



ICMM 2024

2024 International Conference on Microscopy and Microanalysis



ICMSEP 2024

3rd International Conference on Materials Science and Engineering in the Philippines



AUN/SEED-Net

RCME 2024

Regional Conference on Materials Engineering



RCMMME 2024

Regional Conference on Mining, Metallurgical and Materials Engineering

October 28, 2024

Hotel Casiana, Tagaytay City

1:00 – 5:00pm

REGISTRATION

Conference kits distribution / Oral presentation submission

October 28, 2024

De La Salle University – Cabuyao Campus

8:00 – 8:30am

REGISTRATION

8:30 – 8:35am

INVOCATION AND NATIONAL ANTHEM

8:35 – 8:40am

WELCOME REMARKS

Professor Jonathan Rivera DUNGCA

*Vice President and Dean for Laguna Campus
Professor of the Department of Civil Engineering
De La Salle University, Laguna Campus*

8:40 – 8:45am

OPENING REMARKS

Dr. Drexel CAMACHO

*Scientific Director-Central Instrumentation Facility
Faculty Research Fellow and a Professor of Chemistry
De La Salle University, Laguna Campus*

8:45 – 9:00am

COFFEE BREAK AND PICTURE TAKING

9:00 – 12:00nn

LABORATORY TOUR/WORKSHOP

SEM, TEM, AFM, Sample Preparation, Potentiostat, etc.

12:00 – 1:00pm

LUNCH BREAK

1:00 – 4:00pm

LABORATORY TOUR/WORKSHOP

SEM, TEM, AFM, Sample Preparation, Potentiostat, etc.

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**October 28-31, 2024
Hotel Casiana, Tagaytay, Philippines**



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8:00 – 8:30pm

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Conference kits distribution / Oral presentation submission

8:30 – 8:40am

INVOCATION AND NATIONAL ANTHEM

8:40 – 9:10am

WELCOME REMARKS

Mr. Masanari YANAGIUCHI,

Senior Representative, JICA Philippines and AUN-SEED Net

Dr. Maria Antonia N. TANCHULING,

Dean, College of Engineering, University of the Philippines - Diliman

Dr. Eden May B. DELA PEÑA

President, Institute of Materials Engineers of the Philippines (IMEP), Inc.

9:10 – 9:40am

PLENARY LECTURE: *Advancing Materials Characterization using Neutron Scattering at ORNL's Spallation Neutron Source (SNS, the High Flux Isotope Reactor (HFIR) and the future Second Target Station (STS)*

Dr. Clarina DELA CRUZ

Distinguished Senior Scientist, Oak Ridge National Laboratory, Tennessee, USA

9:40 – 10:10am

PLENARY LECTURE: *Machine Learning-Enhanced Molecular Dynamics Simulations of Surface Dynamical Processes*

Dr. Yoshitada MORIKAWA

Osaka University, Japan

10:10 – 10:20am

COFFEE BREAK AND PICTURE TAKING

10:20 – 10:50am

PLENARY LECTURE: *Engineering Scaffold-Mediated Neural Cell Therapy for Spinal Cord Injury Treatment*

Dr. Laurent DAVID

Professor, Claude Bernard Lyon University 1, France

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10:50 – 11:20am

PLENARY LECTURE

Ms. Tonghathai LIKHITWEERAWONG

Program Lead, AUN/SEED-Net Secretariat

Prof. Norhazilan Md NOOR

Editor in Chief, ASEAN Engineering Journal (AEJ)

Dr. Taro SONOBE

Representative, Japan-ASEAN Science, Technology, and Innovation Platform (JASTIP)

11:20 – 11:50am

PLENARY LECTURE: *Oxide Semiconductor for Ultralow-power and Sustainable Electronics*

Dr. Juan Paolo S. BERMUNDO

Division of Materials Science and Data Science Center (cross-appointment) at Nara Institute of Science and Technology

11:50 – 12:20am

INVITED TALK: *Raman Microscope for Material Research and Characterization: Micro to Nano*

Dr. Boyang CHE

Application Scientist, Horiba Instruments Singapore (ALVTechnologies)

