



9th International Conference on Low Carbon Asia



17 & 18
OCT 2023



OKAYAMA
JAPAN

ICLCA 2023

SUSTAINABLE TRANSITIONS TOWARDS A RESILIENT & CARBON-NEUTRAL FUTURE



PROGRAMME BOOK

HOSTS & CO-HOSTS



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SUSTAINABLE TRANSITIONS TOWARDS A RESILIENT & CARBON-NEUTRAL FUTURE

Opening Speeches



Mr. Ryuta Ibaragi
Governor of Okayama Prefecture



Prof. Yasutomo Nasu
President of Okayama University



Prof. Ahmad Fauzi Ismail
Vice Chancellor University of Technology Malaysia



Prof. Kazuhiko Takeuchi
President of Institute for Global Environmental Strategies



Prof. Yoshiteru Sakaguchi
Director, Chugoku-Shikoku Regional Environment Office

Keynote & Plenary Speakers



Prof. Ho Chin Siong
Professor University of Technology Malaysia



Prof. Masanobu Abe
Vice President Okayama University Japan



Prof. Henrik Lund
Professor Aalborg University Denmark



Emeritus Prof. Zakri Abdul Hamid
Joint Chairman (Government) MIGHT - Malaysia



Prof. Ahmad Fauzi Ismail
Vice Chancellor University of Technology Malaysia



Prof. Yuichi Moriguchi
Director National Institute for Environment Studies Japan



Prof. Petar Sabev Varbanov
Professor Brno University of Technology Czech Republic



Prof. Sheng Zhou
Professor Shanghai Academy of Agricultural Sciences China



Prof. Aristotle Ubando
Professor De La Salle University Philippines





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SUSTAINABLE TRANSITIONS TOWARDS A RESILIENT & CARBON-NEUTRAL FUTURE

Mayor Forum

REGIONAL LEADING CASES TOWARDS DECABONIZATION AND EXPECTATIONS FOR ACADEMIA

by City Councils' Representatives from Asian Countries



**Mr. Masao
Omori**
Mayor
Okayama City



**Mr. Noboru
Ota**
Mayor
Maniwa City



**Datuk Sr. Haji
Kamarulzaman
Bin Mat Salleh**
Mayor
Kuala Lumpur
City Hall



**Dato' Ir.
Rajendran
P. Anthony**
Mayor
Penang Island
City Council



**Tuan Haji Hilmy
Bin Haji Othman**
Mayor
Kuching North
City Hall



**Tuan Aznan
Bin Haji Hassan**
Deputy Mayor
Petaling Jaya
City Council

Moderated by

Prof Koji Shimada, Ritsumeikan University

Dr Junichi Fujino, Institute for Global Environmental Strategies



17th



9:40
AM (UTC+9)



OKAYAMA
JAPAN



9th International Conference on Low Carbon Asia (ICLCA'23)

SUSTAINABLE TRANSITIONS TOWARDS A RESILIENT & CARBON-NEUTRAL FUTURE

PRE - REGISTRATION (16th October 2023 - Monday)

14:00 - 17:00	Pre-registration	2F Atrium
14:30 - 17:30	Welcoming Okayama City Tour	2F Atrium (Meet Point)

DAY 1 (17th October 2023 - Tuesday)

08:30	Registration	
09:00	Opening Remarks - Mr. Ryuta Ibaragi, Governor of Okayama Prefecture - Prof. Yasutomo Nasu, President of Okayama University - Prof. Ahmad Fauzi Ismail, Vice Chancellor of University of Technology Malaysia - Prof. Kazuhiko Takeuchi, President of Institute for Global Environmental Strategies - Prof. Yoshiteru Sakaguchi, Director, Chugoku-Shikoku Regional Environment Office	3F Convention Hall
09:20	Keynote 1 Prof. Masanobu Abe, Vice President, Okayama University <i>Regional Zero Carbon Initiatives through the Synergistic Approach of Wooden Architecture, Forestry and Digital Transformation</i>	
09:30	Keynote 2 Prof. Ho Chin Siong, Professor, University of Technology Malaysia <i>Low Carbon Solutions towards Carbon Neutral Cities in Malaysia</i>	
09:40	Mayor Forum by City Councils' Representatives from Asian Countries <i>Regional Leading Cases towards Decarbonization and Expectations for Academia</i>	
10:50	Certificates of Appreciation	
11:00	Green Industry Showcase	
11:15	Group Photo	
11:25	Tea Break	3F Foyer
11:45	Plenary Lectures 1. Prof. Henrik Lund, Professor of Alborg University, Denmark <i>Resilient and Fully Decarbonized Smart Renewable Energy System</i> 2. Emeritus Prof. Zakri Abdul Hamid, Joint Chairman (Government) MIGT, Malaysia <i>Science Policy Nexus: The Politics of Climate Change</i>	3F Convention Hall
12:45	Lunch Break	
14:00	Parallel Session	Room 301/302/405/407
15:30	Tea Break	3F Foyer
15:45	Parallel Session	Room 301/302/405/407
17:30	End of Day 1	

