

# 31<sup>st</sup> annual paase meeting and symposium

Science and Engineering Education, Research and Innovation  
Toward National Development and Global Competitiveness

A yearly publication of the Annual Meeting and Symposium of the Philippine – American Academy of Science and Engineering (PAASE). The publication contains abstracts of scientific papers covering all areas of science, engineering and technology research.

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# 31st APAMS Overview

## Morning Program

DAY 1. Wednesday, June 15, 2011			DAY 2. Thursday, June 16, 2011				DAY 3. Thursday, June 17, 2011													
8:00		8:00					8:00					8:00								
8:15	REGISTRATION	8:15					8:15					8:15								
8:30		8:30					8:30					8:30								
8:45		8:45					8:45					8:45								
9:00		OPENING PROGRAM	9:00	PL2: SEVERINO AND PAZ KOH LECTURESHIP AWARDS IN SCIENCE & ENGINEERING				9:00	PL3: Scientific Plenary Lectures				9:00							
9:15	9:15							9:15									9:15			
9:30	9:30							9:30									9:30			
9:45	9:45							9:45									9:45			
10:00	Morning Break		10:00					Morning break					10:00	Morning break				10:00		
10:15	PLENARY LECTURES, PL1: Science and Engineering and Society	10:15					10:15					10:15								
10:30		10:30	O1-A1	O1-B1	O1-C1	O1-D1	10:30	O3-A1	O3-B1	O3-C1	O3-D1	10:30								
10:45		10:45					10:45					10:45								
11:00		11:00	O1-A2	O1-B2	O1-C2	O1-D2	11:00	O3-A2	O3-B2	O3-C2	O3-D2	11:00								
11:15		11:15					11:15					11:15								
11:30	11:30	O1-A3	O1-B3	O1-C3	O1-D3	11:30	O3-A3	O3-B3	O3-C3	O3-D3	11:30									
11:45	11:45					11:45					11:45									
12:00	LUNCH and Open Forum	12:00	O1-A4	O1-B4	O1-C4	O1-D4	12:00	O3-A4	O3-B4	O3-C4	O3-D4	12:00								
12:15		12:15					12:15					12:15								
12:30		12:30	LUNCH				12:30	LUNCH				12:30								
12:45		12:45					12:45					12:45								
13:00		13:00					13:00					13:00								
13:15	13:15					13:15					13:15									

## Afternoon Program

13:30	PLENARY: Introduction and instructions to Focused Group Discussions	13:30					13:30					13:30
13:45		13:45					13:45					13:45
14:00	PARALLEL SESSIONS: FOCUSED GROUP DISCUSSIONS	14:00	Poster Session & Innovation Booths				14:00	POSTER PITCHING COMPETITION				14:00
14:15		14:15					14:15					14:15
14:30		14:30	O2-A1	O2-B1	O2-C1	O2-D1	14:30	O4-A1	O4-B1	O4-C1	O4-D1	14:30
14:45		14:45					14:45					14:45
15:00		15:00	O2-A2	O2-B2	O2-C2	O2-D2	15:00	O4-A2	O4-B2	O4-C2	O4-D2	15:00
15:15		15:15					15:15					15:15
15:30		15:30	O2-A3	O2-B3	O2-C3	O2-D3	15:30	O4-A3	O4-B3	O4-C3	O4-D3	15:30
15:45		15:45					15:45					15:45
16:00		16:00	O2-A4	O2-B4	O2-C4	O2-D4	16:00	O4-A4	O4-B4	O4-C4	O4-D4	16:00
16:15		16:15					16:15					16:15
16:30	Innovation Pitch	16:30					16:30	O4-A5	O4-B5		O4-D5	16:30
16:45		16:45					16:45					16:45
17:00		17:00					17:00					17:00
17:15		17:15					17:15					17:15
17:30		17:30					17:30					17:30
17:45	17:45					17:45					17:45	
18:00	FELLOWSHIP DINNER	18:00					18:00					18:00
20:00		20:00					20:00	DINNER				20:00

Day 1, Wednesday  
June 15, 2011

8:00	<b>REGISTRATION</b>
9:00	<b>OPENING PROGRAM</b> Moderator: Dr. Arnel Salvador Dr. Gisela Concepcion, Chair 31APAMS and President PAASE Hon. Alfredo Pascual, UP President Engr. Mario G. Montejo, Secretary DOST Recognition Ceremony for Prof. Richard Heck, Nobel laureate in Chemistry, 2010
9:15	
9:30	
9:45	
10:00	
10:00	<b>Morning Break</b>
10:15	<b>PLENARY LECTURES, PL1: Science and Engineering and Society</b> Moderator: Dr. Arnel Salvador  Cong. Joseph Emilio Abaya, Co-Chair of COMSTE Cong. Luis Villafuerte Dr. Abraham Pascual, Chairman Emeritus, Pascual Labs Engr. Diosdado Banatao, President, Tallwood Ventures  Photo Session
10:30	
10:45	
11:00	
11:15	
11:30	
11:45	
12:00	<b>LUNCH and Open Forum</b>
12:30	
13:15	
13:30	<b>PLENARY: Introduction and instructions to Focused Group Discussions</b> Dr. Rigoberto Advincula
13:45	
14:00	<b>PARALLEL SESSIONS: FOCUSED GROUP DISCUSSIONS</b> FGD1: Initiatives to increase R&D funding FGD2: Government Legislation, and S&T Development FGD3: Science and Engineering Curriculum Review FGD4: Internal and external review FGD5: Environmental and Disaster Mitigation FGD6: Secondary Education: Curriculum Review in Science and Engineering from K-12 FGD 7: Energy and Sustainability FGD 8: Millennium Development Goals
14:30	
15:00	
15:30	
16:00	
16:30	
17:00	
17:30	
18:00	<b>FELLOWSHIP DINNER</b>
20:00	