12:20 – 1:30pm

LUNCH BREAK

1:30 – 4:30pm

PARALLEL SESSIONS

Session 1: Material Characterization and Mineralogy

Session 2: Advanced Nanomaterials and Emerging Applications

Session 3: Science and Technology Innovation Workshop

4:30 – 6:00pm

COFFEE BREAK

POSTER SESSION

PHOTOMICROGRAPH COMPETITION

6:00 – 7:00pm

IMEP General Membership Meeting

7:00 – 9:00pm

SOCIALS NIGHTS

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October 30, 2024

Hotel Casiana, Tagaytay City

8:00 – 8:30pm

REGISTRATION

8:30 – 9:00am

PLENARY LECTURE

Dr. Danilo LACHICA

President, Semiconductor and Electronics Industries in the Philippines Foundation, Inc (SEIPI)

9:00 – 9:30am

PLENARY LECTURE: *From Materials to Devices: An Integrated Approach toward High-Efficiency BaSi₂ Solar Cells*

Dr. Kosuke HARA

Professor, Nara Institute of Science and Technology, Japan

9:30 – 9:50am

PLENARY LECTURE: *Novel Metal Manufacturing Technologies Supporting Net-Zero Initiatives*

Dr. Clodualdo ARANAS

Associate Professor, Mechanical Engineering University of New Brunswick, Canada

9:50 – 10:10am

COFFEE BREAK AND PICTURE TAKING

10:10 – 10:40am

PLENARY LECTURE: *Nano-Hybrids for Biological Multimodal Contrast agent and as Theranostic Nanoparticles for Clinical Translation and Nanomedicine Chelating Bio-polymer for Metal Extraction: From Concept to Clinic.*

Prof. Olivier TILLEMENT

Professor, Claude Bernard Lyon University 1, France

10:40 – 11:10am

PLENARY LECTURE: *Bridging Academia and Industry: Fostering Collaborative Solutions for Societal Needs*

Engr. Frederico MONSADA

President, Philippine Technological Council, Philippines

11:10 – 11:40am

INVITED TALK: *Ultimately Low Dose Observation of Soft Matter in Aberration Corrected STEM*

Tetsuo OIKAWA

Senior Product Manager for TEM (JEOL Asia)

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11:40 – 12:10pm **PLENARY LECTURE:** *Polymer Materials: AI/ML and Advanced Manufacturing for Philippine Innovationeering*
Dr. Rigoberto ADVINCULA
Case Western Reserve University, USA

12:10 – 1:30pm **LUNCH BREAK**

1:30 – 1:45pm **PARALLEL SESSIONS**

Session 4: Environmental Sustainability and Waste Valorization

Session 5: Innovations in Materials Processing and Engineering

Session 6: Biocomposites, Functional Materials, and Biomedical Applications

4:30 – 6:00pm **COFFEE BREAK**

6:00 – 7:00pm **AWARDING SESSION**

CONFERENCE SYNTHESIS

Dr. Persia Ada DE YRO

President, Microanalysis and Imaging Society of the Philippines (MICROSPHIL)

CLOSING REMARKS

Prof. Eduardo MAGDALUYO Jr.

Chair, RCME and RCMMME 2024

October 31, 2024

Hotel Casiana, Tagaytay City

8:00 – 3:00pm **TAGAYTAY CULTURAL TOUR (OPTIONAL)**

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PARALLEL SESSION 1 Material Characterization and Mineralogy

