THE 4th ACADEMIC CONFERENCE ON NATURAL SCIENCE FOR YOUNG SCIENTISTS, MASTER AND PhD. STUDENTS FROM ASEAN COUNTRIES

15-18 December 2015, Bangkok, Thailand

http://iop.vast.ac.vn/activities/conf_asean/2015/

CASEAN - 2015
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Vietnam Physical Society (VPS)
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King Mongkut's University of Technology North Bangkok (KMUTNB)

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Institute of Physics, VAST
Conference President:

Prof. Acad. Nguyen Van Hieu (VAST)

Co – Chairmen

Prof. Dr. Teravuti Boonyasopon, President, KMUTNB, Thailand
Prof. Dr. Nguyen Dai Hung, President, VPS, Vietnam
Prof. Dr. Huynh Thanh Dat, President, VNU Ho Chi Minh city
Prof. Dr. Nguyen Huu Duc, Vice President, VNU Ha Noi
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Prof. Dr. Tou Teck Yong, Multimedia University, Malaysia
Prof. Dr. Kyaw Kyaw Khaung, Rector East Yangon University
Prof. Dr. Pho Kaung, Rector Yangon University
Conference Secretariat

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### BRIEF PROGRAMME

**Conference location:** King Mongkut's University of Technology North Bangkok  
1518 Pracharat 1 Road, Wongsawang Bangsue, Bangkok 10800, Thailand

<table>
<thead>
<tr>
<th>Time</th>
<th>Date</th>
<th>Tuesday 15th December</th>
<th>Wednesday 16th December</th>
<th>Thursday 17th December</th>
<th>Friday 18th December</th>
</tr>
</thead>
</table>
| 08:00 - 12:15 | ARRIVAL & CHECK IN | - REGISTRATION (7:30-8:30AM)  
- OFFICIAL OPENING  
- MOU SIGNING  
- PLENARY SESSION | - REPORT SESSIONS  
- POSTER SESSION | ONE-DAY TOUR |
| 12:30 - 13:30 | Buffet Lunch       | Buffet Lunch          |                         |                        | Tour in Bangkok |
| 13:30 - 17:30 | REGISTRATION at KMUTNB (The 1st Floor, Faculty of Applied Science Building) | - REPORT SESSIONS | - REPORT SESSIONS  
- CLOSING |                        |                      |
| 18:00         |                     |                       |                         | CONFERENCE PARTY (offered by the CASEAN Organizing Committee) |
PROGRAM

**Tuesday – December 15, 2015**

13:30-17:00  
- Arrival and check in
  
- Registration at King Mongkut's Univ. of Tech. North Bangkok
  The 1st Floor, Faculty of Applied Science Building

**Wednesday – December 16, 2015**

07:30 - 08:30  
Registration

08:30 - 09:00  
- Welcoming speech: Prof. Dr. Teravuti Booyasopon  
  *President of KMUTNB, Thailand*

- Opening speech: Prof. Dr. Nguyen Dai Hung  
  *President of VPS, Vietnam*

- Speech by: Prof. Dr. Meak Kamerane  
  *Dean, RUPP, Cambodia. (Host of the 3rd CASEAN)*

- Speech by: Prof. Dr. Huynh Thanh Dat  
  *President of VNU in Ho Chi Minh City.  
  (Host of the 5th CASEAN)*

09:00-09:30  
**THE SIGNING CEREMONY OF THE MOU**  
**BETWEEN**  
IOP, VAST AND KMUTNB, THAILAND  
**&**  
**THE SIGNING CEREMONY OF THE MOU**  
**BETWEEN**  
GUST, VAST AND KMUTNB, THAILAND
PLENARY SESSION

Chairperson:  Prof. Pham Van Hoi (IMS, VAST)
Dr. Nitipat Polchai (KMUTNB)

PL-01
09:30 - 10:00  THAILAND'S SOLAR PHOTOVOLTAIC DEVELOPMENT: TOWARD STRATEGIC POSITIONING IN ASEAN
Amornrat Limmanee
Solar Energy Technology Laboratory, NECTEC, National Science and Technology Development Agency (NSTDA), 112 Thailand Science Park, Thonon Phahonyothin,Tambon Klong Nueng, Amphoe Klong Luang, Pathum Thani 12120, Thailand

PL-02
10:00– 10:30  POROUS SILICON STRUCTURE AND ITS DEVELOPMENT INTO A MOSAIC SILICON OXIDE STRUCTURE IN THE METAL-ASSISTED ANODIC ETCHING OF SILICON
Dao Tran Cao
Institute of Materials Science (IMS), Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet street, Cau Giay Distr., Hanoi, Vietnam

10:30 – 10:50  CONFERENCE PHOTOGRAPH
COFFEE BREAK

PLENARY SESSION

Chairperson:  Prof. Meak Kamerane (RUPP, CAMBODIA)
Asst.Prof. Amarin Ratanavis (KMUTNB)

PL-03
10:50 – 11:20  CONTROLLING OPTICAL BISTABILITY IN A FIVE-LEVEL CASCADE EIT MEDIUM
Dinh Xuan Khoa, Le Van Doai, and Nguyen Huy Bang(*)
Vinh University, 182 Le Duan Street, Vinh City, Vietnam
ENGINEERED BACTERIOPHAGE NANOCARRIERS FOR TARGETED GENE DELIVERY TO CANCER CELLS

Teerapong Yata
National Nanotechnology Centre, 111 Thailand Science Park, Phahonyothin Road, KhlongNueng, KhlongLuang, PathumThani 12120, Thailand

NUMERICAL AND EXPERIMENTAL STUDIES OF MIXED-HOST ORGANIC LIGHT EMITTING DIODES

Riku Chowdhury, Teng-Sian Ong, Yeh-Yee Kee, Seong-Shan Yap, Teck-Yong Tou
Faculty of Engineering, Multimedia University, 63100 Cyberajaya, Selangor, Malaysia

LUNCH

REPORT SESSION

Chairperson: Prof. Dao Tran Cao (IMS, VAST)
Dr. Nitipat Polchai (KMUTNB)

THE ADVANCE TECHNIQUE FOR NANOTECHNOLOGY
Invited Talk
Chutchai Juntasaro
Scientific Division, HORIBA Instruments (Singapore) Pte Ltd, 3 Changi Business Park Vista #01-01, Akzonobel House Singapore 486051

COMBINING MICROCAVITY AND PLASMONIC EFFECT FOR NOVEL PHOTONIC DEVICES
Invited Talk
Van Hoi Pham, Huy Bui, Van Dai Pham, Quang Minh Ngo, The Anh Nguyen.
Institute of Materials Science, VAST, 18 Hoang Quoc Viet Rd., Cau giay Dist., Hanoi Vietnam

CHARACTERISTICS OF ALL SOLID-STAE ULTRAVIOLET LASERS USING Ce: LiCAF CRYSTAL
Invited Talk
Pham Van Duong, Nguyen Xuan Tu, Pham Hong Minh, Bui Van Thien, Nobuhiko Sarukura and Nguyen Dai Hung
Institute of Physics, Vietnam Academy of Science and Technology
OPTICAL SPECTROCOPY OF Eu$^{3+}$ IONS IN ALUMINOSILICATE GLASS

Sengthong Bounyavong, Phan Van Do
Department of Physics, Faculty of Natural Sciences, National University of Laos, Laos P.D.R
DuyTan University, DaNang, VietNam
Thuyloi University, 175 Tay Son, Dong Da, Ha Noi, Vietnam.