Day 2, Thursday morning  
June 16, 2011

8:30	<p align="center"><b>PL2: SEVERINO AND PAZ KOH LECTURESHIP AWARDS IN SCIENCE &amp; ENGINEERING</b> Moderator: Dr. Alfonso Albano</p> <p>PL2-1: Dr. Carlito Lebrilla: "Sugar is spice – Glycosylation in the post-genome world" PL2-2: Dr. Felix Buot: "Discrete Quantum Mechanics and Topological Order: Spintronics, Pseudospintronics, and Topological Nanoelectronics"</p>			
8:45				
9:00				
9:15				
9:30				
9:45				
10:00	<b>Morning break</b>			
10:15				
	<b>PARALLEL TECHNICAL SESSIONS 1</b>			
	<b>O1-A: Behavioral Sciences</b> Moderator: Raul Suarez	<b>O1-B: Environment 1</b> Moderator: Nemesio Montaña	<b>O1-C: Energy 1</b> Moderator: Arnel Salvador	<b>O1-D: Biomedical 1</b> Moderator: Liza Virata-Theimer
10:30	<b>O1-A1</b> Mendoza, Eduardo R.: PhilSHIFT: Translating chronobiology research into health-risk reduction and productivity improvement in the Philippine BPO industry	<b>O1-B1</b> De los Reyes, Francis L. III: Enhancing methane capture for energy generation by understanding methanogenesis initiation and microbial ecological succession in landfills	<b>O1-C1</b> Agrupis, S.C.: Properties and Characterization of MMSU 95hBE Bioethanol	<b>O1-D1</b> Albano, A. M.: Vasomotion becomes less random as diabetes progresses in monkeys
10:45				
11:00	<b>O1-A2</b> Jose, Wilfredo I.: Introducing a locally-developed idea-generating technique for educational and research purposes	<b>O1-B2</b> Dadios, Elmer P.: Controlling Water Quality Parameters of Milkfish Culture Using Neural Network	<b>O1-C2</b> Almendrala, Michelle C.: Recycling biobutanol fermentation broth by ultrafiltration	<b>O1-D2</b> Rojas, Nina Rosario L.: Polyethylene Oxide/Chitin/Chitosan Scaffolds for Possible Tissue Regeneration
11:15				
11:30	<b>O1-A3</b> Flordelis, Evelyn V.: From Academe to Social Network	<b>O1-B3</b> Aviso, Kathleen B.: Design of Robust Eco-industrial Water Exchange Networks Using Fuzzy Mathematical Optimization	<b>O1-C3</b> Amante, A.D.: A Prototype Model of a Piezoelectric-based battery charging system	<b>O1-D3</b> Roa, Marylette B.: Utilization of circulating tumor cells for dendritic cell priming
11:45				
12:00	<b>O1-A4</b> Mistades, Voltaire Mallari: A Substantive-Level Theory of Teaching Introductory Physics	<b>O1-B4</b> Llamado, Arlene L. : Comparison between culture-dependent and culture-independent approaches in the detection of dominant biofilm-forming bacteria from an abandoned mine soil	<b>O1-C4</b> Bandyopadhyay, Santanu: Optimum sizing of standalone Photovoltaic Thermal (PVT) systems using design space approach	<b>O1-D4</b> Chung, Francisco S. Jr. Autologous Dendritic Cell Transplantation as an Adjuvant Treatment for Lung Cancer
12:15				

Day 2, Thursday AFTERNOON  
June 16, 2011

12:30	<b>LUNCH</b>			
13:15				
13:30	<b>Poster Session &amp; Innovation Booths</b>			
14:15				
	<b>PARALLEL TECHNICAL SESSIONS 2</b>			
	<b>O2-A: Climate</b> Moderator: Gregory Tangonan	<b>O2-B: Materials 1</b> Moderator: Armando Somintac	<b>O2-C: Energy 2</b> Moderator: Elmer Dadios	<b>O2-D: Biomedical 2</b> Moderator: Leah Tolosa
14:30	<b>O2-A1</b> Comiso, Josefino C.: CO <sub>2</sub> , Climate Change and Ocean Acidification	<b>O2-B1</b> Bacabac, Rommel G.: Biorheology: Stretching Mechanics of Polymers Probed by Counting Winding Events	<b>O2-C1</b> Agrupis, S.C.: Cellulosic Ethanol From Corn Stover Planted at Different Seeding Densities	<b>O2-D1</b> Concepcion, Gisela & Uy, Iris: Analysis of the antibody structure based on high- resolution crystallographic studies
14:45				
15:00	<b>O2-A2</b> Lloren, Ronald B.: Changes in precipitation and primary productivity in the Philippine internal seas during the Holocene	<b>O2-B2</b> Baje, Benito A.: Preparation and Characterization of Silica Powder from Bamboo Leaves Ash	<b>O2-C2</b> Almendrala, Michelle C.: Separation of butanol from ABE mixture using hollow fiber-contained liquid membrane	<b>O2-D2</b> Saloma-Palmes C. Nanoparticles Show Pleiotropic Effects in Cultured Cells and Mouse Embryos
15:15				
15:30	<b>O2-A3</b> Gregorio, Glenn B. "2-in-1" Rice Breeds: Combining the Tolerance of Salinity and Submergence	<b>O2-B3</b> Fujii, Yusaku: Precision Mechanical Measurement Using the Levitation Mass Method (LMM)	<b>O2-C3</b> Tan, Raymond: A Multi-Period Integer Programming Model for Optimal Source-Sink Matching in Carbon Capture and Storage Systems with Time Constraints	<b>O2-D3</b> Gan Lim, Laurence A.: Using ANFIS to Classify Colonic Histopathological Images
15:45				
16:00	<b>O2-A4</b> Siringan, Fernando Sea level changes in the Philippines from SSH data	<b>O2-B4</b> Promentilla, Michael Angelo B.: 3D crack characterization from microtomographic images of cement-based materials	<b>O2-C4</b> Mendoza, Teodoro C.: The Carbon Footprint of Sugar Production in Eastern Batangas, Philippines	<b>O2-D4</b> Virata-Theimer, Maria Luisa A.: Investigation of a Serious Adverse Event: Hemolysis in Two Kawasaki Disease Patients After High-Dose Intravenous Immunoglobulin Therapy
16:15				
16:30	<b>Innovation Pitch</b>			
18:00				

Day 3, Friday morning  
June 17, 2011

8:30	<p align="center"><b>PL3: Scientific Plenary Lectures</b> Moderator: Dr. Eduardo Mendoza</p> <p>PL3-1: Dr. Rigoberto Advincula (2010 Koh Lectureship Award): "Nanostructured Polymer and Hybrid Materials"</p> <p>PL3-2: Dr. Caesar Saloma: "Velocimetry of weakly reflecting microscopic samples by optical feedback semiconductor laser interference microscopy"</p>			
8:45				
9:00				
9:15				
9:30				
9:45				
10:00	<b>Morning break</b>			
10:15				
	<b>PARALLEL TECHNICAL SESSIONS 3</b>			
	<b>O3-A: Natural Products</b> Moderator: Irene Villaseñor	<b>O3-B: Environment 2</b> Moderator: Raymond Tan	<b>O3-C: Computational science &amp; Mathematics</b> Moderator: Michelle Almendrala	<b>O3-D: Biomedical 3</b> Moderator: Ben de Lumen
10:30	<b>O3-A1</b> Anterola, Aldwin: Moss Engineering for Anticancer Drug Production and Discovery	<b>O3-B1</b> Quirit, Leni L.: Analysis of Radionuclides in Philippine Coal-Fired Thermal Power Plants: Comparison of ICP-MS and HPGE g-Spectroscopy	<b>O3-C1</b> Dadios, Elmer P.: Hangul-Jamo Optical Character Recognition Utilizing Artificial Neural Networks	<b>O3-D1</b> Jose, Pedro A.: Acute renal specific down-regulation of D2 dopamine receptors (D2R) results in increased expression of pro-inflammatory cytokines
10:45				
11:00	<b>O3-A2</b> Carpio, Louie Paolo D.: Turrid venom as a potential source of neuropharmacological and other drug leads	<b>O3-B2</b> Sta. Maria, Yvainne : Contrasting the rates and magnitude of erosion along the siliciclastic and carbonate coasts of La Union, Northwestern Philippines	<b>O3-C2</b> Dadios, Elmer P.: Feed Forward Neural Network Based Hiragana Optical Character Recognizer	<b>O3-D2</b> Padilla, Philip Ian: The molecular epidemiology of Helicobacter pylori
11:15				
11:30	<b>O3-A3</b> Dayrit, Fabian M.: Coconut Phospholipids: Creating Value from Waste	<b>O3-B3</b> Talib, Roslan: Survey on implementing sustainable issues into Interior Design Studios Project	<b>O3-C3</b> Detalla, Alnar L.: Weighted Hardy-Sobolev Inequality with Finitely Many Remainder Terms in a Ball Domain	<b>O3-D3</b> Tolosa, Leah: New Paradigms in Glucose Sensing
11:45				
12:00	<b>O3-A4</b> Naing, Marvin D.: Alpha-glucosidase inhibitory compounds from <i>Terminalia catappa</i> leaves	<b>O3-B4</b> Lim, Patrick John Y.: Synthesis of hydrotris(3,5-dimethylpyrazol-1-yl)borate copper(II) compounds: A preliminary report	<b>O3-C4</b> Pascasio, Arlene A.: On Thin Irreducible - Modules with Endpoint 1	<b>O3-D4</b> Haygood, Margo: Microbes and Mollusks: The Philippine Mollusk Symbiont ICBG explores bacteria associated with mollusks for drugs and enzymes
12:15				