DAY 2 (18th October 2023 - Wednesday)

08:30	Registration	3F Convention Hall
09:00	Plenary Lectures 1. Prof. Yuichi Moriguchi, Director of National Institute for Environmental Studies, Japan <i>Systematic Understanding of Material Flows and Stocks towards Carbon Neutral and Circular Society</i> 2. Prof. Sheng Zhou, Professor of Shanghai Academy of Agricultural Sciences, China <i>GHG Emissions & Carbon Sequestration in Paddy Fields & Innovative Methane Mitigation Technology</i> 3. Prof. Aristotle Ubando, Professor of De La Salle University, Philippines <i>A Sustainability Perspective of Microalgal Biofuel Production through Biorefineries</i> 4. Prof. Petar Varbanov, Professor of Brno University of Technology, Czech Republic <i>Process Integration Concepts for Sustainable Solutions to Urban Energy and Waste Management (Online only)</i> 5. Prof. Ahmad Fauzi Ismail, Professor of University of Technology Malaysia, Malaysia <i>Sustainable Approaches in Membrane Technology for Micropollutant Remediation (Online only)</i>	
10:40	Tea Break	3F Foyer
11:00	Parallel Session	Room 301/302/405/407
12:30	Lunch Break	
13:30	Parallel Session	Room 301/302/405/407
15:15	Tea Break	3F Foyer
16:30	Editorial Session <i>Publication in High-Impact Journals</i> by Prof. Henrik Lund	3F Convention Hall
17:15	- Closing Ceremony & Best Presentation Awards - Memorial Session of ICLCA Honorary Advisor – Prof. Jiří Jaromír Klemesš	3F Convention Hall
18:00	End of Day 2	



Parallel Sessions



Technical Tours



Campus Tour

Technical Excursions (19th October, Thursday)

Registration Link: <https://conferenceservice.jp/registration/iclca2023/>

Technical Excursion A



Bio-Diesel Plant (Bio Diesel Okayama Co. Ltd.)



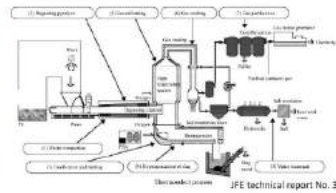
Seto Bridge



Kurashiki Old Townscape Area



Waste Gasification Reformer
(Mizushima Eco Works Co. Ltd.)



Technical Excursion B



Tour to Biomass Industrial Town of Maniwa



Stockyard of Wood Material



Wooden City Hall Entrance



Biomass Heating System



Katsuyama Old Town Area (at Lunch Time)



Biomass Power Plant



Methane Fermentation Plant



CLT Production (Meiken Co. Ltd.)



Relaxation in a foot bath of Yubara hot spring spots

- A Plant of **Bio-Diesel** Reforming from Waste Cooking Oil in Okayama City, and a Plant of **Gasification Reforming** from General Waste in Kurashiki City
- **Time:** 8.15am - 5.45pm

- Advanced Initiatives in Smart Use of **Biomass Resources** in Japan at Maniwa City Biomass Ecotown
- **Time:** 9.00am - 7.15pm

Post Events (20th October, Friday)

09:00 – 10:00

Campus tour in Okayama University

Register link: <https://forms.gle/m8eEoSARYBSGLtD9>



10:00 – 12:00

Workshop on Decarbonization in Circular Economy

Onsite Parallel Session

17th October (Tuesday)

14:00 Carbon Management 1 (Session Room - 301)

Chaired by: [Dr. Toshihiko Masui](#), [Dr. Maria Victoria Migo-Sumagang](#)

ICLCA23.0004 **KEYNOTE**

Mathematical Modeling and Monte Carlo Simulation of Negative Emissions Technology (NET) Portfolios

[Maria Victoria Migo-Sumagang](#), Raymond R. Tan, Kathleen Aviso*

ICLCA23.0020

Pathways toward Achieving Carbon Neutrality in the Commercial and Residential Sectors of Tokyo with a Focus on Electrification and Energy Saving

[Hiroaki Katano](#)*, Toshihiko Masui

ICLCA23.0211

Land use Change Monitoring Systems for spatial GHG emissions and reduction Assessment in Chiang Mai, Thailand.

[Wasinee Wannasiri](#)*

ICLCA23.0002

A Rule-based Model for Predicting Airline Financial Performance from Environmental, Social, and Governance Data

[Josiah Kurt Aviso](#), Jonalyn Baquillas, Kathleen Aviso*, Tsai-Chi Kuo, Hsiao-Min Chen, Raymond R. Tan

Sustainable Energy Planning 1 (Session Room - 302)

Chaired by: [Prof. Michael Walmsley](#), [Prof. Joey Ocon](#)

ICLCA23.0264** **KEYNOTE**

Decarbonising New Zealand Industry through Process Integration and Renewable Energy Integration

[Michael Walmsley](#)*

ICLCA23.0151 **KEYNOTE**

Subsidy Requirements and Financial Sustainability of Electrifying 634 Philippine Off-grid Islands using Hybrid Renewable Energy Systems

