

## **Session Program**

**24-26 May 2017**



# **Siam Physics Congress 2017**

## ***Poster Presentation I***

Rayong Marriott Resort & Spa

<http://www.marriott.com/hotels/travel/bkkrr-rayong-marriott-resort-and-spa/> Rayong, Thailand

## Wednesday 24 May

15:10

### Poster Presentation I

#### Poster Session |

**Location:** Rayong Marriott Resort & Spa, <http://www.marriott.com/hotels/travel/bkkr-rayong-marriott-resort-and-spa/>  
Rayong, Thailand

#### **Effect of Planar Electrode Shapes on Paramecium Cell Lysis Performance in Microfluidic Systems**

##### **Speaker**

Ms Chanikan Aroonnithi

#### **Characterization and XPS analysis of Mn-doped calcium copper titanate thin films by a sol-gel method.**

##### **Speaker**

Mr Pachara Jolutsakul

#### **surface water wave reconstruction using MATLAB**

##### **Speakers**

Mr Nirut Pussadee, Mr Sitthipong Yapo

#### **Torque Induced on Lipid Microtubules with Optical Tweezers**

##### **Speaker**

Dr Nattaporn Chattham

#### **Quantum reflection in the linearly downward potential**

##### **Speakers**

Mr Noppasin Chamnan, Dr Boonlit Krunavakarn

#### **Simple Harmonics Motion experiment based on LabVIEW interface with Arduino**

##### **Speakers**

Dr Anusorn Tong-on, Parinya Saphet, Dr Meechai Thepnurat

#### **One dimensional two-body collisions experiment based on LabVIEW interface with Arduino**

##### **Speakers**

Parinya Saphet, Dr Anusorn Tong-on, Dr Meechai Thepnurat

#### **Investigating Student understanding of Simple harmonic motion**

##### **Speaker**

Pornrat Wattanakasiwich

#### **Single-mirror, off-axis schlieren system's sensitivity determination**

##### **Speaker**

Mr Kittisak Ketaiam

#### **Study of the efficiency calibrations of HPGe detector for the PGNA system**

##### **Speaker**

Mr Wichian Ratanatongchai

**Development of Dielectric Barrier Discharge for Reducing Microbial Contamination in Pepper (*Piper nigrum*) and Sesame (*Sesamum indicum* Linn.) Powder**

**Speaker**

Jiraporn Promping

**Investigation of L-H-L Transitions Criteria and Hysteresis Based on Bifurcation Concept**

**Speaker**

Mr APISIT DANG-IAD

**Effect of Dielectric Barrier Discharge Plasmas Treatment on Egg Shell**

**Speaker**

Dr Nopporn Poolyarat

**Development of X-ray fluorescence technique for tin oxide analysis**

**Speaker**

Chalongwut Boonpratum

**Gamma Ray Evaluation of Fast Neutron Irradiated on Topaz from Sri Lanka by HPGe Gamma Ray Spectrometry**

**Speaker**

Ms Kanokwan Boonsook

**Isotopic Composition of Precipitation at Ongkharak District, Nakhon Nayok Province**

**Speaker**

Mr Chakrit Saengkorakot

**Development of Neutron Imaging System for Neutron Tomography at Thai Research Reactor TRR-1/M1**

**Speaker**

Dr Sarinrat Wonglee

**Developing dye sensitized solar cells with natural dyes and polymer electrolytes**

**Speaker**

Wachira Seesad

**Dependence of contact angle on deposition time for superhydrophobic carbon nanoparticles films**

**Speaker**

Dr Sumet Sakulsermsuk

**Effect of Membrane Tension on Physical Properties of Niosome Bilayers: A Molecular Dynamics Study**

**Speaker**

Ms Saowalak Somjidd

**Characteristic of sputtered Co75Ag25 film on various under-layer and polyimide substrate**

**Speaker**

Nittaya Sanganan

**Hardness Enhancement on Stainless Steel Surface by Coating Graphene Film Using Thermal Chemical Vapor Deposition**

**Speaker**  
Akkawat Ruammaitree

### **Diamond-like carbon films prepared by RF magnetron sputtering**

**Speakers**  
Ms Jidapa Iomon, Ms Ponthip Chaiyabin

### **Vacuum Vaporization Technique for Latent Fingerprints Development on Thermal Papers using Lawsone Natural Products**

**Speaker**  
Mr Noparat Phungyimnoi

### **Effect of annealing conditions on polycrystalline silicon produced by the inverted aluminum induced crystallization of amorphous silicon films on glass substrates.**