- 1:30 – 1:45pm** **S1-01** *Correlation Between Ore Mineralogy and the Dissolution Behavior of K-feldspar*
Adrian Keith CAAMINO
Mindanao State University - Iligan Institute of Technology
- 1:45 – 2:00pm** **S1-02** *Characterization of Apatite Powders Synthesized from Natural Calcium Carbonate Using Wet Chemical Precipitation Method*
Liezel JABILE
Mindanao State University - Iligan Institute of Technology
- 2:00 – 2:15pm** **S1-03** *Reversing Colloidal Behavior of Kaolinite particles in Aqueous Systems*
Ivyleen BERNARDO-ARUGAY
Mindanao State University - Iligan Institute of Technology
- 2:15 – 2:30pm** **S1-04** *Quantitative Mineralogical Characterization of Copper-Arsenic Ore and its Influence on Arsenic Removal*
Krishna TULAWIE
University of the Philippines - Diliman
- 2:30 – 2:45pm** **S1-05** *Microstructural and Chemical Assessment of a Corroded Aluminum-based Propulsion Component*
Key SIMFROSO
Department of Science and Technology – Metals Industry Research and Development Center
- 2:45 – 3:00pm** **S1-06** *Investigation of Maigo Clay Properties for Ceramic Application*
Sherly Keh DIONIO
Mindanao State University - Iligan Institute of Technology
- 3:00 – 3:15pm** **S1-07** *Assessment of Natural Calcite Minerals Found in Southern Philippines*
Rommel JAGUS
Mindanao State University – General Santos
- 3:15 – 3:30pm** **S1-08** *Hydrothermal Alteration, Ore Mineralization, and Quartz Textures in Epithermal Systems: A Case Study from Phnom Sro Ngam, Chhouk District, Kampot Province*
Jolsa HENG
Institute of Technology of Cambodia
- 3:30 – 3:45pm** **S1-09** *Evaluation of Thermal Energy Storage Properties of Dodecanoic Acid-based Phase Change Materials for Solar Applications*
Norhuda ABDUL MANAF
Malaysia-Japan International Institute of Technology
- 3:45 – 4:00pm** **S1-10** *Prospecting and Technological Assessment of Clays for Ceramic Wares Application*
Seigfreid KEMPIS
Mindanao State University - Iligan Institute of Technology
- 4:00 – 4:15pm** **S1-11** *Chemical and Mineralogical Characterization of Clay Deposits in selected sites of Brgy. Tikalaan, Talakag, Bukidnon*
Lor-ann CABALO
Mindanao State University - Iligan Institute of Technology
- 4:15 – 4:30pm** **S1-12** *Selective Removal of Arsenic from Enargite-Scorodite Ore via NaHS-NaOH Leaching*
Terrence ROSAL
University of the Philippines – Diliman

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PARALLEL SESSION 2 *Advanced Nanomaterials and Emerging Applications*

- 1:30 – 1:45pm** **S2-01** *Graphene-AgNP-Decorated Cotton and Polyester Fabrics Towards E-Textile*
Sydney Jean CAPILI
Ateneo de Manila University
- 1:45 – 2:00pm** **S2-02** *Behavior of Radical Adsorption on Plasma Induced Defect for Atomic Layer Etching*
Airah OSONIO
Nagoya University
- 2:00 – 2:15pm** **S2-03** *Synthesis and Characterization of Glycerol Incorporated Polylactic Acid (PLA)/OrganoMontmorillonite (OMMT) Nanocomposites Using Two Factorial Design (FDE)*
Frances DUEÑAS
Mapua University
- 2:15 – 2:30pm** **S2-04** *Ergonomic Braille Keyboard Design: Enhancing User Comfort and Performance for Visually Impaired Individuals*
Anton PABLO
Mapua University
- 2:30 – 2:45pm** **S2-05** *Inclusion of Elemi (Canarium luzonicum) Essential Oil in Cyclodextrin Metal-Organic Framework* **Edgar Clyde LOPEZ**
University of Santo Tomas
- 2:45 – 3:00pm** **S2-06** *Radiolytically Synthesized Silver Nanoparticles as a Surface-Enhanced Raman Scattering (SERS) Substrate for Crystal Violet Detection*
Mon Bryan GILI
University of the Philippines Diliman
- 3:00 – 3:15pm** **S2-07** *Synthesis, Characterization, and in vitro Bioactivity of Sol-gel-derived 45S5 Bioactive Glass-ceramic for Dentinal Application*
Xuan Thanh NGUYEN
Ho Chi Minh City University of Technology
- 3:15 – 3:30pm** **S2-08** *Nanocellulose from Abaca (Musa Textilis Nee) as Reinforcement Filler in Thermoplastic starch film*
Anniver Ryan LAPUZ
Forest Products Research and Development Institute, Department of Science and Technology (DOST-FPRDI)
- 3:30 – 3:45pm** **S2-09** *Adsorption of Textile Dyes in CD-MOF - Insights from Molecular Modeling Studies*
Edgar Clyde LOPEZ
University of Santo Tomas
- 3:45 – 4:00pm** **S2-10** *Comparative Study of Analytical vs Artificial Intelligence Image Analysis Software Using Chitosan and Gold Microparticles*
Anton VENTURA
University of the Philippines - Diliman

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PARALLEL SESSION 4 Environmental Sustainability and Waste Valorization