FLUORESCENCE RESONANCE ENERGY TRANSFER (FRET)-BASED BREAST CANCER BIOSENSOR USING NANOPARTICLE/APTAMER-BASED COMPLEXES

Vu Van Son, Nguyen Thi Thuy, Nguyen Thi Bich Ngoc, Le Quang Huan, Nguyen Thi Thai An and Tran Hong Nhung
Institute of Physics, Vietnam Academy of Science and Technology (VAST)
Institute of Biotechnology, Vietnam Academy of Science and Technology (VAST), 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam.

TEMPERATURE BEHAVIOR OF EPITAXIALLY LIFTED-OFF (ELO) GaAs/AlGaAs QUANTUM WELL BONDED TO 100 SILICON

Deborah Anne O. Lumantas, Gerald Catindig, John Daniel Vasquez, Elmer Estacio, Arnel Salvador, Armando Somintac
National Institute of Physics, University of the Philippines, Diliman, Quezon City, Philippines

COFFEE BREAK
REPORT SESSION

Chairperson: Prof. Nguyen Huy Bang (Vinh Univ., VietNam)
Dr. Nitipat Polchai (KMUTNB, Thailand)

O-07  
15:30 – 15:50  
Invited Talk  
SYNTHESIS OF HOLLOW GOLD NANOPARTICLES BY NANOBOBUBBLE TEMPLATE SYNTHESIS METHOD  
Chivarat Muangphat  
Division of Materials Technology, King Mongkut’s University of Technology Thonburi, 126 Pracha Uthit Rd., Bang Mod, Thung Khru, Bangkok 10140, Thailand.

O-08  
15:50-16:10  
Invited Talk  
THE NEW GENERATION PLASMONIC SOLAR CELLS BASED ON NOBLE METAL (Au, Ag…)/TiO₂ EMBEDDED NANOPARTICLES: RECENT SITUATION, CHALLENGES AND FUTHER DEVELOPMENTS  
Dao Khac An  
Energy Materials and Devices Lab, Institute of Materials Science (IMS), Vietnam Academy of Science and Technology, 18 HoangQuocViet, Cau Giay Ha noi Viet nam

O-09  
16:10-16:25  
PRESENTATION DEPENDENCE OF IMMOBILIZED DYE MOLECULES IN SINGLE MOLECULE FLUORESCENCE MEASUREMENT  
Se Tola, Jae Jin Lee, Sung Hyun Kim, Doseok Kim  
Faculty of Science, Royal University of Phnom Penh, Cambodia

O-10  
16:25-16:40  
A COMPARISON OF THE PERFORMANCE OF MA AND DMA CONTROL CHARTS FOR DETECTING OF PARAMETERS CHANGE IN PROCESSES  
Suganya Phantu, Saowanit Sukparungsee and Yupaporn Areepong  
Department of Applied Statistics, Faculty of Applied Science, King’s Mongkut University of Technology North Bangkok, Thailand

O-11  
16:40-16:55  
EFFECT ON BONDABILITY OF PROLONGED EXPOSURE TIME AFTER PLASMA CLEANING ON IC PACKAGE  
Pornthep Yaekwong, Kessarat Ugsornrat, Chalermsak Sumithpibul, Neil S. Carunungan, Bancha Arthibenyakul and Surapan Yimman  
Department of Industrial Physics and Medical Instrumentation King Mongkut’s University of Technology North Bangkok, Bangkok Thailand. Department of Engineering, Utac Thai Limited, Bangkok, Thailand.
STUDY ON THE FABRICATION AND PROPERTIES OF ALLOYED QUANTUM DOTS AND GRAPHENE QUANTUM DOTS

Pham Nam Thang, Le Xuan Hung, Nguyen Hai Yen, Hoang Van Nong, Vu Thi Hong Hanh, Vu Duc Chinh, Phan Ngoc Hong, Pham Thu Nga

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

Institute of Research and Development, Duy Tan University, Da nang City, Vietnam.

Faculty of Physics, Thai Nguyen University of Education, Thai Nguyen, Vietnam.

RAMAN MAPPING OF SILICON NANOWIRES SYNTHESIZED VIA SILVER ASSISTED CHEMICAL ETCHING

Neil Irvin Cabello, Joseph Christopher Ragasa, Maria Herminia Balgos, Rafael Jaculbia, Joselito Muldera, Elmer Estacio, Arnel Salvador, Armando Somintac

Condensed Matter Physics Laboratory, National Institute of Physics, University of the Philippines Diliman, Diliman, Quezon City, Philippines 1101
REPORT SESSION

Chairperson: Prof. Dang Diem Hong (IBT, VietNam)
Assoc. Prof. Nipon Pisupaisal (KMUTNB, Thailand)

O-14
08:30-08:50
Invited Talk
CHEMICAL QUALITY ASSESSMENT OF STORED HARVESTED RAINWATER IN CAMBODIA
NgobSalin, Chan Oeurn Chey and KameraneMeak
Faculty of Science, Royal University of Phnom Penh, Cambodia

O-15
08:50-09:10
Invited Talk
EXTRACTION OF ALGAL OIL RICH OMEGA-3 AND OMEGA-6 POLYUNSATURATED FATTY ACIDS (AS EPA, DHA, DPA) IN THE FORM OF METHYL ESTER FROM HETEROTROPHIC MARINE MICROALGA SCHIZOCHYTRIUM MANGROVEI PQ6
Le Thi Thom, Nguyen Cam Ha, Hoang Thi Huong Quynh, Pham Van Nhat, Hoang Thi Lan Anh, Ngo Thi Hoai Thu, Dang Diem Hong
Institute of Biotechnology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Cau Giay, Vietnam

O-16
09:10-09:25
HYDROCARBON DEGRADATION IN OILY WASTEWATER BY MICROBIAL BIOFILM ATTACHED ON POLYURETHANE FOAM CARRIERS
Do Van Tuan, Do Thi To Uyen, Dong Van Quyen, Le Thi Nhi Cong
Son La college, Son La, Viet Nam
Institute of Biotechnology, VAST, 18 Hoang Quoc Viet, Ha Noi

O-17
09:25-09:40
EXTRACTION OF SQUALENE FROM VIETNAM HETEROTROPHIC MARINE MICROALGA
Nguyen Cam Ha, Le Thi Thom, Hoang Thi Huong Quynh, Pham Van Nhat, Ngo Thi Hoai Thu, Hoang Thi Lan Anh, Hoang Thi Minh Hien, Dang Diem Hong
Institute of Biotechnology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Cau Giay, Vietnam
CONTENT-BASED AUDIO RETRIEVAL

Petcharat Panyapanuwat, Suwatchai Kamonsantiroj
Department of Computer and Information Science, Faculty of Applied Science
King Mongkut's University of Technology North Bangkok, Bangkok 10800, Thailand.

