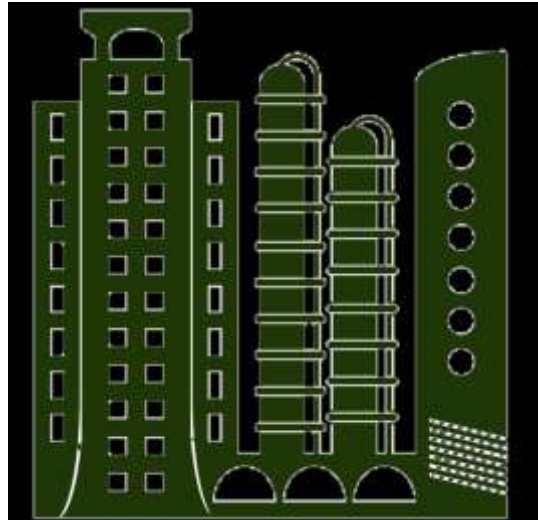




Department of Chemical Engineering
De La Salle University-Manila



25th Regional Symposium on Chemical Engineering

Intensifying the Role of Chemical Engineering for
Sustainable Cities and Communities of the Future

November 21-22, 2018
Makati Diamond Residences
Makati, Philippines

Programme

ORGANIZED BY



Contact Information:

Chemical Engineering Department
Gokongwei College of Engineering
De La Salle University
2401 Taft Ave, Malate, Manila, Philippines 1004
Tel: +632 536-0257 | +632 524-4611 | Fax: 02 524-0563
Email: rsce2018.dlsu@gmail.com
URL: <https://www.dlsu.edu.ph/conferences/rsce/>



25th Regional Symposium on Chemical Engineering RSCE 2018

Intensifying the Role of Chemical Engineering for Sustainable Cities and Communities of the Future

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PROGRAMME

Day 1: November 21, 2018 (Wednesday)

7:30 AM – 8:30 AM **Registration** **Makati Diamond Residences**
Legaspi 1 Function Room Lobby
2nd Floor

Main Session Venue: *Legaspi 1 & 2 Function Room, 2nd Floor*

8:30 AM – 8:45 AM **Opening Ceremonies**
Prayer
National Anthem
Welcoming Remarks **Br. Bernard Oca, FSC**
Chancellor
De La Salle University, Philippines

Prof. Dr. Jonathan Dungca
Dean, Gokongwei College of Engineering
De La Salle University, Philippines

8:45 AM – 9:30 AM **Plenary Lecture 1** **Prof. Dr. David Shan-Hill Wong**
Department of Chemical Engineering
National Tsing Hua University, Taiwan

9:30 AM – 10:15 AM **Plenary Lecture 2** **Prof. Dr. Ir. Dominic Foo**
Process Design and Integration
University of Nottingham, Malaysia

10:15 AM – 11:00 AM **Plenary Lecture 3** **Prof. Dr. Nathaniel Dugos**
Department of Chemical Engineering
De La Salle University, Philippines

11:00 AM – 11:30 AM **Book Launch & Morning Break** **Springer Publishing**

11:30 AM – 12:30 PM **Parallel Technical Sessions & Poster Session** **Session A1**
Salcedo-Arnaiz Function Room
2nd Floor

Session B1
Legaspi 2 Function Room
2nd Floor

Session C1
Leviste-Dela Rosa-Paseo Function Room
2nd Floor

Poster Session
Legaspi 2 Function Room Lobby
2nd Floor



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PROGRAMME

Day 1: November 21, 2018 (Wednesday) – *continuation*

12:30 PM – 1:30 PM	Lunch Break	
1:30 PM – 2:45 PM	Parallel Technical Sessions	Session A2 <i>Salcedo-Arnaiç Function Room</i> 2 nd Floor
		Session B2 <i>Legaspi 2 Function Room</i> 2 nd Floor
		Session C2 <i>Leviste-Dela Rosa-Paseo Function Room</i> 2 nd Floor
2:45 PM – 3:00 PM	Afternoon Break	
3:00 PM – 5:30 PM	Parallel Technical Sessions	Session A3 <i>Salcedo-Arnaiç Function Room</i> 2 nd Floor
		Session B3 <i>28th Floor Function Room</i> 28 th Floor
		Session C3 <i>Leviste-Dela Rosa-Paseo Function Room</i> 2 nd Floor
6:00 PM – 6:30 PM	Dinner Registration	<i>Legaspi 1 Function Room Lobby</i> 2 nd Floor
6:30 PM – 9:00 PM	Welcoming Dinner	<i>Legaspi 1 & 2 Function Room</i> 2 nd Floor



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PARALLEL TECHNICAL SESSIONS

Day 1 - November 21, 2018

Time	Session A1 <i>Salcedo-Arnaiz Function Room</i>	Session B1 <i>Legaspi 2 Function Room</i>	Session C1 <i>Leviste-Dela Rosa-Paseo Function Room</i>
11:30 AM - 11:45 AM	BIO-06	PRO-09	CMP-17
11:45 AM - 12:00 NN	BIO-11	PRO-16	CMP-10
12:00 NN - 12:15 PM	BIO-10	PRO-15	CMP-01
12:15 PM - 12:30 PM	BIO-12	PRO-36	CMP-14

Time	Session A2 <i>Salcedo-Arnaiz Function Room</i>	Session B2 <i>Legaspi 2 Function Room</i>	Session C2 <i>Leviste-Dela Rosa-Paseo Function Room</i>
1:30 PM - 1:45 PM	BIO-05	PRO-20	CMP-02
1:45 PM - 2:00 PM	BIO-01	PRO-22	CMP-11
2:00 PM - 2:15 PM	BIO-02	PRO-10	CMP-13
2:15 PM - 2:30 PM	BIO-03	PRO-41	CMP-18
2:30 PM - 2:45 PM	BIO-04	PRO-30	CMP-12

Time	Session A3 <i>Salcedo-Arnaiz Function Room</i>	Session B3 <i>28th Floor Function Room</i>	Session C3 <i>Leviste-Dela Rosa-Paseo Function Room</i>
3:00 PM - 3:15 PM	BIO-07	PRO-33	CMP-03
3:15 PM - 3:30 PM	BIO-18	PRO-05	RXN-04
3:30 PM - 3:45 PM	BIO-19	PRO-06	RXN-06
3:45 PM - 4:00 PM	BIO-08	PRO-07	RXN-11
4:00 PM - 4:15 PM	BIO-14	PRO-08	FUN-01
4:15 PM - 4:30 PM	MAT-03	PRO-14	FUN-02
4:30 PM - 4:45 PM	MAT-08	PRO-37	FUN-04
4:45 PM - 5:00 PM	MAT-19	PRO-39	FUN-09
5:00 PM - 5:15 PM	MAT-21	PRO-43	CMP-15
5:15 PM - 5:30 PM		PRO-44	CMP-16



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PROGRAMME

Day 2: November 22, 2018 (Thursday)

8:00 AM – 8:30 AM **Registration** **Makati Diamond Residences**
Legaspi 1 Function Room Lobby
2nd Floor