Day 3, Friday afternoon  
June 17, 2011

12:30	<b>LUNCH</b>			
13:15				
13:30	<b>POSTER PITCHING COMPETITION</b>			
14:15				
	<b>PARALLEL TECHNICAL SESSIONS 4</b>			
	<b>O4-A: Agriculture &amp; Biology</b> Moderator: Francis delos Reyes	<b>O4-B: Materials &amp; Engineering</b> Moderator: Wilson Garcia	<b>O4-C: Biomedical 4</b> Moderator: Pedro Jose	<b>O4-D: Biomedical 5</b> Moderator: Philip Ian Padilla
14:30	<b>O4-A1</b> Suarez, Raul K.: Deforestation and Kaingin: Causes and Effects on Philippine Biodiversity	<b>O4-B1</b> Uy, O. Manuel: Use of Design of Experiments Techniques to Help MESSENGER Reach Mercury	<b>O4-C1</b> Gisela P. Concepcion Reinventing the research process in UP	<b>O4-D1</b> Reyes, Joeriggo M.: Differentiating two antigenically-distinct strains of influenza: A structural- physicochemical analysis
14:45				
15:00	<b>O4-A2</b> Perez, Gay Jane: Satellite Studies of Impacts of Warming on Philippine Vegetation	<b>O4-B2</b> Pascua, Chelo S.: Clay Minerals as Advanced Nanomaterials	<b>O4-C2</b> Ilag, Liza L.: The Need and Considerations for Diabetes Translational Research to Clinical Application in the Philippine Setting	<b>O4-D2</b> Santos, Timothy Israel D.: Body Fat Meter Based on Capacitive Water-level Sensor
15:15				
15:30	<b>O4-A3</b> Capareda, Sergio C.: Production of Ethanol from Sorghum Hybrids Developed at Texas A&M University	<b>O4-B3</b> Salvaña, Camilo Jose S. III: Drop Rate Method of Determining Discharge Coefficients	<b>O4-C3</b> Villalobos, Annabelle P.: Biotechnology and Biosimilars	<b>O4-D3</b> Ayade, Heev L.: Elasticity of Single Biopolymers
15:45				
16:00	<b>O4-A4</b> Cadiz, Nina M.: An Assessment in the Decline of Batangas Mandarin (Citrus reticulata Blanco) Production	<b>O4-B4</b> Augusto, Gerardo L.: Hydraulic Calculation of District Cooling Distribution Network with Variable Primary Flow Pumping System	<b>O4-C4</b> Seronay, Romell A. Biodiversity of Turrids in the Sandy Sediment Habitat and Lumun Lumun Nets in the Outer Barrier Reef, Northeast of Bohol, Philippines	<b>O4-D4</b> Detera-Wadleigh, Sevilla D.: Biological networks formed by molecular targets of mood stabilizers, lithium and valproate, highlight a striking enrichment of apoptosis and neurotrophin signaling
16:15				
16:15	<b>O4-A5</b> Magcale-Macandog, D.B.: Comparative Analysis of Land Use Patterns, Drivers and Impacts of Land Use Change in the Three Laguna Lake Subwatersheds: Sta. Rosa, Los Baños and Victoria	<b>O4-B5</b> Apodaca, Dahlia: Detection of Folic acid using a Quartz Crystal Microbalance Sensor coated with Molecularly Imprinted Polymer Thin Film	<b>O4-C5</b>	<b>O4-D5</b> De Guzman, Gonzalo: Exploring social and human- machine behavioral coordination through Virtual Partner Interaction
16:30	<b>CLOSING PROGRAM</b>			
16:45	Moderator: TBA			
17:00	Awarding of Outstanding Student Research (Liza Virata-Theimer, Chair Research Awards Committee)			
	Summary of FGD resolutions			
	Rigoberto Advincula, Incoming PAASE President			
17:15	Announcement of 32APAMS			
18:00	<b>DINNER</b>			

31<sup>st</sup> annual paase meeting and symposium

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# Master list of oral papers

Presenting Author	Title and Authors	Session
Agrupis, Shirley C.	<b>Properties and Characterization of MMSU 95hBE Bioethanol</b> S.C. Agrupis*, R. A. Ulep, N. Mateo, R. Ascano, M. B. Birginias, and F. B. Abenes	O1-C1
Agrupis, Shirley C.	<b>Cellulosic Ethanol From Corn Stover Planted at Different Seeding Densities</b> S.C. Agrupis1*, T. Ballard, S. Bansal, L.Haag, P. Vadlani, S. Staggenborg	O2-C1
Albano, A. M.	<b>Vasomotion becomes less random as diabetes progresses in monkeys</b> A. M. Albano, X. T. Tigno1, B. C. Hansen, S. Nawang, R. Shamekh	O1-D1
Almendrala, Michelle C.	<b>Recycling biobutanol fermentation broth by ultrafiltration</b> Michelle C. Almendrala*, Shang-Tian Yang	O1-C2
Almendrala, Michelle C.	<b>Separation of butanol from ABE mixture using hollow fiber-contained liquid membrane</b> Michelle C. Almendrala*, Shang-Tian Yang	O2-C2
Amante, A.D.	<b>A Prototype Model of a Piezoelectric-based battery charging system</b> A.D. Amante*, M.J.S. De Sagun, R.C. Dimayuga, S.T.Lim	O1-C3
Anterola, Aldwin	<b>Moss Engineering for Anticancer Drug Production and Discovery</b> Aldwin Anterola*, Robert Ham, Laura Murphy, Pierre-Francois Perroud, Ralph Quatrano	O3-A1
Augusto, Gerardo L.	<b>Hydraulic Calculation of District Cooling Distribution Network with Variable Primary Flow Pumping System</b> Gerardo L. Augusto* and Alvin B. Culaba	O4-B4
Aviso, Kathleen B.	<b>Design of Robust Eco-industrial Water Exchange Networks Using Fuzzy Mathematical Optimization</b> Kathleen B. Aviso*	O1-B3
Ayade, Heev L.	<b>Elasticity of Single Biopolymers</b> Heev L. Ayade, Albert James Licup, Christopher Bernido, Ma. Victoria Carpio-Bernido, Roland Otadoy, Rommel G. Bacabac	O4-D3
Bacabac, Rommel G.	<b>Biorheology: Stretching Mechanics of Polymers Probed by Counting Winding Events</b> Rommel G. Bacabac, Albert Licup, Heev Ayade, Lara Gay M. Villaruz, Christopher Bernido, Ma. Victoria Carpio-Bernido, Roland Otadoy	O2-B1
Baje, Benito A.	<b>Preparation and Characterization of Silica Powder from Bamboo Leaves Ash</b> Benito A. Baje*, Marlyn Villareal, Princess Juniere Peligro, Blessie Denise Chung, Kimiko Espiritu	O2-B2
Bandyopadhyay, Santanu	<b>Optimum sizing of standalone Photovoltaic Thermal (PVT) systems using design space approach</b> G.S. Krishna Priya, Santanu Bandyopadhyay	O1-C4
Cadiz, Nina M.	<b>An Assessment in the Decline of Batangas Mandarin (Citrus reticulata Blanco) Production</b>	O4-A4