REMOVAL OF COPPER (II) FROM AQUEOUS SOLUTION BY ADSORPTION ONTO MnO$_2$ NANOSTRUCTURE: EQUILIBRIUM AND KINETIC STUDIES

Van Phuc Dinh, Ngoc Chung Le, Ngoc Tuan Nguyen
Dong Nai University, 04 Le Quy Don Str., Tan Hiep, Bien Hoa City, VietNam
Dalat University, 01 Phu Dong Thien Vuong street, Dalat city, Lam Dong province, Vietnam.
Vietnam Atomic Energy Institute, Viet Nam.

THE DESIGN OF WATER PURIFICATION SYSTEM BY USING NATURAL RESOURCES AND THE INVESTIGATION OF ITS PERFORMANCE

KeoSotha, Chan Oeurn Chey, KameraneMeak
Faculty of Science, Royal University of Phnom Penh, Cambodia

THE INITIAL RESULTS FOR INVESTIGATING EFFECTS OF NANOMATERIALS ON GROWTH AND DEVELOPMENT OF CYANOBACTERIA POPULATION MYCROSYSRIN AERUGINOSA

Trần Thị Thu Hương*, Dương Thị Thuỷ, Hà Phương Thu; Đào Trọng Hiền
Faculty of Environment, Ha Noi University of Mining and Geology, Ha Noi, Viet Nam.
Institute of Environmental Technology, Viet Nam Academy of Science and Technology, Ha Noi, Viet Nam.
Institute of Materials Science, Vietnam Academy of Science and Technology, Ha Noi, Viet Nam.

SEDIMENTATION RATES IN THE U-TAPAO ESTUARY DEMONSTRATED BY $^{210}$Pb-AND $^{137}$Cs-DATING METHODS

Santi Raksawong, Miodrag Krmar, Tripob Bhongsuwan
Department of Physics, Faculty of Science, Prince of Songkla University, Thailand
Department of Physics, Faculty of Science, Univ. of Novi Sad, Serbia.
10:55-12:15 COFFEE BREAK & POSTER SESSION

POSTER

Chairperson:  Dr. Anusara Srisrual, (KMUTNB)  
Dr. Pham Hong Minh (IOP, VAST)  
Dr. Chan Oeurn Chey (RUPP, Cambodia)  
Dr. Ngo Hoai Thu (IOB, VAST)

12:15-13:30 LUNCH
**POSTER**

*Chairperson: Dr. Anusara Srisrual (KMUTNB)*

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

*Dr. Chan Oeurn Chey (RUPP, Cambodia)*

*Dr. Ngo Hoai Thu (IOB, VAST)*

**P-01** A STUDY ON OPTICAL FILTERS USING SLOT TWO DIMENSIONAL PHOTONIC CRYSTAL WAVEGUIDES

Hoang Thu Trang, Ngo Quang Minh  
_Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam_

**P-02** FABRICATION AND STUDY ON OPTICAL PROPERTY OF TRIVALENT EUROPIUM DOPED IN TERNARY BORATE GLASSES

Patarawagee Yasaka, Jakrapong Kaewkhao  
_Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom 73000, Thailand  
Science Program, Faculty of Science and Technology, Nakhon Pathom Rajabhat University, 73000_

**P-03** PREPARATION AND CHARACTERIZATION OF Sm³⁺ DOPED ZINC BARIUM TELLURITE GLASSES

Patarawagee Yasaka, Jakrapong Kaewkhao  
_Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom 73000, Thailand  
Science Program, Faculty of Science and Technology, Nakhon Pathom Rajabhat University, 73000_

**P-04** PHOTOLUMINESCENCE OF LITHIUM GADOLINIUM BORATE GLASSES DOPED WITH CERIUM(III) OXIDE

Kitipun Boonin, Warawut Sa-ardsin, Jakrapong Kaewkhao  
_Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom 73000, Thailand  
Science Program, Faculty of Science and Technology, Nakhon Pathom Rajabhat University, 73000_

**P-05** IMPROVING OF ZnO NANOROD DEFECTS TO ENHANCE CARRIER TRANSPORTATION IN p-Cu₂O/ i-ZnO NANORODS/ n-IGZO HETERO-JUNCTION

Nguyen Huu Ke, Le Thi Tuyet Trinh, Phan Thi Kiều Loan, Dao Anh Tuan, Nguyen Huu Truong, Cao Vinh Tran, Le Vu Tuan Hung  
_Department of Applied Physics, University of Science, VNU-HCM.  
Laboratory of Advanced Materials, University of Science, VNU-HCM  
227 Nguyen Van Cu Street, Award 4, District 5, Ho Chi Minh city, Viet Nam_
P-06 THERMODYNAMIC EVALUATION OF SYNTHESIS OF NANOSILICA FROM THE RICE HUSK
Van Thang Nguyen, Manh Tuong Nguyen, Hoang Giang Ngo, Tien Hue Nguyen, Tran Hung Nguyen
Institute of Chemistry and Materials Science, 17 Hoang Sam., Cau Giay, Hanoi

P-07 SYNTHESIS AND CHARACTERIZATION OF NANO CRYSTALLINE LiMn$_2$O$_4$ MATERIALS MADE BY SOL GEL METHOD
Ta Anh Tan, Nguyen Thi Thuy, Nguyen Thi Tu Oanh, Nguyen Si Hieu$^1$, Le Ha Chi, Dang Tran Chien, Pham Duy Long
Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Cau Giay District, Hanoi, Vietnam.
Hanoi University of Natural Resources and Environment, 41A Phu Dien Road, North Tu Liem District, Hanoi, Vietnam.
Hanoi Metropolitan University, 98 Duong Quang Ham Road, Cau Giay District, Hanoi, Vietnam.

P-08 DIRECT GROWTH OF CuO/ITO NANOWIRES BY VAPOR SOLID OXIDATION METHOD
Nguyen Tien Dai, Dang Tran Chien, Ta Anh Tan
Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Cau Giay District, Hanoi, Vietnam.
Hanoi University of Natural Resources and Environment, 41A Phu Dien Road, North Tu Liem District, Hanoi, Vietnam.
Hanoi Metropolitan University, 98 Duong Quang Ham Road, Cau Giay District, Hanoi, Vietnam.