Main Session Venue: *Legaspi 1 & 2 Function Room, 2nd Floor*

8:30 AM – 8:45 AM **Opening Ceremonies & Message From The Organizing Committee** **Assoc. Prof. Dr. Vergel Bungay**
Chair, Department of Chemical Engineering
De La Salle University, Philippines

8:45 AM – 9:30 AM **Plenary Lecture 4** **Prof. Dr. Hirofumi Hinode**
Department of Transdisciplinary Science
and Engineering
Tokyo Institute of Technology, Japan

9:30 AM – 10:15 AM **Plenary Lecture 5** **Assoc. Prof. Dr. Anchaleeporn Waritswat Lothongkum**
Department of Chemical Engineering
King Mongkut's Institute of Technology, Thailand

10:15 AM – 10:30 AM **Morning Break**

10:30 AM – 11:15 AM **Plenary Lecture 6** **Prof. Dr. Ir. Mohamed Azlan Hussain**
Department of Chemical Engineering
University of Malaya, Malaysia

11:15 AM – 12:00 PM **Plenary Lecture 7** **Asst. Prof. Dr. Joey Ocon**
Department of Chemical Engineering
University of the Philippines, Diliman

12:00 PM – 1:00 PM **Lunch Break**

1:00 PM – 3:15 PM **Parallel Technical Sessions** **Session D1**
Salcedo-Arnaiꝯ Function Room
2nd Floor

Session E1
Legaspi 2 Function Room
2nd Floor

Session F1
Leviste-Dela Rosa Function Room
2nd Floor



25th Regional Symposium on Chemical Engineering RSCE 2018

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PROGRAMME

Day 2: November 22, 2018 (Wednesday) – *continuation*

3:15 PM – 3:30 PM	Afternoon Break	
3:30 PM – 5:00 PM	Parallel Technical Sessions	Session D2 <i>Salcedo-Arnaiz Function Room</i> 2 nd Floor
		Session E2 <i>Legaspi 2 Function Room</i> 2 nd Floor
		Session F2 <i>Leviste-Dela Rosa Function Room</i> 2 nd Floor

Asian Pacific Confederation of Chemical Engineering (APCChE)

5:00 PM – 5:15 PM	Brief History & Current Activities of APCChE	Prof. Dr. Shuichi Yamamoto APCChE President Yamaguchi University, Japan
5:15 PM – 5:25 PM	APCChE Awarding Ceremony for Outstanding RSCE 2018 Presentations	Prof. Dr. Shuichi Yamamoto APCChE President Yamaguchi University, Japan
		Prof. Dr. Ir. Dominic Foo Process Design and Integration University of Nottingham, Malaysia
5:25 PM – 5:45 PM	Invitation to the APCChE 2019 Congress feat. Chemical Engineering for Sustainable Development Goals (SDGs) and Student Contest on SDGs	Prof. Dr. Shuichi Yamamoto APCChE 2019 Steering Committee Chairman Yamaguchi University, Japan
		Prof. Dr. Masaru Noda APCChE 2019 Steering Committee Member Waseda University, Japan
5:45 PM – 6:00 PM	Closing Remarks	Assoc. Prof. Dr. Aileen Orbecido Chair, RSCE 2018 Organizing Committee De La Salle University, Philippines



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PARALLEL TECHNICAL SESSIONS

Day 2 - November 22, 2018

Time	Session D1 <i>Salcedo-Arnaiz Function Room</i>	Session E1 <i>Legaspi 2 Function Room</i>	Session F1 <i>Leviste-Dela Rosa Function Room</i>
1:00 PM - 1:15 PM	MAT-09	RXN-02	NAN-03
1:15 PM - 1:30 PM	MAT-10	RXN-08	NAN-07
1:30 PM - 1:45 PM	MAT-02	RXN-13	NAN-01
1:45 PM - 2:00 PM	MAT-06	RXN-10	NAN-02
2:00 PM - 2:15 PM	MAT-01	PRO-35	NAN-08
2:15 PM - 2:30 PM	MAT-04	PRO-31	NAN-11
2:30 PM - 2:45 PM	MAT-14	PRO-34	NAN-12
2:45 PM - 3:00 PM	MAT-12	PRO-18	FUN-06
3:00 PM - 3:15 PM	PRO-42	PRO-28	FUN-07

Time	Session D2 <i>Salcedo-Arnaiz Function Room</i>	Session E2 <i>Legaspi 2 Function Room</i>	Session F2 <i>Leviste-Dela Rosa Function Room</i>
3:30 PM - 3:45 PM	MAT-15	MAT-05	PRO-17
3:45 PM - 4:00 PM	MAT-17	PRO-12	PRO-23
4:00 PM - 4:15 PM	MAT-11	PRO-03	PRO-25
4:15 PM - 4:30 PM	MAT-13	PRO-19	PRO-26
4:30 PM - 4:45 PM	MAT-20	PRO-21	PRO-29
4:45 PM - 5:00 PM		PRO-24	



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday)

Session A1:	Salcedo – Arnaiz Function Room, 2nd Floor
Moderator:	<i>Dr. Cynthia Madrazo & Dr. Chien-Hsiang Chang</i>
11:30 AM – 11:45 AM	BIO-06 Optimization Of Pectin Extraction From The Native Fruit Of <i>Garcinia bunicao</i> Using Response Surface Methodology <i>P. J. Gealone*</i> , <i>J. K. V. Robrigado</i> , <i>J. E. De Leon</i> , <i>A. T. Orillan</i> , and <i>J. R. Barajas</i>
11:45 AM – 12:00 PM	BIO-11 Production Of Biobutanol From Pineapple Waste By The Coupled Fermentation- Pervaporation System <i>J. Aurelenia*</i> , <i>T. P. Nguyen</i> , and <i>A. B. Beltran</i>
12:00 PM – 12:15 PM	BIO-10 Effect Of Sonication Power On Perfusion Decellularization Of Cadaveric Porcine Kidney <i>J. M. Mondragon</i> , <i>N. P. Dugos*</i> , <i>S. Say</i> , and <i>S. A. Roces</i>
12:15 PM – 12:30 PM	BIO-12 Fabrication Of Vesicular Structure From Pseudotriple-Chain Ion Pair Amphiphile <i>C. H. Chang*</i> , <i>C. C. Chang</i> , <i>P. H. Su</i> , and <i>Y. F. Chen</i>
Session A2:	Salcedo – Arnaiz Function Room, 2nd Floor
Moderator:	<i>Dr. Susan Gallardo & Prof. Shuichi Yamamoto</i>
1:30 PM – 1:45 PM	BIO-05 Moringa-Functionalized Rice Husk Ash Adsorbent For The Removal Of Amoxicillin In Aqueous Solution <i>M. P. Oliva</i> , <i>C. Corral</i> , <i>M. Jesoro</i> , and <i>J. R. Barajas*</i>
1:45 PM – 2:00 PM	BIO-01 Numerical Simulation Of Particle Dispersion In A Preprocessing Of A Static Culture <i>Y. Kanemaru</i> , <i>A. Sekimoto</i> , <i>Y. Okano*</i> , <i>K. Kanie</i> , <i>R. Kato</i> , and <i>M. Kino-Oka</i>
2:00 PM – 2:15 PM	BIO-02 Development And Physico-Chemical Characterization Of Virgin Coconut Oil-In-Water Emulsion Using Polymerized Whey Protein As Emulsifier For Vitamin A Delivery <i>A. B. Nanda Kumar</i> , <i>E. J. Tanglao*</i> , <i>R. R. Noriega</i> , <i>P. Marcelo</i> , and <i>M. E. Punzalan</i>