Presenting Author	Title and Authors	Session
	Nina M. Cadiz, J.R. Velasco, A. A. Alejar and M.L. Dionisio-Sese	
Capareda, Sergio C.	<b>Production of Ethanol from Sorghum Hybrids Developed at Texas A&amp;M University</b> Sergio C. Capareda*	O4-A3
Carpio, Louie Paolo D.	<b>Turrid venom as a potential source of neuropharmacological and other drug leads</b> Louie Paolo D. Carpio, April B. Cabang, Carla A. Omega, Joven A. Ramirez, Iris Bea L. Ramiro, Estuardo Lopez-Vera, Sean B. Christensen, Julita S. Imperial, Baldomero M. Olivera and Gisela P. Concepcion	O3-A2
Chung, Francisco S. Jr.	<b>Autologous Dendritic Cell Transplantation as an Adjuvant Treatment for Lung Cancer</b> Francisco S. Chung Jr., Guia Imelda Elena R. Ladrera, Nelia S. Tan-Liu, Monique D. Barile, May Lanie B. Fuentes, Joseph Leonard Z. Obusan, Ramoncito Habaluyas, Sullian Sy-Naval, Ernesto Yuson, Jose Luis J. Danguilan, Juanito A. Rubio, Maria Teresa A. Barzaga	O1-D4
Comiso, Josefino C.	<b>CO<sub>2</sub>, Climate Change and Ocean Acidification</b> Josefino C. Comiso	O2-A1
Concepcion, Gisela & Uy, Iris	<b>Analysis of the antibody structure based on high-resolution crystallographic studies</b> Jo Erika T. Narciso Iris Diana C. Uy April B. Cabang Jenina Faye C. Chavez Juan Lorenzo B. Pablo, Gisela P. Padilla-Concepcion and Eduardo A. Padlan	O2-D1
Concepcion, Gisela	<b>Reinventing the Research Process in UP</b> Gisela P. Padilla-Concepcion	O4-C1
Dadios, Elmer P.	<b>Controlling Water Quality Parameters of Milkfish Culture Using Neural Network</b> Jojo F. Blanza*, Elmer P. Dadios**	O1-B2
Dadios, Elmer P.	<b>Feed Forward Neural Network Based Hiragana Optical Character Recognizer</b> Kenneth Aldrin O. Prudencio*, Elmer P. Dadios**	O3-C2
Dadios, Elmer P.	<b>Hangul-Jamo Optical Character Recognition Utilizing Artificial Neural Networks</b> Argel A. Bandala, Elmer P. Dadios	O3-C1
Dayrit, Fabian M.	<b>Coconut Phospholipids: Creating Value from Waste</b> Meryl Monericke M.Aquino, Joseph D. Unsay, and Fabian M. Dayrit*	O3-A3
De los Reyes, Francis L. III	<b>Enhancing methane capture for energy generation by understanding methanogenesis initiation and microbial ecological succession in landfills</b> Francis L. de los Reyes III*, Bryan F. Staley, Mort A. Barlaz	O1-B1
Detalla, Alnar L.	<b>Weighted Hardy-Sobolev Inequality with Finitely Many Remainder Terms in a Ball Domain</b> Alnar L. Detalla	O3-C3

Presenting Author	Title and Authors	Session
Flordelis, Evelyn V.	<b>From Academe to Social Network</b> Evelyn V. Flordelis, Erna V. Yabut, Tita Branzuela, Jennifer Florida	O1-A3
Fujii, Yusaku	<b>Precision Mechanical Measurement Using the Levitation Mass Method (LMM)</b> Yusaku Fujii	O2-B3
Gan Lim, Laurence A.	<b>Using ANFIS to Classify Colonic Histopathological Images</b> Laurence A. Gan Lim, Raouf N.G. Naguib, Elmer P. Dadios, Jose Maria C. M Avila	O2-D3
Gregorio, Glenn B.	<b>"2-in-1" Rice Breeds: Combining the Tolerance of Salinity and Submergence</b> Andres Godwin A. Sajise, Swe Zin Myint Thein, Enrico Francisco L. Mercado, Luzminda Refuerzo, Naireen Aiza G. Vispo, Marydee V. Arceta, Maria Florida M. Cueto, Apolonio N. Mamiit, Manuel Q. Esguerra, Georgina V, Vergara, Abdelbagi M. Ismail, David J. Mackill, Rakesh K. Singh, Glenn B. Gregorio*	O2-A3
Haygood, Margo	<b>Microbes and Mollusks: The Philippine Mollusk Symbiont ICBG explores bacteria associated with mollusks for drugs and enzymes</b> Margo Haygood, Gisela Concepcion, Gary Rosenberg, Eric Schmidt, Daniel Distel and Baldomero Olivera	O3-D4
Ilag, Liza L.	<b>The Need and Considerations for Diabetes Translational Research to Clinical Application in the Philippine Setting</b> Liza L. Ilag*, Elizabeth Paz-Pacheco	O4-C2
Jose, Pedro A.	<b>Acute renal specific down-regulation of D2 dopamine receptors (D2R) results in increased expression of pro-inflammatory cytokines</b> Ines Armando, Santiago Gomez Cuevas, Yanrong Zhang, Laureano Asico, Crisanto Escano, Pedro A. Jose*	O3-D1
Jose, Wilfredo I.	<b>Introducing a locally-developed idea-generating technique for educational and research purposes</b> Wilfredo I. Jose	O1-A2
Lim, Patrick John Y.	<b>Synthesis of hydrotris(3,5-dimethylpyrazol-1-yl)borate copper(II) compounds: A preliminary report</b> Louise Marie C. Cañada, Jan Vincent M. Nazareno, Jeff Rey F. Melgo, and Patrick John Y. Lim*	O3-B4
Llamado, Arlene L.	<b>Comparison between culture-dependent and culture-independent approaches in the detection of dominant biofilm-forming bacteria from an abandoned mine soil</b> Arlene L. Llamado and Asuncion K. Raymundo	O1-B4
Lloren, Ronald B.	<b>Changes in precipitation and primary productivity in the Philippine internal seas during the Holocene</b> Ronald B. Lloren, Fernando P. Siringan, and Alyssa Peleo-Alampay	O2-A2
Mendoza, Teodoro C.	<b>The Carbon Footprint of Sugar Production in Eastern Batangas, Philippines</b> Teodoro C. Mendoza	O2-C4