P-09 FABICATION OF POROUS AMORPHOUS SILICON CARBIDE FREE-STANDING MEMBRANES AND MULTILAYERS
Cao Tuan Anh, Luong Truc Quynh Ngan, Dao Tran Cao and Nguyen Ngoc Hai
Tantrao University, Yenson district, Tuyenquang province, Vietnam.
Institute of Materials Science, 18 Hoang Quoc Viet, Hanoi, Vietnam.
Uongbi high school, Uongbi district, Quangninh province, Vietnam.

P-10 A GAS SENSOR BASED ON NANO-POREUS SILICON MICROCAVITY FOR DETERMINATION OF ORGANIC FUEL MIXTURES
Thuy Van Nguyen, Van Dai Pham, Thuy Chi Do, Van Hoi Pham, Huy Bui
Institute of Materials Science, Vietnam Academy Science and Technology, 18 Hoang Quoc Viet Str., Cau Giay Dist., Hanoi, Vietnam.
Thai Nguyen University of Education, Luong Ngoc Quyen road, Thai Nguyen city, Vietnam.

P-11 STRUCTURE AND OPTICAL PROPERTIES OF NANOCRYSTAL SEMICONDUCTOR Zn$_x$Cd$_{1-x}$S: Cu
Hoang Thi Lan Huong, Nguyen Huyen Trang, Vu Thi Hong Hanh, Nguyen Thi Thu Trang, Nguyen Thi Thuy Lieu, Nguyen Xuan Nghia
P-12  STUDY ON SYNTHESIS OF Fe-BTC MOF MATERIAL AT LOW TEMPERATURE AND ATMOSPHERIC PRESSURE

Tran Dinh Tuan, Ninh Duc Ha, Nguyen Tien Hue, Nguyen Thi Hoai Phuong, Ngo Hoang Giang
Institute of Chemical and Materials Science, Military Academy of Science and Technology 17 Hoang Sam, Cau Giay, Hanoi.

P-13  SEEDLESS ZNO NANOROD LAYER AS AN EFFICIENT ELECTRON-TRANSPORTING LAYER FOR HYBRID ORGANIC–INORGANIC PEROVSKITE SOLAR CELLS

Chi H. Le, Dat Q. Tran, Lien T. D. Thach, Long D. Pham, Chung V. Hoang, Masatoshi Yanagida
Institute of Materials Science (IMS), Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet street, Cau Giay distr., Hanoi, Vietnam. National Institute for Materials Science (NIMS) 1-2-1 Sengen, Tsukuba, Ibaraki, 305-0047, Japan

P-14  OPTICAL CHARACTERIZATION OF QUANTUM DOTS PREPARED DIRECTLY IN CITRATE AQUEOUS SOLUTION

Ngo Van Hoang, Ngo Thi Huong, Bui Quang The, Trinh Ba Thong, Nguyen Quynh Trang, Chu Viet Ha, Vu Thi Kim Lien
Thai Nguyen University of Education, Thai Nguyen, Viet Nam.

P-15  USING LOW POWER SEMICONDUCTOR LASER THERAPY FOR SCIATICA

Tran Minh Thai, Tran Trung Nghia, Nguyen Thi Hong Hanh, Ngo Thi Thien Hoa, Nguyen Thi Huong Linh, Trinh Tran Hong Duyễn
Laser Technology Laboratory, University of Technology, Vietnam National University, Ho Chi Minh City, 268, Ly Thuong Kiet Street, District 10, Ho Chi Minh City.

P-16  USING LOW POWER SEMICONDUCTOR LASER THERAPY FOR THE DEGENERATIVE KNEE – OSTEOPHYTE

Tran Minh Thai, Ngo Thi Thien Hoa, Trinh Tran Hong Duyễn, Dinh Thi Thu Hong, Nguyen Quang Trung, Nguyen Thanh Tam, Nguyen Duong Hung
Laser Technology Laboratory, University of Technology, Vietnam National University, Ho Chi Minh City 268, Ly Thuong Kiet Street, District 10, Ho Chi Minh City.
APPLICATION OF LOW POWER SEMICONDUCTOR LASER THERAPY TO PULMONARY TUBERCULOSIS IN COMMUNITY

Tran Minh Thai, Mai Huu Xuan, Ngo Thi Thien Hoa, Tran Van Be, Huynh Quang Linh

Laser Technology Laboratory, University of Technology, Vietnam National University – Ho Chi Minh City.

Blood Transfusion and Hematology Hospital of Ho Chi Minh City, 268, Ly Thuong Kiet Street, District 10, Ho Chi Minh City.

TREATMENT OF THE DEGENERATIVE LUMBAR SPINE – OSTEOPHYTOSIS: THE THERAPY OF LOW POWER SEMICONDUCTOR LASER

Tran Minh Thai, Ngo Thi Thien Hoa, Pham Dinh Tuan, Trinh Tran Hong Duyen, Tran Thi Ngoc Dung, Nguyen Minh Chau, Nguyen Dinh Quang

Laser Technology Laboratory, University of Technology, Vietnam National University, Ho Chi Minh City 268, Ly Thuong Kiet Street, District 10, Ho Chi Minh City

CONDITIONS TO STRETCH PLASMID DNA MOLECULE IN OPTICAL TWEEZERS USING CW LASER BEAM

Thai Dinh Trung, Mai Van Luu, Chu Van Lanh, Nguyen Van Thinh, Hoang Van Nam, Thai Doan Thanh, Ho Quang Quy

Faculty of Physics and Technology, Vinh Univ., 182 Le Duan, Vinh, Vietnam.
Faculty of Natural Sciences, Bac lieu University, Bac lieu City, Vietnam.
Hatinh City, Vietnam.
Hochiminh University of Food Industry.
Academy of Military Science and Technology, 17 Hoang Sam, Hanoi, Vietnam.

MAGNETIC TOPOLOGICAL INSULATOR

Hong-Son Nguyen, Duc-Anh Le, Minh-Tien Tran

Department of Occupational Safety and Health, Trade Union University, 169 Tay Son, Hanoi, Vietnam.
Faculty of Physics, Hanoi National University of Education, 136 Xuan Thuy, Cau Giay, Hanoi, Vietnam.
Institute of Physics, Vietnam Academy of Science and Technology, 10 Dao Tan, Hanoi, Vietnam.

APPLICATION OF LOW POWER SEMICONDUCTOR LASER FOR TREATMENT TO MINIMIZE HARMFUL SIDE EFFECTS AFTER CHEMOTHERAPY AND RADIATION THERAPY IN CANCERS

Tran Minh Thai, Ngo Thi Thien Hoa, Tran Thien Hau, Dang Nguyen Ngoc An

Laser Technology Laboratory, University of Technology, Vietnam National University, Ho Chi Minh City, 268, Ly Thuong Kiet Str., Distr. 10, Ho Chi Minh City, Vietnam.
The Department of Treatment and Rehabilitation in Tan Chau town, An Giang’s Province, VietNam
**P-22**

**THE FIRST RESULT OF TREATMENT FATTY LIVER BY LOW POWER SEMICONDUCTOR LASER**

Tran Minh Thai, Tran Thien Hau, Ngo Thi Thien Hoa, Nguyen Pham Song Toan  
Laser Technology Laboratory, University of Technology, Vietnam National University – Ho Chi Minh City 268, Ly Thuong Kiet Str., Distr. 10, Ho Chi Minh City, Vietnam.  
The department of treatment and rehabilitation in Tan Chau town, An Giang’s Province.