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – *continuation*

Session A2:	Salcedo – Arnaiz Function Room, 2nd Floor
Moderator:	<i>Dr. Susan Gallardo & Prof. Shuichi Yamamoto</i>
2:15 PM – 2:30 PM	BIO-03 Connected Flow-Through Chromatography Processes As Continuous Downstream Processing Of Proteins <i>S. Yamamoto*</i> , N. Yoshimoto, and T. Ichibara
2:30 PM – 2:45 PM	BIO-04 A Method For Designing Flow-Through Chromatography Processes <i>S. Yamamoto*</i> , N. Yoshimoto, and S. Hasegawa
Session A3:	Salcedo – Arnaiz Function Room, 2nd Floor
Moderator:	<i>Dr. Joseph Auresenia & Prof. Sri Aprilia</i>
3:00 PM – 3:15 PM	BIO-07 Improving The Resistance Starch Of Rice Through Physical And Enzymatic Process <i>J. R. Witono*</i> and J. Juliani
3:15 PM – 3:30 PM	BIO-18 Protein Reduction Of Natural Rubber Films Through Leaching Solvent <i>L. J. Yu*</i> , C. W. Y. Chi, V. Tangavalo, and K. W. Lim
3:30 PM – 3:45 PM	BIO-19 <i>In Vitro</i> Biocompatibility Testing Of Phycobiliproteins From <i>Gracilaria changii</i> <i>J. P. Martin</i> , E. C. Roque, F. H. Gutierrez, M. A. L. Hegina, A. J. N. Mata, E. M. Mission, and R. V. C. Rubi*
3:45 PM – 4:00 PM	BIO-08 Development Of Noninvasive Method Of Measuring Copper And Zinc By Passive Diffusion: An <i>In Vitro</i> Model <i>C. E. Tiangco*</i> , Q. C. P. Landrito, and G. K. R. Q. Menor
4:00 PM – 4:15 PM	BIO-14 Bioreaching Kinetics Of Trace Metals From Coal Ash Using <i>Pseudomonas spp.</i> <i>D. C. Pangayao*</i> , M. A. B. Promentilla, S. M. Gallardo, and E. D. van Hullebusch



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – continuation

Session A3: Salcedo – Arnaiz Function Room, 2nd Floor

Moderator: *Dr. Joseph Auresenia & Prof. Sri Aprilia*

4:15 PM – 4:30 PM MAT-03
Acetylation Of Nata De Coco (Bacterial Cellulose) And Membrane Formation
E. L. Alberto, C. G. Depasupil, A. N. de Ocampo, M. Ligaray, R. C. Eusebio, A. H. Orbecido, A. B. Beltran, and L. B. Patacsil**

4:30 PM – 4:45 PM MAT-08
Parametric Study Of Corn Cob Biochar (Ccbc) Yield Via Microwave Pyrolysis
K. I. A. Lavas, S. S. Doliente, R. B. Carpio, V. P. Migo, and C. G. Alfajara*

4:45 PM – 5:00 PM MAT-19
Composites Polyvinyl Alcohol Filled with Nanocellulose from Oil Palm Waste by Formic Acid Hydrolysis
S. Aprilia, N. Razali, Y. Syamsuddin, A. Khalil, H.P.S., and D. Syafrina*

5:00 PM – 5:15 PM MAT-21
Production Of Polymer Membrane From Waste Kappa-Carrageenan And Tilapia (*Oreochromis niloticus*) Fishbone
J. G. Olay, K. R. Ambas, N. D. Glino, and V. R. D. Rubi*

Session B1: Legaspi 2 Function Room, 2nd Floor

Moderator: *Dr. Ramon Christian Eusebio & Dr. Narisara Intarachandra*

11:30 AM – 11:45 AM PRO-09
Treatment Of Oil Mill Effluent Using Activated Carbon Prepared From Kernel Shell Waste In Thailand Palm Industry
*W. Bootham, H. Habaki, and R. Egashira**

11:45 AM – 12:00 PM PRO-16
Preparation Of Palm Oil Empty Fruit Bunch Based Activated Carbon For Adsorption Of Dyes From Aqueous Solution
N. Intarachandra, S. Sirivorakon, and T. Sangmanee*

12:00 PM – 12:15 PM PRO-15
Performance Evaluation and Upgrade Options For Existing Sequencing Batch Reactor For Nutrient Removal
*C. M. A. Castellones, J. Lantin, A. B. Beltran, J. Ly, J. Y. Abenoja, and A. H. Orbecido**



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – continuation

Session B1: Legaspi 2 Function Room, 2nd Floor

Moderator: *Dr. Ramon Christian Eusebio & Dr. Narisara Intarachandra*

12:15 PM – 12:30 PM

PRO-36

Optimal Selection Of BNR System Using Calibrated Fuzzy AHP And GRA

*R. C. Eusebio**, R. G. Damalerio, M. A. Promentilla, A. H. Orbecido, L. B. Patacsil, and A. B. Beltran

Session B2: Legaspi 2 Function Room, 2nd Floor

Moderator: *Dr. Vannie Joy Resabal & Dr. Lawrence Belo*

1:30 PM – 1:45 PM

PRO-20

Optimization Of Lead (II) Removal In Leachates Using *Moringa oleifera* Seeds

*F. Taniagra**, M. A. De Castro, C. A. Agripa, and J. R. Barajas

1:45 PM – 2:00 PM

PRO-22

Development Of Optical Detection For Antibiotic Residues: Oxytetracycline In Freshwater Aquaculture

M. J. Marquez, C. J. Roncales, R. A. Tigcal, and E. Quinto*

2:00 PM – 2:15 PM

PRO-10

Copper Uptake Potential Of Philippine Giant Bamboo (*Dendrocalamus asper*) Under Varied Initial Copper Concentration, Water Hardness And pH

J. L. C. Go, C. F. Madrazo, A. H. Orbecido, M. E. G. de Castro, and L. P. Belo*

2:15 PM – 2:30 PM

PRO-41

Hydrochloric Acid Leaching Of Rare Earth Elements From Coal Fly Ash

*V. J. T. Resabal**, R. D. Alorro, A. K. L. Barote, T. K. F. Ellaga, and J. A. Ochagavia

2:30 PM – 2:45 PM

PRO-30

Dissolution Characteristics Of H₂/N₂ Fine Bubbles

S. Yoshida, Y. Takahashi, M. Tanaka, and K. Onoe*

Session B3: 28th Floor Function Room

Moderator: *Dr. Michael Angelo Promentilla & Dr. Carlito Tabelin*

3:00 PM – 3:15 PM

PRO-33

Formation Of Surface Protective Coatings On Arsenopyrite Using Al-Catecholate Complex And Its Mode Of Inhibition Of Arsenopyrite Oxidation