Presenting Author	Title and Authors	Session
Mendoza, Eduardo R.	<b>PhilSHIFT: Translating chronobiology research into health-risk reduction and productivity improvement in the Philippine BPO industry</b> Eduardo R. Mendoza	O1-A1
Mistades, Voltaire Mallari	<b>A Substantive-Level Theory of Teaching Introductory Physics</b> Voltaire Mallari Mistades*	O1-A4
Naing, Marvin D.	<b>Alpha-glucosidase inhibitory compounds from Terminalia catappa leaves</b> Evangeline C. Amor Ph.D., Rose Marie G. Perono, Marvin D. Naing	O3-A4
Padilla, Philip Ian	<b>The molecular epidemiology of Helicobacter pylori</b> Philip Ian Padilla	O3-D2
Pascasio, Arlene A.	<b>On Thin Irreducible -Modules with Endpoint 1</b> Arlene A. Pascasio and Paolo Lorenzo Y. Bautista	O3-C4
Pascua, Chelo S.	<b>Clay Minerals as Advanced Nanomaterials</b> Chelo S. Pascua	O4-B2
Perez, Gay Jane	<b>Satellite Studies of Impacts of Warming on Philippine Vegetation</b> Gay Jane Perez* and Josefino Comiso	O4-A2
Promentilla, Michael Angelo B.	<b>3D crack characterization from microtomographic images of cement-based materials</b> Michael Angelo B. Promentilla*, Takafumi Sugiyama	O2-B4
Quirit, Leni L.	<b>Analysis of Radionuclides in Philippine Coal-Fired Thermal Power Plants: Comparison of ICP-MS and HPGE g-Spectroscopy</b> Vangelina K. Parami, Sarata K. Sahoo, Hidenori Yonehara, Shino Takeda and Leni L. Quirit	O3-B1
Reyes, Joeriggo M.	<b>Differentiating two antigenically-distinct strains of influenza: A structural-physicochemical analysis</b> Joeriggo M. Reyes	O4-D1
Roa, Marylette B.	<b>Utilization of circulating tumor cells for dendritic cell priming</b> Marylette B. Roa*, Monique D. Barile, Francisco S. Chung Jr., Nelia S. Tan-Liu, Ma. Teresa A. Barzaga	O1-D3
Rojas, Nina Rosario L.	<b>Polyethylene Oxide/Chitin/Chitosan Scaffolds for Possible Tissue Regeneration</b> Joy Edilen A. Codia, Soma Chakraborty, and Nina Rosario L. Rojas	O1-D2
Saloma-Palmes, Cynthia P.	<b>Nanoparticles Show Pleiotropic Effects in Cultured Cells and Mouse Embryos</b> Cynthia Palmes-Saloma*, Myka Francesca R. Ababon, Ma. Azelea V. Laqui	O2-D2
Salvaña, Camilo Jose S. III	<b>Drop Rate Method of Determining Discharge Coefficients</b> Camilo Jose S. Salvaña III	O4-B3
Santos, Timothy Israel D.	<b>Body Fat Meter Based on Capacitive Water-level Sensor</b> Timothy Israel D. Santos*, Darryl P. Valencia	O4-D2
Seronay, Romell A.	<b>Biodiversity of Turrids in the Sandy Sediment Habitat and Lumun Lumun Nets in the Outer Barrier Reef, Northeast of Bohol, Philippines</b> Romell A. Seronay, Alexander E. Fedosov, Gisela P. Concepcion, Porfirio M. Aliño,	O4-C4

Presenting Author	Title and Authors	Session
	Baldomero M. Olivera	
Siringan, Fernando	<b>Sea level changes in the Philippines from SSH data</b> Fernando Siringan, Yvaine Sta. Maria, Marilou Martin, Cesar Villanoy, Raul Capistrano, Roselle Borja, Laura David	O2-A4
Sta. Maria, Yvaine	<b>Contrasting the rates and magnitude of erosion along the siliciclastic and carbonate coasts of La Union, Northwestern Philippines</b> Yvaine Sta. Maria, Fernando Siringan, Rose Berdin, Caroline Marie Jaraula, Peter Zamora, Cristina Remotigue, and Generose Pang-ot	O3-B2
Suarez, Raul K.	<b>Deforestation and Kaingin: Causes and Effects on Philippine Biodiversity</b> Raul K. Suarez	O4-A1
Talib, Roslan	<b>Survey on implementing sustainable issues into Interior Design Studios Project</b> Roslan Talib*, Mzailan Sulieman	O3-B3
Tan, Raymond R.	<b>A Multi-Period Integer Programming Model for Optimal Source-Sink Matching in Carbon Capture and Storage Systems with Time Constraints</b> Raymond R. Tan, Kathleen B. Aviso, Santanu Bandyopadhyay, Denny Kok Sum Ng	O2-C3
Tolosa, Leah	<b>New Paradigms in Glucose Sensing</b> Leah Tolosa*, Xudong, Ge, Hung Lam, Yordan Kostov, Govind Rao	O3-D3
Uy, O. Manuel	<b>Use of Design of Experiments Techniques to Help MESSENGER Reach Mercury</b> O. Manuel Uy	O4-B1
Villalobos, Annabelle P.	<b>Biotechnology and Biosimilars</b> Annabelle P. Villalobos	O4-C3
Virata-Theimer, Maria Luisa A.	<b>Investigation of a Serious Adverse Event: Hemolysis in Two Kawasaki Disease Patients After High-Dose Intravenous Immunoglobulin Therapy</b> Maria Luisa A. Virata-Theimer, Dorothy E. Scott, Mei-ying W. Yu, and Naomi L.C. Luban	O2-D4
Macandog-Magcala, Damasa	<b>Comparative Analysis of Land Use Patterns, Drivers and Impacts of Land Use Change in the Three Laguna Lake Subwatersheds: Sta. Rosa, Los Baños and Victoria</b> D.B. Magcale-Macandog, J.L. Balon, K. Engay, O.B. Nicopior, D. Luna	O4-A5
Apodaca, Dahlia C	<b>Detection of Folic acid using a Quartz Crystal Microbalance Sensor coated with Molecularly Imprinted Polymer Thin Film</b> Dahlia C. Apodaca, Roderick B. Pernites, c Ramakrishna Ponnapati, c Florian R del Mundob and Rigoberto C. Advinculab, c	O4-B5
De Guzman, Gonzalo	<b>Exploring social and human-machine behavioral coordination through Virtual Partner Interaction</b> Gonzalo de Guzman, Emmanuelle Tognoli, J.A.S. Kelso	O4-D5

31<sup>st</sup> annual paase meeting and symposium

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# Master list of poster papers