Michael Castro, Laurence Delina, [Joey Ocon](#)*

ICLCA23.0150

Optimization of a Sodium-ion Battery Pack for Energy, Power, and Cost via Combined Multiphysics and Cost Modeling Approaches

[Michael Castro](#)*, Marcel Roy Domalanta, Julie Anne Del Rosario, Joey Ocon

ICLCA23.0154

Screening of Hybrid Renewable Energy System Projects for Philippine Off-grid Islands based on Techno-economic, Environmental, and Geographic Feasibility

Arizeo Salac, Jairus Dameanne Somera, Myron Alcanzare, Michael Castro, [Jan Goran Tomacruz](#), Joey Ocon*

ICLCA23.0233

Cold Energy Storage Cascade Analysis for Waste Cold Energy Recovery from Liquid Nitrogen

Yin Seng Oh, Gaurav Shukla, [Jeng Shiun Lim](#)*, Bohong Wang

Sustainable Waste & Water Management 1 (Session Room - 405)

Chaired by: [Dr. Angelo Earvin Choi](#), [Dr. Muhammad Afiq Zubir](#)

ICLCA23.0222 **KEYNOTE**

A Review of Economic Incentive Schemes to Promote Waste Separation and Collection in China

[Jie Sun](#)*, Misuzu Asari

ICLCA23.0139

Effects of Electron Donor Additives to Sewage Sludge on Biomethanation of Gaseous Carbon Dioxide

[Gyeongsoo Kim](#), Kazuyuki Oshita*, Masaki Takaoka

ICLCA23.0089

Chemical Regeneration of Spent Empty Fruit Bunch Biochar for Sodium Ion Adsorption

Huiyi Tan, Roswanira Abdul Wahab, Pei Ying Ong, Pei Sean Goh, Keng Yinn Wong, Yee Van Fan, Chew Tin Lee*, Tan Huiyi

ICLCA23.0181

Adsorptive Removal of Reactive Dyes in Wastewater Using APTES-modified Spent Coffee Grounds

Su Bin Kang, Byeong-Chan Min, Zhuo Wang, Sung Wook Won*

Green Process, Technology & Material 1

(Session Room - 407)

Chaired by: Prof. Manimagalay Chetty, Dr. Nor Alafiza Yunus

ICLCA23.0124 **KEYNOTE**

Minimisation of Waste via the Valorisation of Spent Coffee Grounds into High-Value Products

Nikita Singh*, Manimagalay Chetty, Nirmala Deenadayalu

ICLCA23.0258

Prediction of Freezing Point of Jet Fuel Compounds using Group Contribution Method

Nor Alafiza Yunus*, Haslenda Hashim, Makam Mba Michele Raissa

ICLCA23.0125**

Experimental Study on the Application of Mussel Shell as Partial Replacement for Fine Aggregates and Rice Husk Ash as Partial Replacement for Cement in the Production of Pavement Bricks

Krishna Mae Inieto, Michaela Faye De Leon*, John Dale Jornal, John Denver Catapang, Gil Cruz

ICLCA23.0198**

Methane production and hydrolysis rate in anaerobic co-digestion of alternative bedding material and cattle manure

Shohei Riya*, Teppei Nitta, Megumi Kuroiwa, Shohei Yasuda, Akihiko Terada

15:45 Carbon Management 2

(Session Room - 301)

Chaired by: Dr. Yee Van Fan, Ms. Huiyi Tan, Prof. Misuzu Asari

ICLCA23.0095 **KEYNOTE**

Life Cycle Assessment of Renewable Energy System for Residential Building Heating, Cooling and Electricity Production

Ting Pan, Paweł Ocioń, Yee Van Fan*, Petar Sabev Varbanov

ICLCA23.0244

Integrated Framework for Carbon Accounting, Mitigation, and Offsetting for Greening of Industry

Haslenda Hashim*, Muhammad Afiz Zubir, Nasyitah Husniyah Mahbob, Hesam Kamyab, Wai Shin Ho

ICLCA23.0017**

The influence of global value chain on regional carbon intensity: The moderating effect of market segmentation

Xiongfeng Pan*, Sai Yuan

ICLCA23.0247

Cobalt Content in Mine Tailing Areas: in Bato-Bato, Narra Palawan, Philippines

Liwayway Acero*

ICLCA23.0144

Modelling Supply Chain Dynamics for Sustainable Production of Bioplastics

Monika Dokl*, Jafaru Egieya, Yee Van Fan, Zdravko Kravanja, Lidija Čuček

Sustainable Energy Planning 2

(Session Room - 302)

Chaired by: Dr. Wongkot Wongsapai, Dr. Kathleen Aviso

ICLCA23.0005* **KEYNOTE**

Tracking the Real-World Energy Efficiency Measures: Does Past Industrial Sector Performance Can Accelerate Thailand's NDC Target Achievement?