*I. Park**, C. B. Tabelin, H. Inano, K. Seno, K. Higuchi, M. Ito, and N. Hiroyoshi



TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – continuation

Session B3:	28th Floor Function Room
Moderator:	<i>Dr. Michael Angelo Promentilla & Dr. Carlito Tabelin</i>
3:15 PM – 3:30 PM	PRO-05 Carrier-Microencapsulation Using Al-Catecholate Complex To Suppress Arsenopyrite Oxidation: Evaluation Of The Coating Stability Under Simulated Weathering Conditions <i>K. Seno*</i> , <i>I. Park</i> , <i>C. B. Tabelin</i> , <i>K. Magaribuchi</i> , <i>M. Ito</i> , and <i>N. Hiroyoshi</i>
3:30 PM – 3:45 PM	PRO-06 Prediction Of Acid Mine Drainage Formation And Zinc Migration In The Tailings Dam Of A Closed Mine, And Possible Countermeasures <i>C. B. Tabelin*</i> , <i>A. Sasaki</i> , <i>T. Igarashi</i> , <i>S. Tomiyama</i> , <i>M. V. Tabelin</i> , <i>M. Ito</i> , and <i>N. Hiroyoshi</i>
3:45 PM – 4:00 PM	PRO-07 Analysis Of The Potential Of Landfill Gas As An Alternative For Electrical Energy Source <i>E. Munawar*</i> , <i>N. Emalya</i> , <i>A. P. Hayati</i> , <i>Yumardi</i> , and <i>L. Hakim</i>
4:00 PM – 4:15 PM	PRO-08 The Effect Of Leachate Recirculation On The Greenhouse Gases Emissions From Bioreactor Landfill In Tropical Climate Region <i>S. R. Sugihen</i> , <i>Q. H. Ali</i> , <i>E. Munawar*</i> , and <i>A. Adisalamun</i>
4:15 PM – 4:30 PM	PRO-14 Techno-Economic Analysis Of A Combined Cooling, Heating And Power System Based On Hot Sedimentary Aquifer For Hotel Building In Tropical Countries <i>H. Prasetio</i> , <i>K. D. Euodia</i> , and <i>W. W. Purwanto*</i>
4:30 PM – 4:45 PM	PRO-37 Analyses Of The Synergy Of Sub/Supercritical H₂O-CO₂ System For Synthesis Of Green Platform Chemicals <i>A. Quitain*</i> , <i>J. K. Agutaya</i> , <i>R. Inoue</i> , <i>M. Sasaki</i> , <i>M. J. Cocero</i> and <i>T. Kida</i>
4:45 PM – 5:00 PM	PRO-39 Sustainability Assessment Of Xylitol Production From Empty Fruit Bunch <i>Z. A. Putra*</i> , <i>R. H. Hafyan</i> , and <i>L. Bhullar</i>



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – continuation

Session B3:	28th Floor Function Room
Moderator:	<i>Dr. Michael Angelo Promentilla & Dr. Carlito Tabelin</i>
5:00 PM – 5:15 PM	PRO-43 Production Of Activated Carbon From Corn Cobs And Mango Kernels Via H₃PO₄ Activation And Mediated Hydrothermal Treatment <i>E. C. Roque*</i> , <i>J. V. M. Armonio</i> , <i>I. J. Caragdag</i> , <i>J. A. B. Escorpizo</i> , <i>K. M. S. Miranda</i> , and <i>A. J. A. Raymundo</i>
5:15 PM – 5:30 PM	PRO-44 Competitive Effects For The Adsorption Of Copper, Cadmium and Lead Ions Using Modified Activated Carbon From Bamboo <i>A. C. Vilando*</i> , <i>J. B. Ocreto</i> , <i>C. I. D. Go</i> , <i>J. C. E. Chua</i> , and <i>C. J. Z. Apacible</i>
Session C1:	Leviste – dela Rosa – Paseo Function Room
Moderator:	<i>Dr. Michael Angelo Promentilla & Prof. Wasana Kowhakul</i>
11:30 AM – 11:45 AM	CMP-17 Effective Process Safety Management For Highly Hazardous Chemicals <i>A. W. Lothongkum</i> , <i>P. Sommani*</i> , <i>P. Jumpasri</i> , <i>N. Hongbin</i> , and <i>W. Kowhakul</i>
11:45 AM – 12:00 PM	CMP-10 Ethylene Glycol Injection For Hydrate Formation Prevention In Deepwater Gas Pipelines <i>S. Adisasmito*</i> and <i>E. Parubak</i>
12:00 PM – 12:15 PM	CMP-01 Hybrid Intelligent Control Of Ethylene Copolymerization In Gas-Phase Catalytic Fluidized-Bed Reactors <i>M. A. Hussain*</i> , <i>M. R. Abbasi</i> , <i>A. Shamiri</i> , <i>S. Hamidreza</i> , and <i>A. Kaboli</i>
12:15 PM – 12:30 PM	CMP-14 Evaluation of Two Cryogenic Distillation for Processing Natural Gas with High CO₂ Content <i>H. Prabowo</i> and <i>T. Adhi*</i>
Session C2:	Leviste – dela Rosa – Paseo Function Room
Moderator:	<i>Dr. Nishanth Chemmangattualappil & Dr. Kathleen Aviso</i>
1:30 PM – 1:45 PM	CMP-02 A Systematic Molecular Design Framework For An Environmentally Benign Solvent Recovery Process <i>J. Ooi</i> , <i>D. K. S. Ng</i> , and <i>N. G. Chemmangattualappil*</i>



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – continuation

Session C2:	Leviste – dela Rosa – Paseo Function Room
Moderator:	<i>Dr. Nishanth Chemmangattuvalappil & Dr. Kathleen Aviso</i>
1:45 PM – 2:00 PM	CMP-11 Improved Process Modifications Of Aqueous Ammonia Based CO₂ Capture System <i>A. Saptoro*</i> , C. A. Obek, and F. K. Ayittey
2:00 PM – 2:15 PM	CMP-13 Optimization And Analysis For Palm Oil Mill Operations Via Input-Output Optimization Model <i>S. Z. Y. Foong</i> , V. Andiappan, R. R. Tan, and D. K. S. Ng*
2:15 PM – 2:30 PM	CMP-18 Modeling Solubility Of CO₂ And Hydrocarbon Gas Mixture In Ionic Liquid ([bmim][PF₆]) Using Aspen Plus® Simulations <i>A. P. Adornado*</i> , K. L. M. De Leon, J. L. C. Abonita, and A. N. Soriano
2:30 PM – 2:45 PM	CMP-12 A P-Graph Model For The Synthesis Of Tri-Generation Systems For Multi-Period Operation <i>V. Gonzales</i> , R. R. Tan*, and K. B. Aviso*
Session C3:	Leviste – dela Rosa – Paseo Function Room
Moderator:	<i>Dr. Atichat Wongkoblak & Engr. Adonis Adornado</i>
3:00 PM – 3:15 PM	CMP-03 Modeling Of Metallocene Catalyzed Propylene Polymerization In Fluidized Bed Reactors <i>C. S. Law*</i> , M. A. Hussain, and Z. H. Luo
3:15 PM – 3:30 PM	RXN-04 Gasification Of Rice Hulls Into Methane By Rumen Fluid: An Experimental And Simulation Study <i>A. Lucero, Jr.</i> and J. R. Barajas*
3:30 PM – 3:45 PM	RXN-06 Synthesis Of Dimethyl Ether Using Dual Catalyst Fixed Bed For Methanol Synthesis And Its Dehydration <i>A. Ardy</i> , J. Rizqiana, M. Laniwati, and H. Susanto*