**P-23**

**APPLICATION OF LOW POWER SEMICONDUCTOR LASER FOR TREATMENTATHEROMAS OF CAROTID ARTERY IN TYPE 2 DIABETES**

Tran Minh Thai, Ngo Thi Thien Hoa, Tran Thien Hau, Nguyen Pham Song Toan, Ngo Van Trung, Phan Van To Ni  
Laser Technology Laboratory, Ho Chi Minh City University of Technology, Ho Chi Minh City, National University.  
The department of treatment and rehabilitation in Tan Chau town, An Giang’s Province.

**P-24**

**CLINICAL TREATMENT RESULT OF THE BENIGN PROSTATIC HYPERTROPHY OF THE ELDER MEN BY USING LOW POWERED SEMICONDUCTING LASER**

Tran Anh Tu, Tran Minh Thai, Tran Thi Ngoc Dung, Ton Chi Nhan, Ngo Thi Thien Hoa, Nguyen Xuan Quang, Huynh Thanh Hoa, Cao Tan Tieng  
Laser Technology Laboratory, University of Technology, Vietnam National University – Ho Chi Minh City, Vietnam  
Bệnh viện Y học cổ truyền TP. Cần Thơ;  
Phòng điều trị phục hồi chức năng Tân Châu, An Giang.  
Bệnh viện điều dưỡng phục hồi chức năng Khánh Hòa.  
Phòng quang châm 25 Xo Việt Nghệ Tĩnh, Bình Thạnh.  
Tuệ Tĩnh Đường, Đồng Nai.

**P-25**

**THE Nd:YAG LASER OPERATING AT A HIGH REPETITION RATE OF 100 kHz PUMPED BY CONTINUOUSLY DIODE LASER**

Giang Manh Khoi, Do Xuan Tien, Trinh Dinh Chien  
National Center for Laser Technology, C6 Thanh Xuan Bac, Ha Noi, Vietnam  
University of Science, VNU, 334 Nguyen Trai, Ha Noi, Vietnam.

**P-26**

**OUTPUT LASER CHARACTERISTICS OF A DIODE- PUMPED Nd:YAG LASER SYSTEM USED IN INDUSTRIAL APPLICATIONS**

Giang Manh Khoi, Do Xuan Tien  
National Center for Technological Progress, 25 Le Thanh Tong, Ha Noi, Vietnam.
**P-27** RESEARCH AND DEVELOPMENT OF AN ALL SOLID-STATE CHIRPED PULSE AMPLIFIER

Pham Huy Thong, Pham Van Duong, Pham Hong Minh, Sergei A. Tikhomirov, Oleg V. Buganov and Nguyen Dai Hung
Center for Quantum Electronics, Institute of Physics, VAST, 10 Dao Tan, Ba Dinh, Hanoi, Vietnam
Institute of Physics B.I.Stepanov, 68, Nezavisimosti av, 220072, Minsk, Belarus.

**P-28** BIOCHARACTERIZATION AND IDENTIFICATION OF LIGNIN DEGRADING FUNGUS CP36 ISOLATED FROM THE FORESTS OF NORTH CENTRAL VIETNAM

Nguyen Thi Hong Lien, Nguyen Van Hieu, Pham Thi Bich Hop, Cao Van Son, Dang Van Son, Phan Thi Hong Thao
Soil Microbiology, Institute of Biotechnology, Vietnam Academy of Science and Technology.
Reseach Institute of Pulp and Paper Industry

**P-29** RESEARCH RESULTS ON THERMAL DECOMPOSITION OF A MIXTURE INCLUDES RDX AND INSENSITIVES

Nguyen Mau Vuong, Ngo Van Giao, Dang Van Duong, Tran Minh Cong
Chemical Institute, Academy of Science and Technology Army, 17 Hoang Sam street, Cau Giay District, Ha Noi capital, Viet Nam

**P-30** SYNTHESIS AND BIOLOGICAL ACTIVITY OF NOVEL DERIVATIVES OF MURRAYAFOLINE A

Le Duc Anh, Truong Ngoc Hung, Nguyen Thi Nga, Nguyen Manh Cuong, Le Mai Huong, Tran Thi Hong Ha, Tran Thi Thu Thuy, Le Thi Thoa, Tran Minh Cong, Nguyen Trong Dan, Luu Van Chinh
Institute of Chemistry-Materials, Institute of Military Science and Technology, 17-Hoang Sam, Cau Giay, Hanoi, Vietnam
Vietnam - Russia Tropical Centre, 2-Nguyen Van Huyen, Cau Giay, Hanoi, Vietnam

**P-31** BORATE ESTERS FROM STEARYLDIETANOLAMINE USED AS LUBRICANT ADDITIVES

Bang Quoc Ha, Giang Hoang Ngo, Ha Duc Ninh, Hue Nguyen Tien, Van Huu Nguyen
Institute for Chemistry and Materials, No.17, Hoang Sam Str, Cau Giay Dist, Hanoi, VietNam

**P-32** EFFECT OF CATALYST ON THE BURNING RATE OF ENERGY MATERIALS BASED ON NC-NG-DINA

Le Duy Binh, Nguyen Viet Bac, Dam Duc Trung, Do Duc Tri
Chemical Institute, Academy of Science and Technology Army, 17 Hoang Sam street, Cau Giay district, Ha Noi capital, Viet Nam
EXPRESSION AND CHARACTERIZATION OF RECOMBINANT L-ASPARAGINASE IN PICHIA PASTORIS

Thi Hien Trang Nguyen, Van Van Vu, Thi Tuyen Do
Institute of Biotechnology, Vietnam Academy of Science and Technology
18 Hoang Quoc Viet, Cau Giay Distric, Hanoi, Vietnam

IMPROVING ACARBOSE PRODUCTION BY ACTINOPLANES SP. A56 MUTATION STRAINS

Nguyen The Duong, Le Thanh Hoang, Do Thi Tuyen
Institute of Biotechnology, Viet Nam Academy of Science and Technology, 18 Hoang Quoc Viet, Dist. Cau Giay, Ha Noi 10600, Vietnam

OPTIMAZING CULTURE CONDITIONS FOR PRODUCTION OF PROTEASE BY LECANICILLIUM LECANII

Nguyen Huu Quan, Vu Van Hanh, Quyen Dinh Thi
Thai Nguyen University of Education, 20 Luong Ngoc Quyen road, Thai Nguyen city, Vietnam.
Institute of Biotechnology, VAST, 18 Hoang Quoc Viet road, Cau Giay Distr, Hanoi, Vietnam.