Sopit Daroon, Wongkot Wongsapai*

ICLCA23.0063

Storm hardening and insuring energy systems in typhoon-prone regions: A technoeconomic analysis of hybrid renewable energy systems in the Philippines' Busuanga island cluster

Michael Castro, Laurence Delina*, Joey Ocon

ICLCA23.0204

A Peer-to-Peer Control Strategy for the Optimal Trading Price of Larger Solar Thermal Integrated Systems

Muhammad Imran Ismail*, Nor Alafiza Yunus, Haslenda Hashim

ICLCA23.0226*

Technology Roadmap for Achieving Carbon Neutrality of Thai Industrial Estate: The Case of Map Ta Put Area

Tassawan Jaitiang, Wongkot Wongsapai*

ICLCA23.0227*

Gap Analysis and Key Enabling Factors for Carbon Capture Utilization and Storage development in Thailand Oil and Gas Industry to Achieve Carbon Neutrality Target

Waranya Thepsaskul, Wongkot Wongsapai*

Sustainable Waste & Water Management 2

(Session Room - 405)

Chaired by: Dr. Arnel Beltran, Dr. Keng Yinn Wong

ICLCA23.0228 **KEYNOTE**

Integration of machine learning methods for effluent quality prediction in moving bed biofilm reactor system and chlorination wastewater treatment

Andrei Fryle Jaluague, Kathleen Aviso, Arnel Beltran*

ICLCA23.0191 **KEYNOTE**

Elevation of Microbial Contamination for Pre- and Post-Surgical Procedures in Hospital Operating Rooms? A Systematic Onsite Sampling

Tan Huiyi, Chew Tin Lee, Mohd Hafiz Dzarfan Othman, Muhammad Afiz Zubir, Bemgba B.

Nyakuma, Wen Tong Chong, Yee Van Fan, Keng Yinn Wong*

ICLCA23.0028

Assessing Plastic Waste Green Economy Management via Integrated Life Cycle Environmental and Costing Framework

Zhen Xin Phuang, Kok Sin Woon*, Guo Ren Mong, Marlia Mohd Hanafiah, Peng Yen Liew

ICLCA23.0088

Circular Economy at Work: Optimizing Waste Treatment in Waste Eco Park

Min Yee Chin, Chew Tin Lee, Kok Sin Woon*

18th October (Wednesday)

11:00 Food, Agriculture, and Farming 1

(Session Room - 301)

Chaired by: Prof. Xiaobin Dong, Dr. Aristotle Ubando

ICLCA23.0032 **KEYNOTE**

Do Sustainable Agricultural Practices Improve Rice Productivity and Soil Fertility? An Empirical Study in Shiga Prefecture, Japan

Ho Thanh Tam*, Tran Quoc Thinh, Koji Shimada

ICLCA23.0099

Technical Efficiency of Sustainable and Conventional Rice Farming: Evidence from the Mekong Delta of Vietnam

Nguyen Thi Thu Hien*, Ho Thanh Tam, Koji Shimada, Hoang Ha Anh, Nguyen Van Cuong, Le Cong Tru

ICLCA23.0035

Inducing soil organic carbon transport through biochar amendment in a vegetable field

Jining Zhang, Huifeng Sun, Xianxian Zhang, Cong Wang, Sheng Zhou*

ICLCA23.0050

A win-win strategy for minimizing methane and nitrous oxide emissions in rice paddies by coupling water-saving irrigation and nitrification inhibitor

Xianxian Zhang, Huifeng Sun, Jining Zhang, Cong Wang, Sheng Zhou*

Urban Planning

(Session Room - 302)

Chaired by: Dr. Michael Angelo Promentilla, Mr Muhamman Imran Ismail

ICLCA23.0229* **KEYNOTE**

Blockchain-based Internet of Things Adoption for Smart Cities in Society 5.0: A Problematic Analysis

Michael Angelo B. Promentilla*, Fidero Kuok

ICLCA23.0041

Embedded Joint Management Body (JMB) in a comprehensive life cycle Cost Analysis planning Mode in Sustainable Building Project

Khalid Alzarooni*

ICLCA23.0087

Development of Localized 3D-Printed Ultrasonic Wind Anemometer with Cloud Data Transfer and Storage

Jewel Leila Mae San Pedro*, Dan William Martinez, Patrick James Gozun, Kyle Andrew Reyes, Suzaine Joice Ruiz

Green Process, Technology & Material 2

(Session Room - 407)

Chaired by: Dr. Cheng Tung Chong

ICLCA23.0254 **KEYNOTE**

Study of carbon dioxide methanation performance using bickel-based catalyst and new synthesised catalyst

Noraziah Omar, Muhammad Afiq Zubir*, Haslenda Hashim, Wan Muhammad Faris Wan Ramli, Jia Le Ng, Wai Shin Ho

ICLCA23.0149**

Simulation of the LPG Leakage and Dispersion Process to the Factory Environment Using Computational Fluid Dynamics (CFD)

Khoi Le Ngoc Minh, Yen Duong, Tan Minh Le, Nguyen Dang Thanh, Duc Le Tan, Tran Tan Viet*

ICLCA23.0232

Hydrogen-free Deoxygenation of Waste Cooking Oil over Unreduced Bimetallic NiCo Catalysts for Biojet Fuel Production