**Speaker**  
Ms Kanyarat Kesrisom

### **Effect of sputtering power on the properties of co-sputtered Zr-Ti-W metal alloy thin films**

**Speaker**  
Mr Rattanachai Kowong

### **Mechanical properties of cement paste containing iron powder**

**Speaker**  
Mr Nattapong Chuewongkam

### **Effect of Copper Oxide Nanoparticles as a barrier for Efficiency Improvement in ZnO Dye-Sensitized Solar Cells**

**Speaker**  
Ms Anongnart Sonthila

### **Adsorption study of gas molecules on ZnO decorated carbon nanotubes**

**Speaker**  
Mr Yotsarayuth Seekaew

### **Stability and Electronic property of Vacancy Defects in Silicon Carbide Nanosheet based on DFTB**

**Speaker**  
Ms Onsuda Arayawut

### **Optimization of Copper Surface as a Substrate for CVD growth of Graphene**

**Speaker**  
Taworn Intaro

### **Improved Efficiency of Polymer Solar Cells by mean of Coating Hole Transporting Layer as Double Layer Deposition**

**Speaker**  
Ms Teantong Chonsut

### **Optical and Structural Properties of Dye Sensitized Composite Semiconductor Photoanode**

**Speaker**  
Ms Kamonchanok Wangcharoen

**DIY Low Cost Thick Lenses kit Applied Teaching of Parallel light rays passing through lenses in either direction in Physics**

**Speaker**

Dr Meechai Thepnurat

**The determination of the energy values and the composition analysis of M-16 rifle black powders**

**Speaker**

Ms Rewattee Satee

**The sound education by applying mathematica program.**

**Speaker**

Mr Thanapon Premkamon

**Selected Screen for Engaging Students in Projectile Motion**

**Speaker**

Mr Ar-si Dramaee

**Fabrication and Physical Properties of Titanium Nitride/Hydroxyapatite Composite on Polyether Ether Ketone by RF Magnetron Sputtering Technique**

**Speaker**

Wasin Nupangtha

**Application of tapered glass capillary microbeam in MeV-PIXE mapping of longan leaf for elemental concentration distribution analysis**

**Speakers**

Liangdeng Yu, Dr Nirut Pussadee, Mr Sirawut Natyanun

**Enhance of hydrophilicity property for gas separation membrane by DC plasma**

**Speaker**

Mrs Soraya Ruangdit

**Application of atmospheric-pressure argon plasma jet for bread mold decontamination**

**Speaker**

Dr Panakamon Thonglor

**Conceptual Study of Possibility for Droplets to Achieve Superheated in Edge Tokamak Plasmas**

**Speakers**

Dr Nopparit Somboonkittichai, Dr Michael Coppins

**Measurement and Analysis of Specific Activities of Radionuclide 40K, 226Ra and 232Th in Beach Sand Samples from Talo kapo beach Yaring District in Pattani Province using Gamma Ray Spectrometry**

**Speakers**

Ms Yameela Mhuchudchu, Ms Areeya Tamat, Ms Masae Masae, Ms Supeeya Pao-oh

**Preparation of aluminum doped zinc oxide thin films on glass substrate by sparking process and their optical and electrical properties**

**Speaker**

Mr Anupong Sukee

**Surface study of irradiated sapphires using AFM**

**Speaker**

Natthapong Monarumit

**Influence of Under-layers morphology on Structural and Magnetic Properties of Sputtered Co<sub>81</sub>Pd<sub>19</sub> Film.****Speaker**

Pairin Ponchaiya

**Gas Sensing Response of Nickel Doped Calcium Copper Titanate Thin Films Synthesized by Sol-gel Method****Speaker**

Ms Arisara Boontum

**Modification of Calcium Copper Titanate Thin Films by Adding Ag Compounds and their H<sub>2</sub>S Gas Sensing Response****Speaker**

Mr Aukrit Natkaeo

**Microstructure of CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub>/SrTiO<sub>3</sub> and CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub>/BaTiO<sub>3</sub> multilayered thin films grown on LaAlO<sub>3</sub> (100) substrates for dielectric tunability****Speaker**

Mr Wiwittawin Sukmas

**Influence of Thermal Annealing Process on Vanadium Oxide Thin Films for Metal-Insulator Transition Enhancement****Speaker**

Mr Sukittaya Jessdaluk

**Control the Crystal Growth of Al-doped ZnO Thin Film Prepared by Pulsed Laser Deposition and The Influences on Its Optical and Electrical Properties****Speaker**

Mr Narathon Khemasiri

**Hydrophobic thiol-ene surfaces fabricated via plasma activation and photo polymerization****Speaker**

Peera Champathet

**Tuning of Preparational Factors Affecting the Morphological Structure and Gas Separation Property of Asymmetric Polysulfone Membranes****Speaker**