GENE EXPRESSION PROFILING OF ADP-GLUCOSE PYROPHOSPHORYLASE (AGPASE) AND STARCH SYNTHASE IV (SSIV) IN SINK AND SOURCE ORGANS OF SOME VIETNAM’S CASSAVA VARIETIES WITH DIFFERENT STARCH CONTENTS

Nguyen Thi Minh Hong, Le Thu Ngoc, Nguyen Mau Hung, Pham Bich Ngoc, Chu Hoang Ha
Institute of Biotechnology, Vietnam Academy of Science and Technology (IBT, VAST), 18-Hoang Quoc Viet, CauGiay, Ha Noi, Vietnam.
Hong Duc University (HDU), Dong Son, ThanhHoa, Vietnam

EFFECT OF TREATMENT TEMPERATURE ON CARBON FIBER SURFACE PROPERTIES REINFORCED CARBON-CARBON

Ngo Hoang Giang, Tran Minh Cong, Nguyen Tien Hue, Nguyen Duy Ket, Ninh Duc Ha, Nguyen Ngoc Duan, Vu Minh Thanh
Institute of Chemistry-Materials, Institute of Military Science and Technology, 17-Hoang Sam, Cau Giay, Hanoi, Vietnam

STUDY ON THE COMPLEXATION OF La(III) WITH REAGENT 4-(3-METHYL-2-PYRIDYLAZO)RESORCINOL BY SPECTROPHOTOMETRIC METHOD

Nguyen Van Can and Nguyen Dinh Luyen
Department of Chemistry, Hue University of Agriculture and Forestry, Vietnam
Hue University College of Education, Vietnam
P-39 INVESTIGATION OF STABLE STRAIN OF STREPTOMYCES SP. KB1 FOR STABILITY OF BIOACTIVE COMPOUNDS PRODUCTION BY CONTINUOUS SUB-CULTURE
Kittisak Chawawisit, Monthon Lertcanawanichakul
School of Allied Health Sciences and Public Health, Walailak University, Nakhon Si Thammarat 80161, Thailand.

P-40 USE OF AN INERTIAL MEASUREMENT INSTRUMENT AND A CAMERA TO DEFINE THE POSITION AIRPLANE
Nguyen Quang Vinh, Pham Van Phuc, Phan Tuong Lai
Military Institute of Science and Technology, VietNam

P-41 RESEARCH INTO EFFECT OF COMPOSITION'S RATE ON BURNING RATE OF PYROTECHNICS
Doan Anh Phan, Ngo Van Giao, Tran Minh Cong
Chemical Institute, Academy of Science and Technology, 17 Hoang Sam street, Cau Giay district, Hanoi capital, Vietnam

P-42 REDUCING OF CARBON DIOXIDE POLLUTION BY THE BACKWARD DIFFUSION METHOD
Vu Ba Dung
Hanoi University of Mining and Geology, Viet Nam

P-43 NATURAL RADIOACTIVITY AND ITS ASSOCIATED RADILOGICAL HAZARDS IN SOMECEMENTS OF LAO PDR
Sonexay Xayheungsy, Le Hong Khiem
Faculty of Science, The National University Of Laos, Dongdok Campus, Vientiane Capital, LAO PDR, P.O.Box: 7322. Institute of Physics, VAST, 10 DaoTan, BaDinh, Hanoi, VietNam

P-44 DEVELOPMENT OF ELECTROCHEMICAL DETECTOR COMBINE WITH DIGITAL MICROFLUIDICS SYSTEM
Sarunchana Wiboonsak, Chonticha Chunhakit, Paveena Nakbumpen, Kessararat Ugsornrat, Patiya Pasakorn, Thitima Maturuos, Adisorn Tuantranont
Department of Industrial Physics and Medical Instrumentation King Mongkut’s University of Technology North Bangkok, Bangkok, Thailand Nanoelectronics and MEMS Laboratory, National Electronics and Computer Technology Center, Pathumthani, Thailand

P-45 PRELIMINARY RESULT ON THE SYNTHESIS OF GOLD NANOPARTICLES AND GOLD NANOPARTICLES/GRAPHENE COMPOSITE USING ATMOSPHERIC PLASMA ASSISTED ELECTROCHEMICAL METHOD
Nguyen Van Kha, Nguyen The Anh, Bui Van Dong, Nguyen Dinh Tuan, Le Hong Manh, Dang Van Thanh, Hoang Thi Minh Thao and Do Hoang Tung
THE AERODYNAMIC CHARACTERISTICS OF THE WINGS WHEN USING FLAPS
Trần Phú Hoành, Đỗ Văn Phương, Trần Duy Duyên
Academy of Military Science and Technology, 17 Hoàng Sam street, Cầu Giấy district, Hà Nội, Vietnam

APPLICATION OF LOW POWER SEMICONDUCTOR LASER TO TREAT FOR DEGENERATIVE LUMBAR SPINE – HERNIATED DISC
Trần Minh Thái, Ngô Thị Thien Hoa, Trịnh Trần Hồng Duyên, Bùi Chí Hưng, Đinh Thị Thúy Hồng, Ngô Thị Trà Huong
Laser Technology Laboratory, University of Technology, Vietnam National University – Ho Chi Minh City, Việt Nam

MICROFLUIDIC SYNTHESES OF MIL-88B METAL ORGANIC FRAMEWORK
Phùng Thị Thu, Hoàng Văn Trung, Vũ Thị Thu and Trần Đại Lâm
Institute of Materials Science, Việt Nam Academy of Science and Technology, 18 Hoàng Quốc Việt, Cầu Giấy, Hà Nội, Vietnam.
University of Science and Technology of Hanoi, 18 Hoàng Quốc Việt, Cầu Giấy, Hà Nội, Vietnam.
Graduate University of Science and Technology, Việt Nam Academy of Science and Technology, 18 Hoàng Quốc Việt, Cầu Giấy, Hà Nội, Vietnam.

SOME EFFECTS OF PVP ON THE FEATURES OF Au/TiO2 NANOPARTICLES SYSTEM FOR APPLICATION IN PLASMONIC SOLAR CELLS
Tiến Thành Nguyễn, Thị Thùy Nguyễn, Duy Thien Nguyễn, Văn Vũ Lê and Khắc An Dao
Energy Materials and Devices Lab, Institute of Materials Science, Vietnam Academy of Science and Technology (VAST), 18 Hoàng Quốc Việt Road, Cầu Giấy District, Hà Nội, Vietnam,
Faculty of Physics, University of Natural Science, Hanoi National University

PREPARATION AND PHOTOCATALYTIC ACTIVITY OF TiO2-SiO2-Fe3O4 COMPOSITES FOR DECOMPOSITION OF POLY CHLORINATED BIPHENYLS (PCBs) IN WASTE TRANSFORMER OIL
Nguyễn Quốc Trung, Vũ Đức Chinh, Vương Thị Kim Oanh, Phạm Nam Thắng, Vũ Thị Hồng Hanh
Institute of Materials Science, Vietnam Academy of Science and Technology, VAST
Faculty of Physics, Thai Nguyen University of Education, Thái Nguyên, Vietnam
FABRICATION OF Fe₃O₄ MAGNETIC FLUID BY HYDRO THERMAL FOR BIOMEDICAL APPLICATIONS

Vuong Thi Kim Oanh, Tran Dai Lam, Do Hung Manh, Le Trong Lu, Nguyen Xuan Phuc
Institute of Materials Science, Vietnam Academy of Science and Technology, VAST
Duy Tan University, 182 Nguyen Van Linh, Danang, Vietnam.
Graduate University of Science and Technology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Hanoi, Vietnam.
Institute for Tropical Technology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Hanoi, Vietnam.