Brandon Han Hoe Goh, Cheng Tung Chong*, Jo-Han Ng

ICLCA23.0083

Exploring the Adhesion Characteristics of Dewatered Sewage Sludge during Indirect Thermal Drying

Junyeong Yoo, Kazuyuki Oshita*, Masaki Takaoka, Taketoshi Kusakabe

Sustainable Waste & Water Management 3

(Session Room - 405)

Chaired by: Dr. Wai Shin Ho, Dr. Habuer

ICLCA23.0138

Development of Integrated Assessment Tool for Wastewater Treatment Plant Considering Classification by Carbon Origin

Kyungsoo Min, Kazuyuki Oshita*, Masaki Takaoka, Taketoshi Kusakabe

ICLCA23.0201

An analysis of municipal biodegradable solid waste flow in Vietnam

Cuong Le Dinh*, Takeshi Fujiwara, Song Toan Pham Phu

ICLCA23.0156

Investigation on the Impact of Recycling on the Correlation between Waste Disposal Rate and Gross Domestic Product for the Assessment of Feedstock Sustainability of Waste to Energy Plant

Muhamad Iqbal Hakim Bin Mohd Tahir Mohd Tahir, Wai Shin Ho*, Haslenda Hashim

13:30 Food, Agriculture, and Farming 2

(Session Room - 301)

Chaired by: Dr. Habuer

ICLCA23.0200 **KEYNOTE**

Composting Activities in Vietnam – The Situation, Problems, and Challenges

Bao Nguyen Duy, Takeshi Fujiwara, Cuong Le Dinh, Song Toan Pham Phu*

ICLCA23.0145

A Low-Cost Electronic Food Nose IoT-Based Fish Quality Monitoring System

Maribelle Pabiania*, Jose Antonio Marasigan, Nathaniel Paulo Mercado, Laurence Rivera

ICLCA23.0221*

Formulation and Characterisation of EFB Compost Formulation with Additives as Soilless Growing Media for Ornamental Plants

Sarah Baharudin*, Thohirah Lee Abdullah, Rosenani Abu Bakar

Sustainable Energy Planning 3

(Session Room - 302)

Chaired by: Prof. Hua Shang, Dr. Xue-Chao Wang

ICLCA23.0018

Applications of Empirical Models to GIS-Based Suitability Analysis of Solar Siting on Limited Spatial Resolution

Dan William Martinez, Rommel Glenn Mendova*, Gil Cruz, Nelson Andres

ICLCA23.0039

What policy is effective to enlarge the geothermal power capacity in Indonesia?

Abigail Hasyanita*, Koji Shimada

ICLCA23.0245

Optimal Carbon Dioxide Methanation using Green Hydrogen

Noraziah Omar, Haslenda Hashim*, Wai Shin Ho, Muhammad Afiq Zubir, Zarina Ab Muis, Lek Keng Lim, Wan Choy Chee, Wan Muhammad Faris Wan Ramli

Carbon Management 3

(Session Room - 405)

Chaired by: Dr. Joni Adiansyah, Dr. Kok Sin Woon

ICLCA23.0053 **KEYNOTE**

Pearson Correlation Analysis Between Carbon Dioxide Emissions and Socioeconomic Factors Across Nations' Income Groups

Yuting Qin, Min Yee Chin, Zheng Xuan Hoy, Chew Tin Lee, Musharib Khan, Kok Sin Woon*

ICLCA23.0084 **KEYNOTE**

Environmental Performance of Three Coal Ash Management Strategies in a Copper Mine Site Using End Point Impact Category

Joni Adiansyah*

ICLCA23.0183

Scenarios on the reduction of greenhouse gas emissions from municipal solid waste incineration plant

Ge Yichen*, Hashimoto Seiji

ICLCA23.0170

How do population aging and sub-replacement fertility affect carbon efficiency in European Economic Area? A multi-level and multivariate mediation analysis of population flow and technological innovation

Li Jiang, Xiongfeng Pan, Hua Shang*

ICLCA23.0262**

Carbon Neutral Conditions of Woody Biomass Power Generation in Japan: Examination of Bioenergy Conversion Factor

Ryosuke Hayashi*, Hashimoto Seiji, Chew Tin Lee, Pei Ying Ong

15:30 Sustainable Energy Planning 4

(Session Room - 302)

Chaired by: Dr. Jeng Shiun Lim, Prof. Seungjae Lee

ICLCA23.0101 **KEYNOTE**

Economic Impacts of Decarbonization in Power Sector from the Perspective of Carbon Neutrality: A Case Study of Shanxi Province

Han Yalong*, Toshihiko Masui

ICLCA23.0059

Assessing the Viability of a Sustainable Biomass Electricity Generation in Nigeria: A Feasibility Study

Joseph Jr, Aduba*, Koji Shimada

**Food, Agriculture, and
Farming 3**
(Session Room - 301)

ICLCA23.0027

The role of renewable power generation in sustainable economic growth and climate change mitigation: An Asian countries' perspective

Ei Ei Thein*, Koji Shimada

Chaired by: Dr. Pei Ying Ong

ICLCA23.0051 **KEYNOTE**

Effects of Conservation Agricultural Patterns on Greenhouse Gases from Rice-based Rotation Systems: Results from A 10-years Field In-situ Study