Session	Title and Authors
Ag 01	<b>MCU-Based Aquaculture System</b> Voltaire B. De Leon*, Alejandro H. Ballado Jr., Pablo M. Dychitan Jr., Regie C. Gustilo
Ag 02	<b>Automated Fish Fry Counting and Schooling Behavior Analysis Using Computer Vision</b> R. T. Labuguen and E. J. P. Volante*, A. Causo, G. Peren, R. Bayot, N. J. C. Libatique, G. L. Tangonan, R. M. Macaraig
Bi 01	<b>Bacterial endosymbionts of Kuphus polythalamia, the world's largest shipworm</b> Marvin Altamia*, Meghan Betcher, Julie Albano, Rande Dechavez, Imelda Forteza, Rowena Antemano, Mary Anne Astilla-Ammon, Rommel Seronay, Gisela Concepcion, Margo Haygood, Jennifer Fung & Daniel Distel
Bi 02	<b>Prevalence of Salmonella enterica in tonsil tissues and jejunum of asymptomatic swine slaughtered in locally registered meat establishments in Bulacan and Quezon City</b> Kamela Charmaine S. Ng*, Windell L. Rivera
Bi 03	<b>Characterization of Some Developmental Changes in Pyrodinium bahamense var. compressum as revealed by Confocal Laser Scanning Microscopy (CLSM)</b> Deo Florence L. Onda*, Rhodora V. Azanza and Arturo O. Lluisma
Bi 04	<b>Effect of Surface Adhesive Forces on Local Elasticity of Living Mammalian Cells</b> Lara Gay M. Villaruz*, Edna Mariz M. Bitanga, Ma. Victoria Carpio-Bernido, Christopher Bernido, Roland Otadoy, Rommel G. Bacabac
Bm 01	<b>Neuroactive compounds from marine cone snail-associated bacteria screened by calcium signaling in dorsal root ganglion primary neurons</b> Rowena Antemano*, Zhenjian Lin, Ronald Hughen, Olivier Peraud, Christopher Reilly, Lenny Marett, Gisela Concepcion, Margo Haygood, Baldomero Olivera, Alan Light, Eric Schmidt
Bm 02	<b>Single Nucleotide Polymorphism Genotyping of Antithrombotic Therapy Resistance Markers using Tetra-Primer Arms PCR and High Resolution Melting Analysis</b> Gerald Ryan R. Aquino*, Kristine M. Cangas, Ma. Alegria T. Caringal, Denice Mae Palmos, Bianca Beatriz V. Trocino, Jose Enrico H. Lazaro+
Bm 03	<b>Differential Gene Expression in Zebrafish (<i>Danio rerio</i>) upon Exposure to Sublethal Concentrations of Hexavalent Chromium</b> Gerald Ryan R. Aquino*, Felichi Mae P. Arines, Gihanna Gaye S.T. Galindez, Joseph Michael Le Lim, Jose Enrico H. Lazaro
Bm 04	<b>Evaluation of Immunologic Interactions between an HLA-typed Cancer Patient and Tumor-associated Antigens using In Silico and In Vitro Approaches</b> Ruby Anne N. King* and Francisco S. Chung Jr.
Bm 05	<b>Production and Preliminary Immunological Characterization of Recombinant De-antigenized Influenza H3 Agglutinin</b> Gisela P. Concepcion, Lisa E. Lamberte*, Lydia Teresa Isabel Salud-Bautista, Jortan O. Tun, Neda Barghi, Marvin A. Altamia, Jenina Faye C. Chavez, Juan Lorenzo B. Pablo, Ameurfina D. Santos, Luz P. Acosta, Fidel F. Malbas, Remigio O. Olveda, Eduardo A. Padlan
Bm 06	<b>Angiotensin I-Converting Enzyme and its Inhibition by Indigenous Fermented Foods</b> Dulce M. Flores, Kristine Mae Y. Abao, Mitchell Rey M. Toleco*

Session	Title and Authors
Bm 07	<b>Virulence factor genes analysis of methicillin-resistant staphylococcus aureus (MRSA) isolates from Makati Medical Center, Philippines</b> Demetrio L. Valle Jr. *, Windell L. Rivera
Cl 01	<b>Coral assemblage of mid-Holocene uplifted reefs of Currimao, Ilocos Norte and Punta Dumalag, Davao City: Implications on the resilience of present-day reefs to projected further warming of seas</b> Riovie D. Ramos*, Fernando P. Siringan, Wilfredo Licuanan
En 01	<b>Optimization of Microwave-Enhanced Transesterification for Coconut Biodiesel Production</b> Joy Rochelle V. Conejos*, Susan A. Roces, Florinda T. Bacani, Raymond R. Tan
En 02	<b>An analysis of energy use in commercial buildings using Energy Intensity Reduction Modelling and Evaluation Method</b> Jeremias A. Gonzaga*
En 03	<b>Wind power assessment of Bangkal, Abucay, Bataan using Weibull distribution model</b> Eugene V. Vega
En 04	<b>Optimal Operational Adjustment in Multi-Functional Energy Systems in Response to Process Inoperability</b> Raymond R. Tan, Ivan Dale U. Barilea*
Ev 01	<b>Trends, possible causes and strategies for mitigation of coastal erosion in the Guimaras province</b> Jenny S. Aggangan*, Fernando P. Siringan
Ev 02	<b>Paracetamol Degradation by Electro-Fenton and Photoelectro-Fenton Using a Double Cathode Electrochemical Cell</b> M.L.Veciana*, M.D.G. de Luna, M.C. Lu
Mr 01	<b>A Statistical Approach to Object Localization in Digital Holographic Microscopy in the Presence of Residual Aberration</b> Timothy Joseph T. Abregana*, Anne Margarette S. Maallo and Percival F. Almoro
Mr 02	<b>Well width dependence of radiative carrier lifetimes in GaAs/Al<sub>0.3</sub>Ga<sub>0.7</sub>As single quantum wells at 77K</b> Jessica Afalla*, Maria Herminia Balgos, Jeremy Porquez, Jasher John Ibanez, Arnel Salvador, Armando Somintac
Mr 03	<b>Synthesis, Characterization and Application of Imidazolium Ionic Liquid-Capped Photocatalytic Quantum Dots in Recycled Polymer Fibers for Pollutant Degradation in Wastewaters</b> Herdeline Ann Ardoña*, Fiona Paredes, Arlene Bartolome, Ian Harvey Arellano, Susan Arco
Mr 04	<b>Zeolite Y/ Iridium (III) dye/TiO<sub>2</sub> Photocatalytic Assemblies: Synthesis, Characterization and Photocatalytic Activity Testing</b> Maxx Q. Arguilla*, Leon M. Payawan Jr., Jim Josephus G. Minglana and Jossana A. Damasco
Mr 05	<b>Tapered-tip indium oxide nanostructures grown on glass substrate</b> Fritz Christian Awitan*, Mae Agatha Tumanguil, Neil Irvin Cabello, Jeffrey de Vero, Michael Defensor, Armando Somintac and Arnel Salvador
Mr 06	<b>Carrier lifetime measurement on GaAs/AlGaAs core-shell nanowires using Time Resolved Photoluminescence Spectroscopy</b> Maria Herminia Balgos*, Rafael Jaculbia, Jasher Ibanez, Michelle Bailon-Somintac, Michael Defensor, Arnel Salvador, and Armando Somintac