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TECHNICAL SESSIONS

Day 1: November 21, 2018 (Wednesday) – continuation

Session C3:	Leviste – dela Rosa – Paseo Function Room
Moderator:	<i>Dr. Atichat Wongkoblap & Engr. Adonis Adornado</i>
3:45 PM – 4:00 PM	RXN-11 Production Of Lactic Acid From Cellulose Using Solid Catalyst <i>S. Doungsri*</i> , P. Rattanaphanee, and A. Wongkoblap
4:00 PM – 4:15 PM	FUN-01 Organic Acid Penetration Depth In Epoxy Lining Through Alkaline Marking Method <i>M. L. I. C. Miranda*</i> , A. Zulibumaer, M. Kubouchi, Y. Arao and N. Tanimoto
4:15 PM – 4:30 PM	FUN-02 Calcium Soap From Palm Fatty Acid Distillate For Ruminant Feed: Calcium Oxide Particles Size <i>M. R. Saadi</i> , L. A. Handoyo*, A. Indarto, D. Sbofinita, D. Yulistia, and F. I. Hasyiyati
4:30 PM – 4:45 PM	FUN-04 Cross-Flow Ultrafiltration Of Aqueous Solution Of Coconut Protein <i>C. Yiengveerachon*</i> , S. Yoshikawa, H. Matsumoto, and S. Ookavara
4:45 PM – 5:00 PM	FUN-09 Determination Of Diffusion Coefficients Of Heavy Metal Ions (Ni³⁺, Zn²⁺, Ba²⁺, And Mn²⁺) At Infinite Dilution Through Electrolytic Conductivity Measurements <i>A. P. Adornado*</i> , D. A. A. Dimaculangan, A. N. Soriano, and V. C. Bungay
5:00 PM – 5:15 PM	CMP-15 The Dynamic Estimation Of Chemical Process Control: Smoothers <i>M. L. Doko*</i>
5:15 PM – 5:30 PM	CMP-16 The Application Of Dynamic Estimation In Chemical Process Control: Filters <i>S. Fatmawati*</i> and M. L. Doko



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TECHNICAL SESSIONS

Day 2: November 22, 2018 (Thursday) – continuation

Session D1:	Salcedo – Arnaiz Function Room
Moderator:	<i>Dr. Eden Mariquit & Dr. Armando Quitain</i>
1:00 PM – 1:15 PM	MAT-09 Design of Composite Electrode for the Electrochemical Reduction of Carbon Dioxide <i>J. A. Jacinto, T. Kida, A. Quitain, L. Belo, N. Dugos, and M. Sasaki*</i>
1:15 PM – 1:30 PM	MAT-10 Fabrication Of Enhanced Triboelectric Nanogenerator Using Silica From Sugarcane Bagasse <i>D. C. Leal*, J. C. J. Mendoza, K. A. Tabangin, A. Baraceros, and J. Taqueban</i>
1:30 PM – 1:45 PM	MAT-02 The Effect Of The Process Condition On Synthesis Amorphous Silica Alumina From Metakaolin On Pore Structure And Crystallinity Of Product <i>E. S. Rabayu*, G. Subiyanto, S. Shoelarta, M. I. Hartono, and H. Elisafa</i>
1:45 PM – 2:00 PM	MAT-06 Degradation Of PVC Insulated Cable By Small Punch Test Considering Molecular Weight Change <i>K. Yasutomo*, A. Yoshibiko, and K. Masatoshi</i>
2:00 PM – 2:15 PM	MAT-01 Development And Characterization Of Perlite From Lamba, Albay, Bicol As Packing Material And The Design Of A Packed Column For The Absorption Of Ammonia Gas <i>J. S. Valoroza, B. A. San Mateo, M. N. J. C. Yturralde, and L. D. B. Pestaño*</i>
2:15 PM – 2:30 PM	MAT-04 Photocatalytic Activity and Photoinduced Superhydrophilicity of Immobilized Nano Fe-TiO₂ Thin Films <i>E. Mariquit, M. Miyauchi, H. Hinode, and W. Kurniawan*</i>
2:30 PM – 2:45 PM	MAT-14 CeO₂-Dolomite As Fire Retardant Additives On The Conventional Intumescent Coating In Steel Substrate <i>J. B. Zoleta*, G. B. Itao, V. J. T. Resabal, A. A. Lubguban, R. D. Corpuz, C. B. Tabelin, M. Ito, and N. Hiroyoshi</i>
2:45 PM – 3:00 PM	MAT-12 Synthesis Of Geopolymer Spheres With Photocatalytic Activity <i>R. A. J. Malenab, P. I. K. Bravo, E. D. Shimizu, D. E. C. Yu, and M. A. B. Promentilla*</i>



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TECHNICAL SESSIONS

Day 2: November 22, 2018 (Thursday) – continuation

Session D1:	Salcedo – Arnaiz Function Room
Moderator:	<i>Dr. Eden Mariquit & Dr. Armando Quitain</i>
3:00 PM – 3:15 PM	PRO-42 A Systematic Mapping Study on the Development of Permeable Reactive Barrier for Acid Mine Drainage Treatment <i>A. A. S. Tigue, R. A. J. Malenab, and M. A. B. Promentilla*</i>
Session D2:	Salcedo – Arnaiz Function Room
Moderator:	<i>Engr. Erison Roque & Dr. Marita Dimaano</i>
3:30 PM – 3:45 PM	MAT-15 Investigation of Superabsorbent Polymer Absorbency at Reduced Water Chemical Potential <i>A. V. Melendres*, J. A. B. Antang, and C. J. A. Manacob</i>
3:45 PM – 4:00 PM	MAT-17 Talisay (<i>Terminalia catappa</i>) Seed Husk Biochar For Adsorption Of Lead (II) Ions In Artificially Contaminated Soil <i>M. N. R. Dimaano*, J. J. Canlas, J. C. Go, and A. C. Mendoza</i>
4:00 PM – 4:15 PM	MAT-11 A Study On The Potential Of Carbon Residue From Rice Husk Used As Boiler Fuel For Carbon Dioxide Capture And Wastewater Treatment <i>J. R. S. Peñaflores, A. J. B. Carillo, S. E. M. Estrada, and J. M. Celedonio-Castro*</i>
4:15 PM – 4:30 PM	MAT-13 Analysis Of The Interaction Between Particles And Gliding Arc Discharge In A Spouted Bed Reactor <i>A. Nakajima*, S. Kodama, and H. Sekiguchi</i>
4:30 PM – 4:45 PM	MAT-20 Extraction of Cellulose from Waste Papers for the Preparation of Cellulose Graft-Poly (Acrylamide) for Superabsorbent <i>N. E. Almanzor, C. R. T. Aquino, F. D. G. Carlos, F. U. Padua, H. R. Tayactac, A. H. O. Zulueta, and E C. Roque*</i>