- 1:30 – 1:45pm** **S4-01** Direct Regeneration and Microstructural Investigation of NCA Cathode Material from Waste Lithium-Ion Batteries
Aimee Lorraine BLAQUERA
University of the Philippines Diliman
- 1:45 – 2:00pm** **S4-02** Characterization of Silty Mine Waste from Agusan del Norte
Mary Jane GOTOSTOS-ZOZOBRAO
Mindanao State University - Iligan Institute of Technology
- 2:00 – 2:15pm** **S4-03** Challenges and Practices of Households And Non-household Establishments During COVID-19 Pandemic: Learnings and Opportunities Towards Sustainable Solid Waste Management
Irene Lara ABAD
Mindanao State University – General Santos
- 2:15 – 2:30pm** **S4-04** Two-Stage Hypochlorite Leaching of a Refractory Gold-Molybdenum Concentrate
John Resuello
University of the Philippines - Diliman
- 2:30 – 2:45pm** **S4-05** Assessing Concrete Slurry Waste of MCIC, Iligan City, Lanao Del Norte, Philippines: Physico-Chemical Characterization for Sustainable Solutions
Algen SECULA
Mindanao State University - Iligan Institute of Technology
- 2:45 – 3:00pm** **S4-06** An Exploratory Study on the Effects of Using Ammonium Hydroxide as a Purification Agent in Coal Fly Ash Leachate
Jeffrey GADAPAN
Mindanao State University-Iligan Institute of Technology
- 3:00 – 3:15pm** **S4-07** Surface Modification of Philippine Coal Fly Ash via Acid Treatment for Ceramic Use
Edison LIMBAGA
Mindanao State University - Iligan Institute of Technology
- 3:15 – 3:30pm** **S4-08** Surface Analysis of Rice Husk Agricultural Waste-Derived Porous Powders from Southern Philippines
Sean MANLUPIG
Mindanao State University-Iligan Institute of Technology
- 3:30 – 3:45pm** **S4-09** Carbon Capture Potential of Biochar Derived from Plastic Waste and Water Hyacinth: Parametric and Kinetic Studies
Karina HOSOKAWA
University of Santo Tomas
- 3:45 – 4:00pm** **S4-10** Co-Pyrolysis of Chlorella sp. with Used Palm Cooking Oil for Enriched Hydrocarbon Biofuel
Vekes BALASUNDRAM
Malaysia-Japan International Institute of Technology
- 4:00 – 4:15pm** **S4-11** Investigating the Effects of Gum Arabic and Beating Time on the Mechanical Properties of Kraft Paper Produced from Pineapple Leaf Fiber
Edem GATOGO
Pan African University Institute for Basic Sciences, Technology and Innovation, Kenya
- 4:15 – 4:30pm** **S4-12** Utilization and Assessment of Copper Mine Tailings as Precursors in Hybrid Geopolymer-Cement Mortars
Dionella QUINAGORAN
University of the Philippines - Diliman

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PARALLEL SESSION 5 *Innovations in Materials Processing and Engineering*