STUDY ON Ni-TiO₂ ELECTROPLATING PROCESS

Le Thi Phuong Thao, Nguyen Duy Ket, Nguyen Duc Hung
Hanoi University of Mining and Geology, Duc Thang, Bac Tu Liem, Hanoi
Institute for Chemistry and Materials, 17 Hoang Sam, Hanoi

RESERVOIR OPTIMIZATION METHODS: DYNAMIC PROGRAMMING AND DIFFERENTIAL EVOLUTION

Phan Thi Thu Phuong
Faculty of Civil Engineering, Hanoi University of Civil Engineering, 55 Giai Phong Street, Hanoi, Vietnam

MODEL CALCULATES THE PARAMETERS OF DONUTS EXPLOSIVE APPLICATIONS FOR CUTTING THE CYLINDER PIPE

Nguyen Quang Huy, Nguyen Trang Minh and Tran Van Doanh
Z117 Mechanic Company, Dong Xuan commune, Soc Son, Hanoi.
Academy of Military Science and Technology, No 17 Hoang Sam, Cau Giay, Hanoi.
Military Technical Academy, No 236 Hoang Quoc Viet, Cau Giay, Hanoi

TYPE-2 FUZZY CO-CLUSTERING ALGORITHM FOR COLOR IMAGE SEGMENTATION

Van Nha Pham, Duc Thao Nguyen
Department of Advisory and Planning, Institute of Science and Technology MIST, Hoang Sam, Cau Giay, Hanoi, Vietnam

CONSTRUCTION POLARIZED LIGHT EXPERIMENT FOR HIGH SCHOOL STUDENTS

Nguyen Hoang Dang Khoa, Le Cong Nhan
High school Tran Hung Dao, Go Vap District, Ho Chi Minh city, VietNam.
Department of Environmental Sciences, Saigon University, Ho Chi Minh City, Vietnam.
APPLICATION OF GAMMA-GAMMA COINCIDENCE METHODS IN NEUTRON ACTIVATION ANALYSIS
Truong Van Minh, Pham Dinh Khang, Nguyen Xuan Hai, Tran Minh Hung, Ho Huu Thang, Nguyen An Son
Dong Nai University, 04 Le Quy Don, Bien Hoa, Dong Nai, VietNam
Nuclear Research Institute, 01 Nguyen Tu Luc, Dalat, Vietnam.
Da Lat University, 01 Phu Dong Thien Vuong, Dalat.

A METHOD TO OPTIMISE THE TOP QUARK MASS IN DI-LEPTON DECAY CHANNEL
Phan Thi Hong Ngoc, Markus Cristinziani, Kaven Yau Wong
Math and Natural Science Department, LongAn Teacher Training College, Long An province, Vietnam
ERC TopCoup Leader, Physics Institute, Bonn University, Germany.
ERC TopCoup member, Physics Institute, Bonn University, Germany

BUILDING AERODYNAMIC CALCULATIONS MODEL FOR WING WITH 3D MODELS BY IMMERSED BOUNDARY METHOD (IBM)
Mai Xuân Cánh, Nguyễn Trang Minh, Lã Hải Dũng, Nguyễn Quang Huy, Phạm Minh Vương
Academy of Military Science and Technology, VietNam
Viettel Research & Development Instituse.
DFM Engineering, Inc.

APPLYING MODEL-BASED PREDICTIVE CONTROL TECHNIQUE FOR OPTIMALLY CONTROLLING THE WATER LEVEL OF THE RESERVOIR OF A HYDROPOWER PLANT
Chu Hoa Lu, Vu Manh Tuan
Military Academy of Science and Technology, 17 Hoang Sam, Hanoi, Vietnam

ADJUSTMENT OF CALIBRATION PROCEDURE FOR THE FSA METHOD USING TO ANALYZE THE Γ SPECTRA
Huynh Thi Yen Hong, Truong Huu Ngan Thy, Vu Ngoc Ba, Truong Thi Hong Loan, Ngo Quang Huy
Nuclear Technique Laboratory, University of Science, 227 Nguyen Van Cu, Ward 4, District 5, HCMC, Vietnam
District, HCMC, Vietnam. Basic Science Department, Industrial University of Ho Chi Minh City, 12 Nguyen Van Bao, Ward 4, Go Vap District, HCMC, Vietnam.

STRUCTURAL STRENGTH ESTIMATING OF FLIGHT INSTRUMENTS
Trinh Hong Anh, Nguyen Phu Thang, Nguyen Trang Minh
Academy of Military Science and Technology, VietNam
P-63 METAL NANOPARTICLE SUBSTRATES OF SURFACE ENHANCED RAMAN SCATTERING FOR THE DETECTION OF MELAMINE
Nguyen Thi Bich Ngoc, Nguyen Thi Thai An, Vu Van Son, Nguyen Trong Nghia, Nghiem Thi Ha Lien, Tran Hong Nhung
Institute of Physics, Vietnam Academy of Science and Technology (VAST), 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam
Institute of Research and Development, Duy Tan University, 5/7 Quang Trung, Da Nang, Vietnam.

P-64 PROPAGATION DYNAMICS OF LASER PULSES IN A THREE-LEVEL V-TYPE ATOMIC MEDIUM UNDER ELECTROMAGNETICALLY INDUCED TRANSPARENCY
Hoang Minh Dong, Pham Van Trong, Nguyen Manh An, Le Van Doai, Dinh Xuan Khoa, Vu Ngoc Sau and Bang Nguyen Huy
Vinh University, 182 Le Duan Street, Vinh City, Vietnam.
The Central Region Transport College, Nghi Lien, Vinh City, Vietnam
Hong Duc University, Thanh Hoa City, Vietnam

P-65 DESIGN AND CONSTRUCTION OF THE HYPOGLYCEMIA MONITOR WIRELESSSYSTEM FOR DIABETICS
DararatYotha, Surapun Yimman, SathitNiramitmahapany
Department of Industrial Physics and Medical Instrumentation, King Mongkut’s University of Technology North Bangkok