Cong Wang, Huifeng Sun, Xianxian Zhang, Jining Zhang, Sheng Zhou*

ICLCA23.0157 **KEYNOTE**

Nitrous oxide emissions from different fertilizer management of cassava cultivation in Thailand

Patikorn Sriphirom*, Amnat Chidthaisong, Wanlee Amornpon, Kazuyuki Yagi, Wanida Nobuntou, Kruamas Smakgahn

ICLCA23.0072

Food Supply Chains under Covid-19 Lockdown in Shanghai: Problems and Countermeasures

Shuyu Han, Xintong Zhao, Zengjing Liu, Lei Jia*

ICLCA23.0260**

Rice yield estimations based on transformed surface reflectance from orbital hyperspectral remote sensing

Poonsak Miphokasap*

ICLCA23.0056**

Oxygen-nanobubble-modified biochar mitigates methane emissions from paddy soils

Shuhan Xu*

ICLCA23.0199

Optimizing poultry growth and sustainability with innovative cooling techniques

Muhammad Afiq Zubir*, Mas Arman Sugindj, Ahmad Badruddin Amin, Mohamad Il-Hadi Mustafa, Abdul Razak Abdul Rahman, Haslenda Hashim

ONLINE SESSION

Carbon Management

Moderated by: Yoke Kin Wan, Beatriz Belmonte

ICLCA23.0024

A Rough Set-based Model for Evaluating the Stability of Biochar Based on Accelerated Aging Data

Beatriz Belmonte*, Ryan Christian Atis, Trisha Marie Aquino, Annicka Lesley Marron, Ivan Henderson Gue, Kathleen Aviso, Raymond R. Tan

ICLCA23.0025

Development of sustainability framework and assessment of petroleum refinery process

Ola Yahia Mohamed, Nabila Farhana Jamaludin*, Faiz Hakimi Mohd Sukhri, Muhammad Fairis Bin Hadipornama

ICLCA23.0026

Quantification and assessment of carbon footprint and accounting in petroleum refinery process

Nabila Farhana Jamaludin*, Ola Yahia Mohamed, Nur 'aifaa Syamimi Binti Shuhaimi, Muhammad Fairis Bin Hadipornama

ICLCA23.0036

An Update of Blockchain Potential in the Entire Life Cycle of Renewable Energy

Lei Zhang, Yee Van Fan, Pingan Jing, Peng Jiang*

ICLCA23.0123

A Systematic Fuzzy-based Framework for Synthesis and Optimisation of an Eco-Industrial Park (EIP) for Oil Palm Industry

Yi Thung Cheah, Yoke Kin Wan*

ICLCA23.0129

Analysis on Future Scenarios towards Decarbonization Society in African Countries

Kazumasa Nagamori*, Tomoki Hirayama, Toshihiko Masui

ICLCA23.0175

Life Cycle Assessment of Poultry Production in Nigeria: A Review of Sustainability and Evaluation Studies

Hajara Salihu Bawa*, Amir Hamzah Sharaai, Rahimah Rahim, Syazwani Sahrir, Abubakar Umar Yuguda

ICLCA23.0122

Price of Unpreparedness: Macroeconomic Impact of the Sudden Change in Emission Mitigation Target

Marissa Malahayati*, Toshihiko Masui

ICLCA23.0057

Climate change and food security: A case study in Muda Agricultural Development Authority (MASA), Malaysia

Shaidatul Azdawiyah Abdul Talib*, Wan Mohd Razi Idris, Liew Ju Neng, Tukimat Lihan, Muhammad Zamir Abdul Rasid

ICLCA23.0034

Evaluation of Urban Eco-efficiency from the Perspective of Full Carbon Emission Accounting

Hua Shang*, Yuan Ling

ICLCA23.0267

Measurement of China's Modernization Level, Dynamic Evolution of Distribution, and Analysis of Regional Differences Based on the concept of sustainable development

Xiaofei Chu*, Wenlong Li

Food, Agriculture, and Farming

Moderated by: Mae Garcillanosa, Nguyet Nguyen

ICLCA23.0173

Evaluating Social Performance for Socially Sustainable Paddy Production: A Review of Social Life Cycle Assessment (S-LCA) and Case Studies in Malaysia

Amir Hamzah Sharaai*

ICLCA23.0037

Design of Smart Weed Control System with Consideration of Herbicide Persistence Using Supervised Learning

Mae Garcillanosa*, Noela Jean Bunag, Diann Claire Elazegui, James Bryan Natulan

ICLCA23.0006

Anti-Methicillin resistant Staphylococcus aureus Activity of Carallia brachiata L. Extract

Thanh Thi Ngoc Lan Mai*

ICLCA23.0042

Recent Patents on Intelligent Automated Fruit Harvesting Robots for Sweet Pepper and Apple

Yanbin Hua*, Ken Nagasaka, Xin-Gen Zhou

ICLCA23.0054

Application of Bead Tree Leaf Extract (Melia azedarach) as a Green and Natural Anti-parasitic Drug to Control Trichodinosis in Whitespotted Freshwater Catfish (Clarias fuscus) Farming