- 1:30 – 1:45pm** **S5-01** *Beneficiation, Intercalation and Milling of Manito Kaolin Clay for Industrial Filler Applications*
Edwin Roven CAÑEZAL
University of the Philippines Diliman
- 1:45 – 2:00pm** **S5-02** *Preparation and Characterization of Nickel and Cobalt oxide-based catalysts from Waste EV Cathodes for Rechargeable Li-O₂ batteries*
Mark Verndick CABADING
University of the Philippines Diliman
- 2:00 – 2:15pm** **S5-03** *Optimizing Robocasting Ceramic Mixtures Using Locally Sourced Clay and Diatomite from Northern Mindanao for Additive Manufacturing Applications*
Princess Zest LABANDERO
Mindanao State University - Iligan Institute of Technology
- 2:15 – 2:30pm** **S5-04** *Enhanced Shoe Dryer Housing for Durability and Reduced Moisture Absorption Using PETG*
Gabrielle TORRES
Mapua University
- 2:30 – 2:45pm** **S5-05** *Materials Selection of Philippine Natural Textile Fiber-based Yarns for Knitting through TOPSIS and COPRAS*
Jonalyn ENRIQUEZ
Philippine Textile Research Institute
- 2:45 – 3:00pm** **S5-06** *Surrogate Modelling of Ti6Al4V Manufactured Via Pulsed Laser Powder Bed Fusion*
Thomas MCCARTHY
University of New Brunswick
- 3:00 – 3:15pm** **S5-07** *Low-Temperature Fabrication of 8YSZ Film Electrolyte via Screen-Printing on NiO-YSZ Electrode Support using Li₂CO₃ Sintering Aid*
Liebert Nyle VILLARBA
University of the Philippines Diliman; Analog Devices, Inc.
- 3:15 – 3:30pm** **S5-08** *Optimizing Ceramic Printing Material Parameters for Enhanced Printability and Performance Using Clay-Based Filament in Additive Manufacturing Applied for Rapid Tooling of Ceramic Molds*
Lester OLASIMAN
Adamson University
- 3:30 – 3:45pm** **S5-09** *Design, Simulation, and Fabrication of a Small-Scale Hydrocyclone for Bauxite Fines Removal*
Mark BORILLA
University of the Philippines - Diliman
- 3:45 – 4:00pm** **S5-10** *Effects of Different Additives in the Electrolyte Solution on the Passivation of Copper Anodes*
Ann Carmelle BALABA
University of the Philippines - Diliman
- 4:00 – 4:15pm** **S5-11** *Application of Artificial Neural Networks in Flux-Cored Arc Welding Parameters Optimization*
Victor Otieno ODHIAMBO
Jomo Kenyatta University of Agriculture and Technology, Kenya
- 4:15 – 4:30pm** **S5-12** *The Influence of Unipolar Potentiostatic Mode on the Microstructure and Corrosion Resistance of PEO-coated AA7075*
Eden May DELA PEÑA
University of the Philippines - Diliman

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PARALLEL SESSION 6 *Biocomposites, Functional Materials, and Biomedical Applications*

- 1:30 – 1:45pm** **S6-01** *Effect of Heat Treatment on the Development of a New Apatite Layer on Carbonate Apatite Surfaces in Simulated Body Fluid*
Xuan Thanh NGUYEN
Ho Chi Minh City University of Technology
- 1:45 – 2:00pm** **S6-02** *Optimizing Wound Healing: The Combined Effects of Polyvinyl Alcohol (PVA), Sodium-Modified Montmorillonite (NaMMT), and Manuka Honey*
Xuan Thanh NGUYEN
Ho Chi Minh City University of Technology
- 2:00 – 2:15pm** **S6-03** *Effect of Plasticizer Concentration on Physical and Mechanical Properties of Biodegradable films based on Giant Swamp Taro (*Cyrtosperma merkusii*) Starch*
John REYES
National Institute of Molecular Biology and Biotechnology (BIOTECH)
- 2:15 – 2:30pm** **S6-04** *Characterization and Biodegradation Kinetic Study of PVA-cellulose Film*
Marvin SAMANIEGO
University of Santo Tomas
- 2:30 – 2:45pm** **S6-05** *Structural and Thermal Degradable Nature of the pH-Sensitive Biodegradable Chitosan-Polyvinyl Alcohol Hydrogel Films*
Aung Than HTWE
University of Yangon
- 2:45 – 3:00pm** **S6-06** *Development of Tissue-Mimicking Materials for Gynecologic Ultrasound-guided Training Phantom*
Jitka QUINAGORAN
University of the Philippines Diliman
- 3:00 – 3:15pm** **S6-07** *Investigation of Textural and Microstructural Changes in Chalcopyrite During Chemical Dissolution with Deep Eutectic Solvents Ethaline and Oxaline*
Alexandria TANCIONGCO
Department of Science and Technology – Philippine Nuclear Research Institute
- 3:15 – 3:30pm** **S6-08** *Isotherm Studies of Methyl Orange Adsorption using Polymer-based Metal-Organic Framework Composite Beads*
Edgar Clyde LOPEZ
University of Santo Tomas
- 3:30 – 3:45pm** **S6-09** *Comparative Dissolution of Copper Sulfide Using Aqueous and Non-aqueous Leaching Systems*
Cyrille SALDAGA
University of the Philippines - Diliman
- 3:45 – 4:00pm** **S6-10** *Montmorillonite-based Adsorbents for Heavy Metal Pollutant Remediation: Emerging Trends, Perspectives, Future Outlook in the Philippines*
Harvey MELENDREZ
Mindanao State University – Iligan Institute of Technology
- 4:00 – 4:15pm** **S6-11** *Compositional Analysis of Decellularized Porcine Skin for the Presence of Extracellular Matrix (ECM) Proteins for Tissue Engineering Applications*
Jean BANZON
De La Salle University
- 4:15 – 4:30pm** **S6-12** *3D-Printed Carbon-Based Flexible Piezoresistive Wearable Sensor for Smart Device Gesture to Speech Applications*
Mar Christian QUE
Department of Science and Technology – Industrial Technology Development Institute