Dr Chalad Yuenyao

**The effects of Fe-doping concentration in Ba<sub>1-x</sub>Fe<sub>x</sub>TiO<sub>3</sub> thin films on their microstructure and magnetic properties****Speaker**

Mr Witheetat Amatyakul

**Frequency Distribution of Specific Activities and Radiological Hazard Assessment in Surface Beach Sand Samples Collected from Bangsaen beach in Chonburi Province, Thailand****Speaker**

Nopparit Changkit

### **One step hydrothermal synthesis of CNTs-NiS films for counter electrodes in dye-sensitized solar cells**

**Speaker**

Dr Wasan Maiaugree

### **The pre-service teachers understanding about moon phase.**

**Speaker**

Nudchanard Saenpuk

### **Study Motion of PVC-Cylindrical on Incline Plane using g-Sensor Compare with Motion Simulate**

**Speaker**

Mr Dusit Ngamrunroj

### **Electrical properties and gas sensing properties of TiO<sub>2</sub>/GO nanocomposites for CO<sub>2</sub> sensor application**

**Speaker**

Ms Pitchanunt Chaiyo

### **A Study of Ferrofluid Shape Formation under Influence of Magnetic Field from Various Permanent Magnet Shapes**

**Speakers**

Mr Tananut Sanghong, Mr Tanabodee Kaewwichian

### **Liquid absorption using 3D carbon nanofiber scaffolding derived from bacterial cellulose**

**Speaker**

Mr Surachat Sombat

### **Observation of Spin Seebeck Effect in Bulk Strontium Ferrite**

**Speaker**

Mr Champ Suksawat

### **A novel spectrometer based on the near-field Talbot effect**

**Speaker**

Mr Withun Sutham

### **Optical tristability Investigation in Two Coupled Ring Resonators**

**Speaker**

Dr Santhad Pithakwongsaporn

### **Microfluidic System for E.coli Electroporation**

**Speaker**

Jongrak Sanglao

### **Biocompatibility of TiO<sub>2</sub>, TiN and TiNO Thin Films Deposited by DC Reactive Magnetron Sputtering**

**Speaker**

Ms jita vachabuskorn

### **Charge Mobility of Organic Solar Cells using Low Cost Pulsed Laser for photo-CELIV**

**Speaker**

Mr Sorawit Changsalak

**Selective area growth behavior of ZnO nanorod arrays in hydrothermal synthesis****Speaker**

Nantarat Srisuai

**Design and performance of a laser-based weed control system****Speaker**

Mr Sirinun Sirikunkitti

**Classical Nuclear Simulations of the  $\pi^+({}^3\text{He},\text{ppn})\pi^+$  Reactions with Quantum Corrections****Speaker**

Dr Rachen Ratanarojanakul

**Application of Silver Nanoparticles for Natural Rubber Latex****Speaker**

Ms Pranlekha Traiwatcharanon

**The evaluation of laser cleaning of silica nanowires****Speaker**

Chonticha Chunhakit

**The investigation of high school student's energy concept by using analogies****Speaker**

Mr Khanti Toedtanya

**DEVELOPING CONCEPT ON ENERGY CONSERVATION USING SIMPLE EXPERIMENTS FOR GRADE 10 STUDENTS****Speakers**

Mr Sakchai Rachniyom, Dr Sura Wuttiptom

**Developing students' learning achievement and experimental skills on buoyancy and the involvement of Newton's third law through experimental set****Speakers**

Mr Chokchai Jaewijarn, Dr Sura Wuttiptom

**Fission Product Behavior in High-Temperature Water: CsI vs MoO<sub>4</sub>****Speaker**

Dr Kotchaphan Kanjana

**In-house development of neutron moisture gauge for field measurement****Speaker**

Ms Parichat Sinkaew

**Electrical Properties of Ultra-thin TiO<sub>2</sub> Compact Layer on FTO for Perovskite Solar cells****Speaker**

Ms Ramon Songtanasit

**interference of two vortex beams with different topological charge numbers**



**Speaker**

Ms Suvipak Chumdaeng

**Fractal dimension of synthesized sound wave****Speaker**

Mr Manorth KANJANAPEN

**Construction of 3D Image of Surface Coated with Micro-Scale Transparent Layer by Analyzing Speckle Interferogram with Fast Fourier Transform****Speaker**