TECHNICAL SESSIONS

Day 2: November 22, 2018 (Thursday) – continuation

Session E1:	Legaspi 2 Function Room
Moderator:	<i>Dr. Vergel Bungay & Engr. Joseph Ortenero</i>
1:00 PM – 1:15 PM	RXN-02 Acidity Effects Of K Promoted Co-Based Catalyst With NH₄OH Addition Of The Impregnation Solution For Fischer-Tropsch Synthesis <i>Z. A. Fatony, Y. Febriani, IGBN Makertihartha, M. L. Gunawan, and Subagio*</i>
1:15 PM – 1:30 PM	RXN-08 Heterogeneous Catalytic Reaction Of Glycerol With Acetone For Solketal Production <i>H. Sulistyono*, I. Hapsari, Budhijanto, W. B. Sediawan, S. S. Rabayu, and M. M. Azis</i>
1:30 PM – 1:45 PM	RXN-13 Mechanistic Study Of Ni_xFe_{2-x}Se₃ Film Electrodeposition And Catalytic Activity Towards Oxygen Evolution Reaction <i>J. Ortenero*, W. Sides, Q. Huang, and J. Ocon</i>
1:45 PM – 2:00 PM	RXN-10 Kinetic Study On Carbon Dioxide Gasification Of Philippine-Indonesian Coal Char Blends <i>V. C. Bungay*, J. P. A. Chua, and C. P. P. Beo</i>
2:00 PM – 2:15 PM	PRO-35 Production Of Hydrogen Gas From Biomass Oil Palm Empty Fruit Bunch Using Electrolysis Method <i>R. Y. Amri, A. K. Saba, A. Asfarina, and R. S. Putra*</i>
2:15 PM – 2:30 PM	PRO-31 Catalytic Thermal Decarboxylation Of Palm Kernel Oil Basic Soap Into Drop-In Fuel <i>G. F. Neonufa*, M. Pratini, T. Prakoso, R. Purwadi, and T. H. Soerawidjaja</i>
2:30 PM – 2:45 PM	PRO-34 Phosphorus Recovery From Wastewater And Sludge <i>R. G. Damalerio, L. P. Belo, A. H. Orbecido, C. M. J. Pausta, M. A. B. Promentilla, L. F. Razon, R. C. P. Eusebio, D. Saroj, and A. B. Beltran*</i>
2:45 PM – 3:00 PM	PRO-18 Parametric And Optimization Studies On The Entrapment Of Potassium Fertilizer Into Chitosan Polymethacrylic Acid Carrier Via Ionic Gelation <i>D. J. M. Plofino, C. C. P. Brutus, C. G. Alfajara, M. C. Maguyon-Detras, and V. P. Migo*</i>



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TECHNICAL SESSIONS

Day 2: November 22, 2018 (Thursday) – continuation

Session E1:	Legaspi 2 Function Room
Moderator:	<i>Dr. Vergel Bungay & Engr. Joseph Ortenero</i>
3:00 PM – 3:15 PM	PRO-28 Development Of Efficient Synthesis Of Bromate Utilizing Ozone Fine Bubble <i>K. Ogane and K. Onoe*</i>
Session E2:	Legaspi 2 Function Room
Moderator:	<i>Engr. John Raymond Barajas & Engr. Roy Alvin Malenab</i>
3:30 PM – 3:45 PM	MAT-05 Compressive Strength Of Geopolymer Bricks From Gold Mine Tailings And Lime Sludge As Geopolymeric Source Materials <i>E. M. Opiso*, J. P. J. Aseniero, C. V. Maestre, J. J. N. Zapanta, and O. P. Cajés</i>
3:45 PM – 4:00 PM	PRO-12 Utilization Of Coal Fly Ash And Fine Sawdust In Pervious Concrete Pavement Application <i>E. M. Opiso*, R. P. Supremo, J. R. Perodes, and R. T. Rojas</i>
4:00 PM – 4:15 PM	PRO-03 The Production Of Biogas From Palm Oil Mill Effluent As Substrate With Variation Of Agitation Speed With Fed-Batch System <i>A. Hasan, M. Aznury*, Jaksen, and R. Artindah</i>
4:15 PM – 4:30 PM	PRO-19 Optimization Of Furfural Extraction From Theobroma Cacao Wastes Using Response Surface Methodology <i>J. R. Barajas*, J. R. Uy, N. D. Careo, and D. Llarena</i>
4:30 PM – 4:45 PM	PRO-21 Optimization Of Microwave-Assisted Alkaline Pre-Treatment Method For The Cellulolytic Fermentation Abaca Stripping Waste Into Glucose <i>J. R. Barajas*, G. I. Cea, J. R. Manlangit, and M. Reverente</i>
4:45 PM – 5:00 PM	PRO-24 Production Of Hydrogen Gas From Biomass Rice Straw Uses Biomass Electrolysis Method To Produce Environmentally Friendly Hydrogen Fuel Cell <i>S. Aminah, M. M. Fajrin, and R. S. Putra*</i>



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TECHNICAL SESSIONS

Day 2: November 22, 2018 (Thursday) – continuation

Session F1:	Leviste – dela Rosa Function Room
Moderator:	<i>Dr. Michael Angelo Promentilla & Engr. Anabella Vilando</i>
1:00 PM – 1:15 PM	NAN-03 Development Of Nanosilver-Coated Geopolymer Beads (AgGP) From Fly Ash And Baluko Shells For Antimicrobial Applications <i>K. S. Dela Cerna*</i> , J. I. B. Janairo, and M. A. B. Promentilla
1:15 PM – 1:30 PM	NAN-07 Synthesis of Fly Ash-Baluko Shell Geopolymer Sphere Composites As Matrix For Nanotitania Photocatalysis <i>M. R. Delgado</i> , A. E. Nebres, K. M. Yap, M. A. B. Promentilla*, and A. B. Beltran
1:30 PM – 1:45 PM	NAN-01 Process Optimization For Potassium Nanofertilizer Production Via Iontropic Pre-gelation Using Alginate-Chitosan Carrier <i>P. J. A. Nido*</i> , V. P. Migo, M. C. Maguyon-Detras, and C. G. Alfafara
1:45 PM – 2:00 PM	NAN-02 Process Optimization For The Production Of Potassium-Carrageenan Nanofertilizer By Ionic Crosslinking <i>M. D. Toledo</i> , V. P. Migo*, C. G. Alfafara, and M. C. Maguyon-Detras
2:00 PM – 2:15 PM	NAN-08 Effect Of Magnetic Field On The Synthesis Of Carbon Nanotubes Using MPECVD <i>C. B. Lugod</i> and J. Aurenesia*
2:15 PM – 2:30 PM	NAN-11 Production of Green Nano Zero-Valent Iron (G-Nzvi) Particles Using Polyphenolic Extracts of Tawa-Tawa (Euphorbia Hirta Linn) Leaves and Green Tea (Camelia Sinensis) Leaves <i>A. C. Vilando</i> , E. Roque*, M. A. Benitez, J. R. Diva, and J. E. Ragindin
2:30 PM – 2:45 PM	NAN-12 The Removal of Copper II and Lead II from Aqueous Solution using Fuller's Earth and Fuller's Earth-Immobilized Nanoscale Zero Valent Iron (FE-NZVI) by Adsorption <i>M. G. Malacas</i> , M. C. C. Balberan, N. A. J. D. Bederi, C. J. G. Ramos, M. A. Rato, A. G. A. Salazar, and E. C. Roque*