Thi Phuong Nhung Tran, Gia-Buu Tran*

ICLCA23.0238

Effect of aloe vera gel on the physical properties of vegan ice cream bar

Nguyet Nguyen*, Hieu Do Thi Hong

ICLCA23.0255

Modelling Soil Respiration of Food Waste Compost Amended Soil

Aisyah Dolit, Umi Aisah Asli, Norfairna Baharulrazi, Aidee Kamal Khamis, Nur Raudhah Azman, Nor Alafiza Yunus*

ICLCA23.0117

Effects of Inorganic Anions on Methylene Blue Degradation by Heterogeneous Fenton-Like Reaction using Cobalt Doped Carbon Aerogel Catalyst

Khoi Anh Tran, Huy Nhat Nguyen, Nga Hoang Nguyen Do, Kien Anh Le, Phung Kim Le*

ICLCA23.0237

Research the mixing formula and structural properties of Textured Vegetable Proteins balls using polydextrose

Nguyet Nguyen*, Vy Vu Thi Thao, Phuong Dao Nguyen Thu

ICLCA23.0249

Isolation and toxicity of Xanthomonas spp. in tomato and potential of phage L2.1 against the pathogen

Hoang Anh Hoang*, Nguyen Thi Danh, Le Thi Thuy Tien, Vo Thanh Phuc, Phan Thi Phuong Trang, Pham D.t. My

ICLCA23.0162

Efficient and Low-Cost Method of Smart Indoor Vertical Farming for Lactuca Sativa L. with Machine Learning

Mae Garcillanosa*, Zosimo Batino Jr., Exequiel Gabuyo, Tricia Mojica, Mari Angeline Del Mundo, Deanmark Impelido, Ma. Pauline Anne Sison

ICLCA23.0179

Optimization and Validation of Concentration-based Standard Curve for Quantification of Alexandrium spp. using eDNA

Kun-Woo Yun, Hwa-Seong Son, Min-Jun Seong, Mu-Chan Kim*

ICLCA23.0172

Detection of Specific Harmful Marine Organisms in Seawater and Sediment Samples using eDNA

Hwa-Seong Son, Kun-Woo Yun, Min-Jun Seong, Mu-Chan Kim*

ICLCA23.0205

Bioactive compounds from Portulaca oleracea L. extract

Thanh Truc Tran*, Phuc Hoang-Bui, Nga Phan Thi Thanh, My-Dung Hoang, Minh-Tam K Nguyen

ICLCA23.0193

Developing A Thermal-Composting System for Recycling Household Biodegradable Solid Waste

Song Toan Pham Phu*, Misuzu Asari, Bao Nguyen Duy, Cuong Le Dinh

Green Process, Technology & Material

Moderated by: Mazura Jusoh Jusoh, Hoang Anh Hoang

ICLCA23.0014

Development of Separation Techniques for Magnesium Recovery: A mini review

Kevin Eugene Tan, Angelo Earvin Choi*

ICLCA23.0022

Preparation, Characterization, and Carbon Dioxide Sorption Behaviour of Meranti Sawdust Porous Activated Carbon Using Taguchi L9 Orthogonal Array

Nor Adilla Rashidi*, Puteri Balqis Ahmad Hazmin, Leonardo Sambang

ICLCA23.0177

Simultaneous Removal of Anionic and Cationic Species by Ionic Hydrogels: Adsorption Mechanism of Arsenic (V) and Chromium (III) Combining to the Positive-charged Complex at Strong Acidic Aqueous Environment

Yu Song, Takehiko Gotoh*, Satoshi Nakai

ICLCA23.0031

Characteristic And Stability Of Chitosan-Based Fruit Coating Polymer In The Presence Of Ginger Essential Oil: Effect Of Acetic Acid Concentration

Nor Hanuni Ramli@said*

ICLCA23.0033

One step microwave synthesis of 5-Hydroxymethylfurfural from bamboo in presence of Low Transition Temperature Mixture

Huei Yeong Lim, Nor Adilla Rashidi*, Kin Wai Cheah, Aida Syafiqah Abdul Manaf

ICLCA23.0038

Free Fatty Acid Reduction in a Used Frying Oil Via Bio-Adsorbent: A Short Review

Munirah Onn, Komethi Muniandy, Siti Nurul Ain Zaiton, Mat Uzir Wahit*

ICLCA23.0046

Tailor-Made Iridium Oxide (IrOx) Coated Titanium Electrode: pH Sensor towards Potentiometric Titration

Hoa-Hung Lam, Hong Phuong Phan, Trung Dang-Bao*

ICLCA23.0055

Fabrication of Carbon Aerogels from Cigarette Butts for the Oil Spills Treatment

Tram Tran Ngoc Nghiem, Nga Hoang Nguyen Do, Thuan Thi Nguyen, Kien Anh Le, Phung Kim Le*

ICLCA23.0065

Thermal behaviour and synergistic effect analysis of co-pyrolysis of coconut copra and eggshell for biofuels production