Session	Title and Authors
Mr 07	<b>3D tracking of Optical Vortices using a Statistical Algorithm for Phase Map Analysis</b> Rommel L. Bartolome*, Anne Margarete S. Maallo and Percival F. Almoró
Mr 08	<b>Synthesis and Characterization of C-Ag Composite Nanomaterials for Battery Electrode Applications</b> Ruby Michelle M. Buot*, Gil Nonato C. Santos
Mr 09	<b>Formation of Rutile and Anatase Titanium Dioxide Nanotubes</b> Ed Adrian Dilla*, Celestino Andrew Borja, Renato Daclan Jr., Michael Defensor, Arnel Salvador, Armando Somintac
Mr 10	<b>Characterization of Silver Nanomaterials synthesized by Horizontal Vapor Phase Crystal Growth Technique for Antimicrobial Purposes</b> Wilfred V. Espulgar*, Gil Nonato C. Santos
Mr 11	<b>Synthesis, Characterization and Application of Imidazolium Ionic Liquid-Capped CdS Quantum Dots in PET Fibers as a Photocatalyst for the Photodegradation of Methylene Blue</b> Ana Katrina Estandarte*, Fiona Paredes, Arlene Bartolome, Ian Harvey Arellano, Susan Arco
Mr 12	<b>Kinetics of mullite formation as observed from in situ and time-resolved XRD analysis</b> M. C. T. Garcia* and C. S. Pascua
Mr 13	<b>Raman Spectroscopic Studies of Porous Silicon Fabricated via Electrochemical Etching</b> Rhona Olivia M. Gonzales*, Neil Irvin F. Cabello, Michael J. Defensor, Armando S. Somintac
Mr 14	<b>300K Tunneling in GaAs/Al<sub>x</sub>Ga<sub>1-x</sub>As Asymmetric Double Quantum Wells Observed via Time resolved Photoluminescence Spectroscopy</b> R.B.Jaculbia*, M.J.Defensor, M.H.M.Balgos, J.G.Porquez, K.Omambac, A.A.Salvador, A.S.Somintac
Mr 15	<b>Reactive Ion Etching of Gallium Arsenide</b> Rengie Mark Mailig*, Maria Emma Villamin, Gino Leynes, Arnel Salvador, Armando Somintac
Mr 16	<b>Al<sub>0.3</sub>Ga<sub>0.7</sub>As/GaAs HEMT Band Diagram Simulation using Variable Shooting Method</b> Renebeth B. Payod*, Jasher John Ibañez, Armando S. Somintac
Mr 17	<b>A Comparative Study on the THz Emission of Annealed LTG:GaAs Grown on SI and n+ GaAs Substrates</b> Elizabeth Ann P. Prieto*, Christopher T. Que, Elmer S. Estacio, Armando S. Somintac, Arnel A. Salvador, Kohji Yamamoto, and Masahiko Tani
Mr 18	<b>Enhanced adhesion of epoxy on a stainless steel surface treated with O<sub>2</sub>/Ar microwave plasma</b> Julie Anne Ting*, Ma. Camille Lacdan, Leo Mendel Rosario, Henry Ramos, Roy Tumlos
Mr 19	<b>X-ray pole figure mapping of GaAs/AlGaAs core-shell nanowires on Si substrates</b> Mae Agatha C. Tumanguil*, Peter Jeffrey Maloles, Jasher John A. Ibañez, Michael J. Defensor, Arnel A. Salvador, Armando S. Somintac
Mr 20	<b>Study of plasma emission spectral properties and film characteristics of pulsed laser deposited Bi<sub>2</sub>Sr<sub>2</sub>CaY<sub>1-x</sub>Cu<sub>2</sub>O in vacuum and ambient air</b> Jaziel R. Vitug*, Jeffrey C. De Vero, Roland V. Sarmago and Wilson O. Garcia

Session	Title and Authors
Mr 21	<b>Free-Standing Conductive Nontronite- Polyaniline Nanocomposite</b> A.V.Gillado* and C. S. Pascua
Mr 22	<b>Synthesis and Phase Separation of a Diblock Copolymer with Electroactive Pendant Unit</b> Gillian Hope S. Macusi*, Florentino Sumera and Rigoberto Advincula
Mr 23	<b>Synthesis of a Terthiophene-Functionalized Precursor Polymer Using Reversible Addition Fragmentation Chain-Transfer Polymerization</b> Shemaiah S. Pascua*, Gillian Hope S. Macusi, Maria Celeste R. Tria, Florentino C. Sumera, Rigoberto C. Advincula
Np 01	<b>In vitro antimicrobial efficacy of combinations of Philippine medicinal plants</b> Charmine M. Alcantara
Np 02	<b>A Group of Actinomycin Compounds Isolated from a Sponge-associated Actinomycete</b> Azcuna M.A*, Concepcion G.P., Zaulda F., Foronda L, de la Cruz N., Okino T., Anas A.
Np 03	<b>Isolation of Marine Mollusk-Associated Bacteria for use as Anti-Bacterial and Anti-Cancer Leads</b> Malem S. Flores*, Mary Anne A. Ammon, Imelda L. Forteza, Ma. Gwen Jane P. Limbaco, Gaiselle F. Mabeza, Clarisse A. Quimio, Mitchell Rey R. Toleco, Joshua Rey P. Torres, Gisela P. Concepcion, and Margo G. Haygood
Np 04	<b>Anti-influenza constituents from the sponge-associated bacterium, <i>Quadrisphaera granulorum</i></b> Julius Adam V. Lopez*, Ciara Christianne Y. Lim, Janiza Lianne Foronda, Irene M. Villasenor, Gisela P. Concepcion, Tatsufumi Okino
Np 05	<b>Antimicrobial compound from associated-bacteria of a turrid, <i>Lienardia rubida</i></b> Gaiselle Mabeza*, Imelda Forteza, Zhenjian Lin, Margo Haygood, Eric Schmidt, Gisela Concepcion
Np 06	<b>Isolation of Jorunnamycin A from a Philippine Blue Sponge <i>Xestospongia sp.</i></b> Hilbert DS. Magpantay*, Louvy Lynn C. Punzalan, Irene M. Villaseñor, Gisela P. Concepcion and Naoki Saito
Np 07	<b>Phytochemical Analysis and Bioactivity Evaluation of an Herbal Dietary Supplement</b> Julius Victorius A. Saluria* and Evangeline C. Amor
Ph 01	<b>Computer Generated Holograms of Optical Vortices</b> Charmaine Rose B. delos Reyes* and Percival F. Almor
Ph 02	<b>High Resolution Technique for the Evaluation of Object Tilt and Rotation Using Amplitude Variance of Reconstructed Wavefronts</b> Jae Lord Dexter C. Filipinas* and Percival F. Almor
Ph 03	<b>Aberration and misalignment correcting set-up for generation of Bessel beam</b> Paul Leonard Hilario*, Kristine Faith Roque, Maria Eloisa Ventura, Giovanni Tapang
Ph 04	<b>Simultaneous Multi-Plane Light Modulation</b> Mark Jayson Villangca*, Paul Leonard Atchong Hilario, Giovanni Tapang
En 05	<b>Computational Fluid Dynamics Analysis of Microalgae Solar Dryer for Biofuel Production</b> Aristotle T. Ubando*, Neil Stephen A. Lopez1b, Alvin B. Culaba1c, and Raymond R. Tan
En 06	<b>Turbulence Model Validation of a Savonius Wind Turbine using ANSYS CFD Software</b> Aristotle T. Ubando*
Mr 21	<b>Detection of 2, 4-dinitrotoluene (DNT) via Two-Dimensional Molecularly Imprinted Monolayers using the QCM and EIS Methods</b> Dahlia C. Apodaca*, Roderick B. Pernites, Florian R. Del Mundo and Rigoberto C. Advincula