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TECHNICAL SESSIONS

Day 2: November 22, 2018 (Thursday) – continuation

Session F1:	Leviste – dela Rosa Function Room
Moderator:	<i>Dr. Michael Angelo Promentilla & Engr. Anabella Vilando</i>
2:45 PM – 3:00 PM	FUN-06 Steady State Model For Concentration Polarization Reduction In Membrane System Using Electro-Osmotic Slip Velocity <i>F. S. Chan, C. K. Tan*, Y. Y. Liang, and P. Ratnayake</i>
3:00 PM – 3:15 PM	FUN-07 Estimation of Parameters for the Vapor-Liquid Equilibrium of Ethanol-Water System with TRIS as Entrainer <i>C. J. P. Balboa, V. C. Bungay and N. P. Dugos*</i>
Session F2:	Leviste – dela Rosa Function Room
Moderator:	<i>Dr. Denvert Pangayao & Engr. April Anne Tigie</i>
3:30 PM – 3:45 PM	PRO-17 Synthesis Of Biodiesel Using Electrolysis Method With Variation Of Electrodes Without Co-Solvent And Addition Of Catalyst <i>A. A. Yuniar*, R. S. Putra, M. D. Cahyati, and I. A. Maksur</i>
3:45 PM – 4:00 PM	PRO-23 The Production Of Biogas From Palm Oil Mill Effluent As Substrate With Variation Of Agitation Speed With Fed-Batch System <i>F. Natasya and R. S. Putra*</i>
4:00 PM – 4:15 PM	PRO-25 Direct Conversion Of Corn Cob Biomass Into Bioelectricity With Biomass Oxidation <i>V. A. Haq and R. S. Putra*</i>
4:15 PM – 4:30 PM	PRO-26 Conversion Of Weed Grass Biomass For Hydrogen Evolution By Biomass Electrolysis <i>M. M. Fajrin, S. Aminah, R. A. Gusis, and R. S. Putra*</i>
4:30 PM – 4:45 PM	PRO-29 Direct Conversion Of Wood Sengon And Teak Wood Into Bioelectricity With A Biomass Fixed Cell <i>A. Muryati, Z. Robayati, and R. S. Putra*</i>



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POSTER SESSIONS

Day 1: November 21, 2018 (Wednesday), 11:30 AM – 12:30 PM

Poster Session: Legaspi 2 Function Room Lobby, 2nd Floor

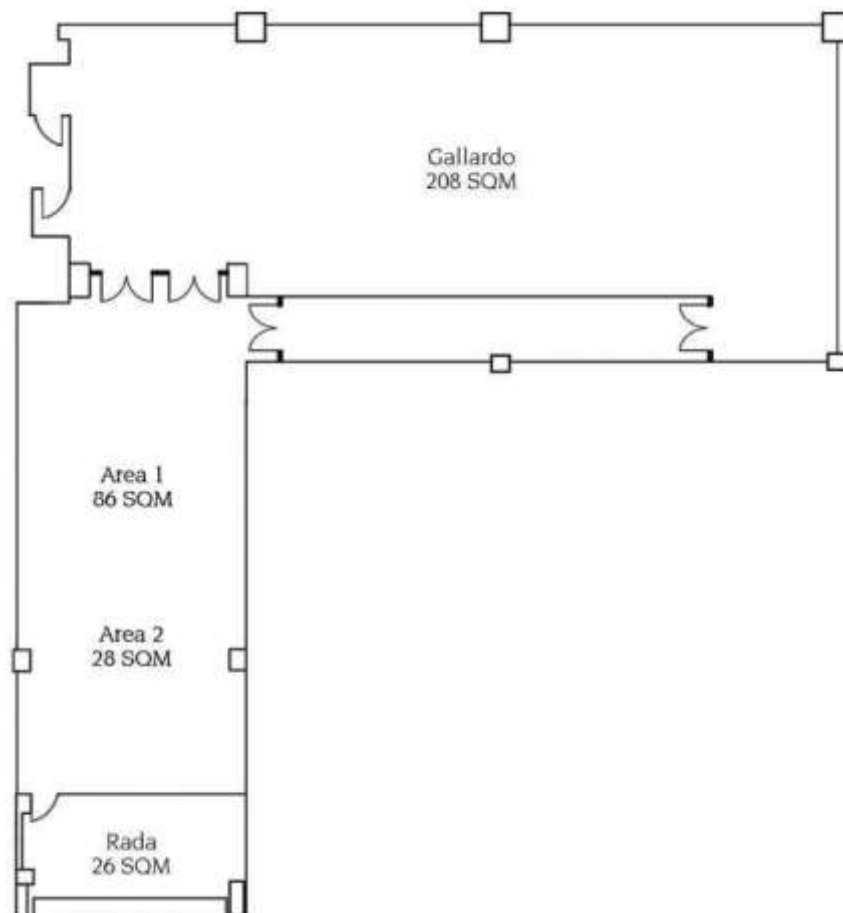
- Poster 1 BIO-09
Expression Of Heterologous Carbonic Anhydrase To Enhance Biomass And Lipid Production In *Chlorella sp.*
*I.S. Ng**, *W. R. Lin*, *Y. C. Lai*, *P. K. Sung*, *C. H. Chang*, *C. Y. Chen*, and *J. S. Chang*
- Poster 2 BIO-16
Simultaneous Saccharification And Bioethanol Fermentation Of Banana (*Musa acuminata*) Peel Using Combination Of *Saccharomyces Cerevisiae* And *Pichia Anomala*
T. A. T. Thi, *Q. N. Dinh*, and *K. P. L. Thi**
- Poster 3 BIO-17
Extraction Of Lignin From Cacao Peel (*Theobroma cacao L.*) Using NaOH-H₂O₂ Combines With Other Reagents
T. A. T. Thi, *Q. N. Dinh**, *N. C. Hoai**, and *K. P. L. Thi**
- Poster 4 FUN-08
Ultimate Pretreatment Of Lignocellulose In Bioethanol Production By Combining Both Acidic And Alkaline Pre-treatment
T. A. T. Thi, *Q. N. Dinh**, *L. N. M. Nguyen*, *H. N. Cao*, *T. K. P. Le*, and *T. P. Maii*
- Poster 5 PRO-38
Carbon-Based Catalytic Conversion Of Glycerol To Gasoline-Range Hydrocarbons
*A. T. Quitain**, *T. Tanaka*, *M. Sasaki*, and *T. Kida*
- Poster 6 RXN-07
Graphene-Based Catalytic Acetylation Of Limonene In Supercritical Carbon Dioxide
T. Oda, *A. T. Quitain*, *M. Sasaki*, *T. Kida*, and *M. Cocero**
- Poster 7 RXN-09
Synthesis Of TiO₂/SiO₂ Monolith And Its Application In Photocatalyst For Wastewater Treatment
N. D. T. Huynh, *K. D. Vo*, *T. V. Nguyen*, *N. D. Pham*, and *M. V. Le**