Mr Parinya Duangklang

**Effect of Surfactant Concentration to Aggregations of Nanogold Particles.****Speaker**

Ms Methawee Duangthanu

**Learning Particle Physics with DIY Play Dough Model****Speaker**

Ms Thittima Thunyaniti

**Dead and living yeast cells analyzer using electrical force induction****Speaker**

Prof. Sakshin Bunthawin

**Cholesterol Effect on Physical Properties of Niosome Bilayers: A Molecular Dynamics Study****Speaker**

Mr Likit Temprom

**Low Cost and Disposable Lab on a Chip****Speaker**

Mr Anan Saenkhamai

**Study of tilapia's egg permeabilization with the optimized electrical parameters****Speaker**

Prof. Dr.Sakshin Bunthawin

**Viability determinations of yeast cells using translational dielectrophoretic speeds****Speaker**

Prof. Sakshin Bunthawin

**Minimization of the synthetic androgen 17Alpha-methyltestosterone hormone for sex reversal of Nile tilapia eggs using electrical technique****Speaker**

Prof. Dr.Sakshin Bunthawin

**Verification of electrical inductions of O.niloticus egg with physiological membrane pores****Speaker**

Prof. Dr.Sakshin Bunthawin

**Simulations of induced transmembrane potentials of tilapia's egg using Hen egg RC-model**

**Speaker**

Prof. Dr.Sakshin Bunthawin

**Effect of Electromagnetic Fields on oil Palm Germination****Speaker**

ผศ.ดร. ชดาภิษฐ์ สุดศิริ

**Study on Inverse Laplace Transform of NMR relaxation signal of Sticky rice.****Speaker**

Mr Nattawoot Maleelai

**Preparation of strontium- and/or zinc-doped hydroxyapatite nanoparticles and their polycaprolactone composite fibrous scaffolds****Speaker**

Mr Teeranat Pantasri

**liposomes fabrication using vortex rings generated microfluidic device****Speaker**

Mr Sorawit Sanin

**Improving of QRS complex detection in ECG signal Using Combination of Fourier Transform and Wavelet method****Speaker**

Jutarop Reungyos

**Permeation of Beta Cyclodextrin and its Derivatives into the Lipid Membrane****Speakers**

Ms Wasinee Khuntawee, Ms Pornkamon Nalakarn

**Development of the teaching sound frequency with Sing Sharp mobile phone and pipe pressure for KARAOKE subject****Speaker**

Mr thienchai ounsumran

**Flipped Classroom Enhances Students' Performance in Physics Learning****Speaker**

Mr Prakasit Changsuphan

**Performance of ZnO-doped recycled window glass as a thermoluminescence dosimeter****Speaker**

Ms Thanaporn Thumsa-ard

**The Measurement of Thermal Diffusivity in Conductor and Insulator by Photodeflection Technique****Speaker**

Uthed Achathongsuk

**Charge Mobility of Organic Solar Cells using Low Cost Pulsed Laser for photo-CELIV****Speaker**

Mr Sorawit Changsalak

### **Effect of MnO<sub>2</sub> morphology on electrochemical capacitance of supercapacitor electrode**

**Speaker**

Mr Authit Phakkhawan

### **Study of formaldehyde molecule adsorption on pristine, defect and functionalized carbon nanotubes by self-consistent charge density functional tight-binding method**

**Speaker**

Mr Kriengkri Timsorn

### **Fabrication of carbon sphere film as a supercapacitor electrode**

**Speaker**

Ms Suklitta Thongkhem

### **A facile method for Electrospinning of Chitosan/PVA /Siam weeds Nano fibers**

**Speaker**

Mr piriya praneekit

### **Optical properties of DC sputtered titanium dioxide/gold thin films**

**Speaker**

Mr Manas Sittishoktram

### **Characterization of Ag doped WO<sub>3</sub> synthesized by electrospinning**

**Speaker**

Mr Jananan Kamsri

### **Yttrium doped TiO<sub>2</sub> nanotubes prepared by anodization method**

**Speaker**

Ms Watchareeya Chaiyarat

### **Stretchable strain sensor based on metal nanoparticles-Polydimethylsiloxane nanocomposites**

**Speaker**

Dr Thutiyaporn Thiwawong

### **SYNTHESIS OF CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub> BY MODIFIED SOL-GEL METHOD WITH HYDROTHERMAL**

**Speaker**

Dr Chivalrat Masingboon

### **First-principles study of H<sub>2</sub> adsorption on two-dimensional C<sub>2</sub>N sheet**

**Speaker**

Mr Pongdet Netrattana

### **A Nonlinear Transfer Matrix Method for Third-Harmonic Generation Modeling in a One-Dimensional Metal-Dielectric Photonic Band-Gap Structure**

**Speaker**

Surawut Wicharn

### **Stoichiometry and Performance in PCDTBT:Perylene Solar Cells**

**Speaker**

Ms Sathongsang Wannakan

**Stoichiometry and Performance in PCDTBT:Perylene Solar Cells**

**Speakers**

Ms Wannakan Sathongsang, Ms Kanyaporn Thubthong

16:00

15:10

**Poster Presentation I**

**Poster Session** |

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