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POSTER PRESENTATIONS

- PS - 01** *Synthesis of Graphene-Reinforced Starch Bioplastic from Banana (*Musa acuminata x balbisiana*) Peels and Determination of its Water Resistance Activity*
Kristel Camille VITALICIO
Polytechnic University of the Philippines - Manila
- PS - 02** *Green Synthesis of Zinc Oxide Nanoparticles using Moringa oleifera Leaf Extract*
Auline Luz SECILLANO
University of the Philippines - Diliman
- PS - 03** *Fabrication and Characterization of Graphene, Nickel Oxide, Graphene Nickel Oxide, And Graphene Nickel Nanomaterials Using Horizontal Vapor Phase Growth Technique For Formaldehyde Gas Detection*
Arturo SALVADOR
Baler National High School
- PS - 04** *Tailoring the Morphology of Zirconium Phosphate Nanoparticles*
Ivy Ann RAZONADO
Université Claude Bernard Lyon 1; University of the Philippines Diliman
- PS - 05** *Facile One-Pot Microwave-Assisted Synthesis of Carbon Quantum Dots from Glycerol*
Patricia Joy ABARQUEZ
Ateneo de Manila University
- PS - 06** *Synthesis and Raman Analysis of Acetic Acid-Doped Polyaniline with Different Volume Ratio of Aniline and Ammonium Persulfate*
Rhejuia NORTIZA
University of the Philippines Diliman
- PS - 07** *Enhancing Particle Board Performance: A Nanocomposite Polymer Coating Using Nanoclay*
Kyle Matthew CARRIDO
Mapúa University
- PS - 08** *A Correlation Between Tensile and Rheometric Tests in the Investigation of the Reinforcing Potential of Alternative Carbon and Silica Fillers in Rubber Compounds*
Leslie Joy DIAZ
University of the Philippines - Diliman
- PS - 09** *Kevlar and Water Hyacinth Fiber Reinforced Polymer Composite as Potential Protective Material for Body Armor*
Heizel Joane LAO
Ateneo de Manila University
- PS - 10** *Effect of Leachate Solutions on the Dissolution of Vitrified Bond Material for Abrasive Grain Recovery*
Jasmine Federica MALIT
Ateneo de Manila University
- PS - 11** *Effect of Pore Size, Geometry, and Porosity of Additively Manufactured Implants and Scaffolds on Osseointegration Factors*
Shain Angelo ARAÑEZ
Mapua University
- PS - 12** *Evaluation of the Physicochemical and Functional Properties of Intoxicating Yam (*Dioscorea hispida*) Starch for Bioplastic Film Fabrication*
Jesha Faye LIBREA
University of the Philippines Los Baños

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- PS – 13** *Effect of Thermal Processing on the Suitability of Abaca Fibers (Musa textilis) in Thermoplastic Matrices*
Cyrus Kelly MACABANGON
University of the Philippines Diliman
- PS – 14** *Functionalization of Bentonite with L-cysteine via Mechanochemical Method as an Antioxidant Active Ingredient*
Edgie NATIVIDAD
University of the Philippines Diliman
- PS – 15** *Influence Of Starch Content and Plasticizer Ratio on Starch-Based Bioplastic Films Synthesized Via Solution Casting*
Rojel Jan BUTALID
University of the Philippines Diliman
- PS – 16** *Development and Characterization of Silicone-based Skin-Mimicking Material for Ultrasound Training Phantoms*
Dionella Jitka QUINAGORAN
University of the Philippines Diliman
- PS – 17** *Extraction of Pectin from Mangifera indica Linn. Var. Carabao Peels for Bioplastic Film synthesis*
Ray Noel DELDA
Mapúa University
- PS – 18** *Lignin-Reinforced Meltspun Polylactic Acid for Filament Yarns*
Alecsandra GONZALES
Philippine Textile Research Institute
- PS – 19** *Development of New and Advance Templating Approach for Micro-mesoporous Silicates Derived from Rice Husk Ash and their Applications – A Review*
Glenn Ruel MAUJON
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