Makati Diamond Residences Map

Activity	Room	Floor
Plenary Session / Opening / Closing	Legaspi 1 and 2 Function Room	2 nd Floor
Technical Session Rooms	Salcedo-Armaiz Function Room	2 nd Floor
	Legaspi 2 Function Room	2 nd Floor
	Leviste-Dela Rosa-Paseo	2 nd Floor
	28 th Floor Function Room	28 th Floor
Poster	Legaspi 2 Function Room	2 nd Floor
Welcoming Dinner	Legaspi 1 and 2 Function Room	2 nd Floor
Prayer Room	Rada Room	Upper Ground Floor

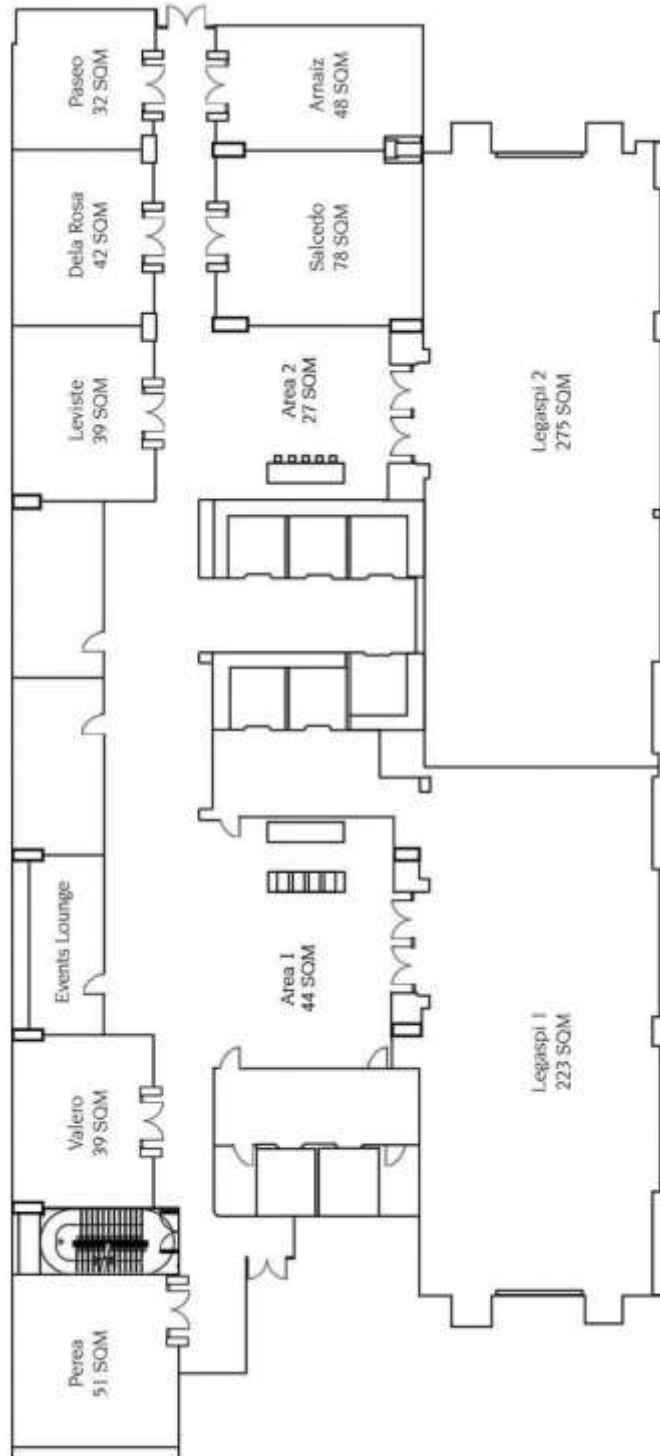
Upper Ground Floor





Makati Diamond Residences Map

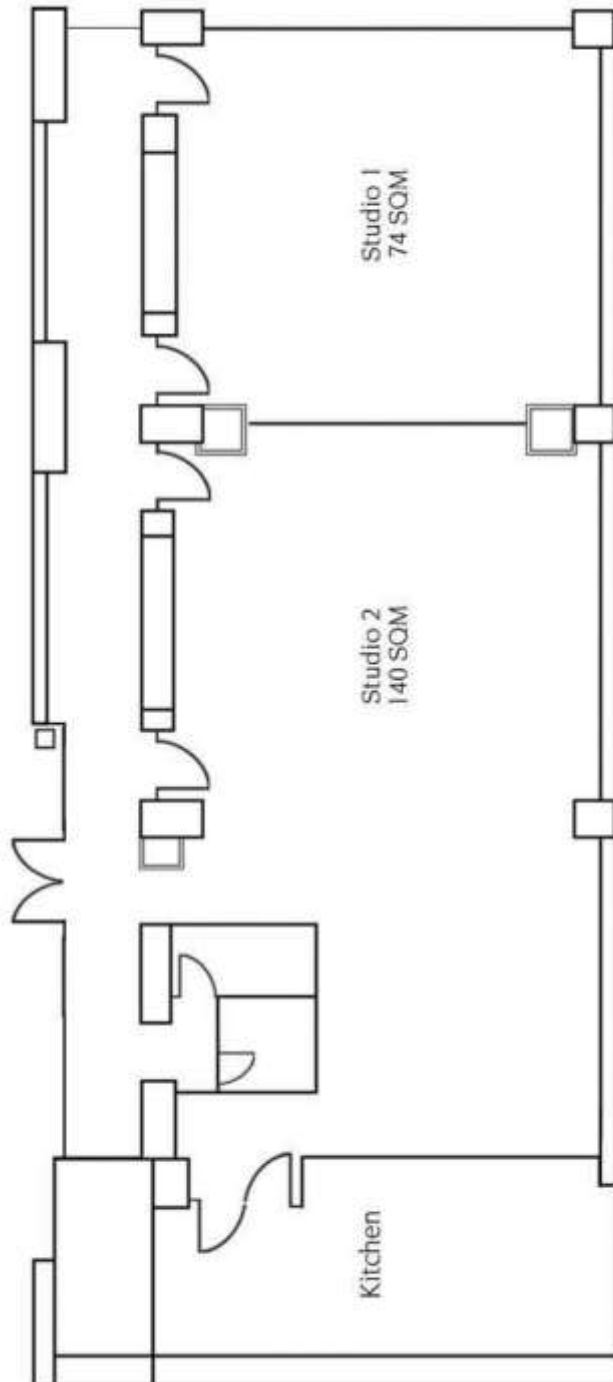
2nd Floor





Makati Diamond Residences Map

28th Floor





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