

Ho Chi Minh University of Technology, Ho Chi Minh city

(B-40)
10:35 - 10:50

PREPARATION OF THE TRANSPARENT SILVER NANOWIRES ELECTRODE ON FLEXIBLE SUBSTRATE

Tran Quang Trung, Hoang Thi Thu, Truong Cam Hong

Ho Chi Minh City University of Science, VNU HCM

10:50 – 11:00

Coffee Break

11:00 – 12:30

POSTER II

12:30 – 13:30

Lunch Buffer

Chairperson: Prof. Dr. Vu Thi Bich (IOP, VAST)
Prof. Dr. Le Thi Quynh Anh (VNU HoChiMinh)

(B-41)
13:30 – 13:55

OPTICAL PROPERTIES OF Sm³⁺ IONS IN K₂YF₅ HOST CRYSTAL

(Invited talk)

Vu Phi Tuyen, Phan Van Do, Nicholas M. Khaidukov, V.N. Makhov, Vu Xuan Quang, Nguyen Trong Thanh, Doan Tuan Anh

Institute of Materials Science, VAST, Hanoi

(B-42)
13:55 – 14:20

AN IMPROVEMENT OF PHOTOCATALYST OF TiO₂ AND TiO₂:0.5%V⁴⁺ NANOPARTICLES

(Invited talk)

Nguyen Minh Thuy, Duong Quoc Van, Nguyen Hong Quan, Nguyen Thanh Vinh and Le Thi Hong Hai

Hanoi National University of Education, Hanoi.

(B-43)
14:20 – 14:35

RESEARCH PROPERTIES AND SYNTHESIZE OF AU COATED APTES/SiO₂/Fe₃O₄ NANOPARTICLES BY SEED-MEDIATED METHOD, POTENTIALLY FOR MAGNETIC AND OPTICAL DISEASE DIAGNOSTICS

Tran Hoang Hai, Truong Thuy Kieu, Nguyen Thi Hang, Bui Thi Lan Khanh, Le Hong Phuc, Le Khanh Vinh, Doan Thi Kim Dung, Nguyen Quan Hien, Le Bin Ho and Bui Trung Thanh

Ho Chi Minh City Institute of Physics, VAST

(B-44)

14:35 – 14:50

ZnO NRs/ITO HETEROGENEOUS NANO STRUCTURES FOR SUBSTRATES OF ORGANIC SOLAR CELLS

Son Cao Hoang Tran, Top Khac Le, Nhan Chi Thuc Ha, Thang Bach Phan, Vinh Quang Lam, Thu Hanh Thi Vu, Dinh Nang Nguyen, Hieu Van Le

Ho Chi Minh City University of Science, VNU, HCM

(B-45)

14:50 – 15:05

THE OPTICAL AND ELECTRICAL PROPERTIES OF ZnO AND ZnO:Ag THIN FILMS DEPOSITED BY SPRAY PYROLYSIS METHOD

Pham Van Vinh and Le Minh Son

Hanoi National University of Education, Hanoi

(B-46)

15:05 – 15:20

SYNTHESIS OF ZnO NANOWIRES ON Ti/GLASS SUBSTRATES BY D.C MAGNETRON SPUTTER DEPOSITION

Dinh Thi Mong Cam, Vo Hoang Thao Linh, Nguyen Thanh Hoang, Nguyen Chi Thang, Nguyen Thi Kieu Ngan

Ho Chi Minh City University of Science, VNU, HCM