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discovery, invention and  
innovation papers

Dii-01

31<sup>st</sup> Annual Paase Meeting and Symposium  
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**Device fabrication and characterization of  $n\text{-In}_x\text{Al}_{1-x}\text{As}/\text{In}_y\text{Ga}_{1-y}\text{As}$  Metamorphic High Electron Mobility Transistor (MHEMT) on GaAs Substrate**

**Jonathan D. Azares\*, Fritz Christian B. Awitan, Rafael B. Jaculbia, Jasher John Ibanez, Michael J. Defensor, Armando S. Somintac, Arnel A. Salvador**

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Dii-02

31<sup>st</sup> Annual Paase Meeting and Symposium  
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National Institute of Physics, University of the Philippines - Diliman

**Philippine marine biodiversity: a pharmacological mining ground for neuroactive and anti-cancer agents**

**April Cabang<sup>1\*</sup>, Zenaida Bojo<sup>1</sup>, Malem Flores<sup>1</sup>, Rowena Antemano<sup>1</sup>, Sonia Jacinto<sup>2</sup>, Julita Imperial<sup>3</sup>, Zhinjian Lin<sup>4</sup>, Eric Schmidt<sup>4</sup>, Margo Haygood<sup>5</sup>, Baldomero Olivera<sup>3</sup>, Gisela Concepcion<sup>1</sup>**

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Dii-03

31<sup>st</sup> Annual Paase Meeting and Symposium  
June 15-18, 2011  
National Institute of Physics, University of the Philippines - Diliman

**Photoluminescence Properties of Nanoporous Silicon Fabricated via Electrochemical Etching**

**Neil Irvin Cabello\*, Rhona Olivia Gonzales, Arnel Salvador, Armando Somintac**

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Dii-04

31<sup>st</sup> Annual Paase Meeting and Symposium

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### **MCU-Based Aquaculture System**

**Voltaire B. De Leon\*, Alejandro H. Ballado, Jr., Pablo M. Dychitan, Jr., Regie C. Gustilo**

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Dii-05

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June 15-18, 2011

National Institute of Physics, University of the Philippines - Diliman

### **High $T_c$ superconducting films prepared by 1064 nm Nd:YAG Pulsed Laser Deposition**

**Jeffrey C. De Vero, Wilson O Garcia, and Roland V. Sarmago**

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Dii-06

31<sup>st</sup> Annual Paase Meeting and Symposium

June 15-18, 2011

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### **PhilSHIFT Research Group Studying the Filipino Chronotype**

**Maria Eliza Aguila, Gayline Manalang, Darwin Dasig, Richard Bryann Chua, Till Roenneberg, Celine Velter, Jingky**

**Lozano-Kuhne, Roselyn Gabud, Eduardo Mendoza**

University of the Philippines Manila & Institute of Medical Psychology, Ludwig Maximilians University, Munich

Dii-07

31<sup>st</sup> Annual Paase Meeting and Symposium

June 15-18, 2011

National Institute of Physics, University of the Philippines - Diliman

### **Automated Fish Fry Counting and Schooling Behavior Analysis Using Computer Vision**

**R. T. Labuguen and E. J. P. Volante**

A. Causo, G. Peren, R. Bayot, N. J. C. Libatique, G. L. Tangonan, R. M. Macaraig

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Dii-08

31<sup>st</sup> Annual Paase Meeting and Symposium  
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National Institute of Physics, University of the Philippines - Diliman

**DE-ANTIGENIZATION: MOVING CLOSER TO A VACCINE THAT PROTECTS AGAINST  
MULTIPLE INFLUENZA STRAINS**

**Lisa E. Lamberte<sup>1</sup>, Jortan O. Tun<sup>1</sup>**, Lydia Teresa Isabel Salud-Bautista<sup>1</sup>, Neda Barghi<sup>1</sup>, Marvin A. Altamia<sup>1</sup>, Jenina Faye C. Chavez<sup>1</sup>, Juan Lorenzo B. Pablo<sup>1</sup>, Ameurfina D. Santos<sup>2</sup>, Eduardo A. Padlan<sup>1</sup>, Gisela P. Concepcion<sup>1</sup>,  
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Dii-09

31<sup>st</sup> Annual Paase Meeting and Symposium  
June 15-18, 2011  
National Institute of Physics, University of the Philippines - Diliman

**Expanding a Medical Diagnostics Mobile Tool for Pediatric Care to include Risk  
Assessment for Pregnant Women in Low-Income Countries**

**Michael B. Syson, M.S.**

Ateneo de Manila University and the Ateneo Innovation Center  
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Email: [m.syson@yahoo.com](mailto:m.syson@yahoo.com)

Dii-10

31<sup>st</sup> Annual Paase Meeting and Symposium  
June 15-18, 2011  
National Institute of Physics, University of the Philippines - Diliman

**Image Processing Assisted Tool for Hand Movement Disorder Characterization**

**Talusan, Jose Paolo V., Ramos, Elaine Valerie E., Tangonan, Gregory L., Libatique, Nathaniel C.**  
Ateneo De Manila University and Electronics, Communications and Computer Engineering  
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Email: [jptalusan@gmail.com](mailto:jptalusan@gmail.com)

Dii-11

31<sup>st</sup> Annual Paase Meeting and Symposium

June 15-18, 2011

National Institute of Physics, University of the Philippines - Diliman

### **A Marine Science Museum for the UP Diliman National Science Complex**

**Lucila R. Taylor<sup>1</sup>, Dylan Taylor<sup>1</sup>, Dr. Margo G. Haygood<sup>2</sup>, Dr. Wilson O. Garcia<sup>3</sup>  
Dr. Baldomero M. Olivera<sup>4</sup> and Dr. Gisela P. Concepcion<sup>5</sup>**

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Dii-12

31<sup>st</sup> Annual Paase Meeting and Symposium

June 15-18, 2011

National Institute of Physics, University of the Philippines - Diliman

### **Rapid and accurate detection kit for amebiasis patients through salivary IgA**

**Windell L. Rivera<sup>1,2</sup>, Alexander Edward S. Dy<sup>1</sup>, Angeline Odelia C. Concepcion<sup>1</sup>**

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31<sup>st</sup> annual paase meeting and symposium

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