P-66 RESULTS OF TREATMENT OF CERVICAL VERTEBRAE DEGENERATION AND CEREBRAL VASCULAR DYSFUNCTIONS WITH INTRAVASCULAR LASER IN THAI NGUYEN
Bui Van Thien, Le Thi Nga, Duong Cong Thai, Nguyen Thu Huong, Pham Van Hoi
Thai Nguyen University of Medicine & Pharmacy
Minh Tien Clinics in Dai Tu district- Thai Nguyen
Thai Nguyen Traditional Medicine Hospital
Thai Nguyen Hospital of Nursing & rehabilitation
Institute of Material Science, VietNam Academy of Science & Technology

P-67 A STUDY OF CO-PROCESSING WASTES CONTAMINATED OILS IN CEMENT KINLS
Hoang Quoc Trong, Pham Gia Dien
Center for High Technology Development, VAST, 18 Hoang Quoc Viet, Cau Giay, Hanoi
Institute of Chemistry, VAST, 18 Hoang Quoc Viet, Cau Giay, Hanoi
REPORT SESSION

Chairperson: Dr. Le Vu Tuan Hung (VNUH, VietNam)
Dr. Rungsima Yeetsorn (KMUTNB)

O-23
13:30 – 13:50
Invited Talk
SYNTHESIS AND CHARACTERIZATION OF A NEW FAMILY OF LITHIUM CONDUCTING IONIC LIQUIDS FOR LITHIUM BATTERIES

Priew Eiamlamai\textsuperscript{1,2}, Cristina Iojoiu\textsuperscript{1,2}, Patrick Judeinstein\textsuperscript{3}, Lavinia Astratine\textsuperscript{1,2}, Jean-Yves Sanchez\textsuperscript{1,2}

Univ. Grenoble Alpes, LEPMI, F-38000 Grenoble, France
CNRS, LEPMI, F-38000 Grenoble, France, 1130 Rue de la Piscine, 38402, St. Martin d’Hères, France
R.M.N. en Milieu Orienté, Institut de Chimie Moléculaire et des Matériaux d’Orsay (ICMMO), UMR8182, Bâtiment 410, Université Paris-Sud, 91405 Orsay Cedex, France

O-24
13:50-14:10
Invited Talk
APPROACHING THE GENERATION OF GREEN TECHNOLOGY FOR DIESEL FUEL

Wan Azelee Wan Abu Bakar
Faculty of Science, Universiti Teknologi Malaysia, Skudai, Johor Bahru Johor Malaysia

O-25
14:10-14:25
ASYMPTOTIC ANALYSIS FOR TRANSMISSION OF GAUSSIAN BEAM THROUGH A PLANE DIELECTRIC INTERFACE

Dinh Trong Quang, Trinh Xuan Tho
Military Institute of Science and Technology, Vietnam

O-26
14:25-14:40
NUMERICAL ESTIMATIONS OF RELATIVE PERMITTIVITY, RELATIVE PERMEABILITY AND REFRACTIVE INDEX BY ALTITUDE IN THE EARTH ATMOSPHERE ENVIROMENT FOR APPLICATIONS IN PROBLEM OF WIRELESS INFORMATION TRANSMISSION (WIT) AND THE WIRELESS POWER TRANSMISSION (WPT)

Dao Khac An and Nguyen Chung Dong
Energy Materials and Devices Lab, Institute of Materials Science (IMS), VAST, 18 Hoang Quoc Viet road Cau Giay Ha noi Viet nam
**O-27**

14:40-14:55  
ELECTROCHEMICAL DOSING OF Fe\(^{2+}\) IN ELECTRO-FENTON TREATMENT

James I. Colades, Mark Daniel G. de Luna, C. P. Huang  
Department of Chemical Engineering, Environmental Engineering Graduate Program, University of the Philippines, Diliman, Quezon City  
Department of Civil and Environmental Engineering, University of Delaware, Newark, DE 19716-3120, USA.

**O-28**

14:55-15:10  
SELECTIVE HYDROGENATION OF 3-NOTROSTRENE TO 3-VINYLANILINE OVER Pt-BASED BIMETALIC CATALYSTS

Sathaporn Tiensermsub, Joongjai Panpranot  
Center of Excellence on Catalysis and Catalytic Reaction, Department of Chemical Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok 10330, Thailand

15:10-15:30  
COFFEE BREAK

**REPORT SESSION**

Chairperson:  
Prof. Wan Azelee Wan Abu Bakar (UT, Malaysia)  
Dr. Luepol Pipanmaekaporn (KMUTNB)

**O-29**

15:30-15:50  
Invited Talk  
A NEW SIMPLE PROOF OF THE HOOK-LENGTH FORMULA

Bich Van Nguyen  
Department of Algebra, Institute of Mathematics, VAST,  
18 Hoang Quoc Viet Road, Cau Giay District, Hanoi, Vietnam

**O-30**

15:50 – 16:10  
Invited Talk  
TERAHETZ EMISSION FROM Mn:GaAs FILMS

National Institute of Physics, University of the Philippines, Diliman, Quezon City 1101, Philippines  
Research Center for Development of Far-Infrared Region, University of Fukui, Fukui 920-8507, Japan.
O-31
16:10-16:25 DETECTING HUMAN EMOTION VIA SPEECH RECOGNITION BY USING ENSEMBLE CLASSIFICATION MODEL
Sathit Prasomphan Surinee Duangvichian
Department of Computer and Information Science,
King Mongkut's University of Technology North Bangkok, Thailand

O-32
16:25-16:40 SPEED UP FUZZY CO-CLUSTERING ALGORITHM ON GPU FOR CATEGORICAL MULTIVARIATE DATA
Van Nha Pham, Long Thanh Ngo
Department of Advisory and Planning, Institute of Science and Technology MIST, Hoang Sam, Cau Giay, Hanoi, Vietnam
Department of Information System, Le Quy Don Technical University, 236 Hoang Quoc Viet, Hanoi, Vietnam.

O-33
16:40-16:55 A STUDY OF LITHIUM AND COBALT RECOVERY PARAMETERS FROM SPENT LI-ION BATTERIES
Siriya Chansakun, Preecha Termsuksawed, Choochatt Nitipanyawong
King Mongkut's University of Technology Thonburi (KMUTT) 126 Pracha Uthit Rd., Bang Mod, Thung Khru, Bangkok 10140, Thailand.

O-34
16:55-17:10 METHODS ON DETERMINATION OF CAFFEINE CONTENT IN COFFEE
Phan Thi Thanh Dieu
Faculty of Chemical Technology, Ho Chi Minh City University of Food Industry, 140 Le Trong Tan., Tay Thanh, Tan Phu., Ho Chi Minh, Vietnam

CLOSING

17:10-17:30 Chairperson: Prof. Teravuti Booyasopon,
President of (KMUTNB, Thailand)

Prof. Dr. Nguyen Dai Hung,
President, VPS, Vietnam

18:30 - 20:00 CONFERENCE PARTY
(Offered by CASEAN Organizing Committee)
ONE-DAY TOURS
ABSTRACT