Norazana Ibrahim*, Vekes Balasundram, Rafiziana Md Kasmani, Hasrinah Hasbullah, Aizuddin Supee, Mohd Kamaruddin Abd Hamid, Nadhilah Aqilah Shahdan

ICLCA23.0068

Making PVA-Based Antimicrobial Food Packaging Film: An Incorporated Association with AgNPs-Immobilized Cellulose Nanospheres

Hong Phuong Phan, Chau-Giang Tran, Quang-Dong Tu, Minh-Tam K Nguyen, Hoa-Hung Lam, Uyen Tran, Trung Dang-Bao*

ICLCA23.0076

Effect of chitosan addition on characteristics of cellulosa acetate based bioplastic from kapuk fiber using sorbitol plasticizer

Rahmatullah Rahmatullah*, Rizka Wulandari Putri, Enggal Nurisman, Prahady Susmanto, Harry Waristian, Sri Haryati, Muzafar Zulkifli

ICLCA23.0091

Effects of Epoxidized Waste Cooking Oil Plasticizer in Improving the Mechanical Properties of Polylactic Acid (PLA)

Anis Ainaa Omar, Mohd Hafidzal Mohd Hanafi*, Nurul Hanim Razak, Nurul Afwanisa' Ab Razak, Grasiyanto Grasiyanto

ICLCA23.0093

Facile Fabrication of Antimicrobial Zinc Ions Loaded Nanochitosan

Viet Thanh Tran, Chien Xuan Le, Hoa T. Ma, Tram Nguyen Quynh Truong, Nga Hoang Nguyen Do, Phung Kim Le*

ICLCA23.0102

Epoxidation of Soybean Oil and its Blend with Waste Cooking Oil Using H₂SO₄ as Homogeneous Catalyst

Hong Phuong Phan*, Trung Dang-Bao, Hoa-Hung Lam

ICLCA23.0132

Biomass Wastes Hydrothermal Carbonization: A Mini-Review on Hydrochar Properties and Combustion Performance

Mohd Zaki Sukor, Ahmad Rafizan Mohamad Daud, Sharifah Iziuna Sayed Jamaludin, Siti Hajar Anaziah Muhamad, Nor Ain Abu Samah, Salmi Nur Ain Sanusi, Nur Hazirah Rozali Annuar*

ICLCA23.0239

Synthesize and Investigate the Applicability of CO₂ Capture of Zeolite-based Geopolymer Materials

Nguyen Quang Long*, Cuong Dinh The, Nguyen Thi Truc Phuong, Nguyen Minh Phuoc, Lu Thanh Thien, Nguyen Van Dung, Dung Van Nguyen, Ngo Tran Hoang Duong

ICLCA23.0218

PETG Mesochannel Reactor for Efficient Biodiesel Synthesis using Microwave Heating

Koguleshun Subramaniam, Kang Yao Wong, Kok Hoe Wong, Andrew Xian Hann Ling, Lit Yoong Hooi, Cheng Tung Chong, Jo-Han Ng*

ICLCA23.0207

Optimizing ultrasonic-assisted extraction of phenolics from Paris polyphylla

Tan Phat Vo, Nguyen Thi Hoang Yen, Hoang Ngoc Van Anh, Truong Khanh Vi, Le Ngoc Minh Khang, Nhan Tu Le Tan, Dinh Quan Nguyen*

ICLCA23.0202

Magnesium Ferrite-Based Solid Phase Extraction for Preconcentration and Quantification of Lead Ions

Thi-Ngoc-Ha Nguyen, Hoa-Hung Lam, Hong Phuong Phan, Thi-Kieu-Anh Tran, Trung Dang-Bao*

ICLCA23.0080

Optimization of phage production using Plackett-Burman and response surface methodology

Phan Huyen, Xuan Thi Thanh Tran, Hoang Anh Hoang*

ICLCA23.0079

Briquette of Rice Husk and Bagasse Mixture with Variation on Adhesives Type and Mass Ratio of Raw Materials

Rizka Wulandari Putri*, Rahmatullah Rahmatullah, Nina Haryani, Susi Susanti, Sri Haryati, Kelly Yong Tau Len, Harry Waristian, Alek Al Hadi

ICLCA23.0219

Microwave-Heated Tubular Reactor for Enhanced Biodiesel Transesterification Process

Jo-Han Ng*, Josiah Kai Yi Yang, Koguleshun Subramaniam, Kang Yao Wong, Meng Choung Chiong, Cheng Tung Chong

ICLCA23.0161

Physical Properties of Biodiesel-Diesel Blends with Butyl Levulinate Additive and their Emission Characteristics from Diesel Engine

Muhammad Alif Samion, Muzakkir Mohammad Zainol*, Muhammad A`qil Azlan, Mohd Asmadi, Abdull Hafidz Hassan, Luqmanulhakim Baharudin, Idris Saad

ICLCA23.0148

Biodegradable Polyvinyl Alcohol Composite Film Reinforced by Crystalline Nanocellulose from Rice Straw

Yen Thi Hai Nguyen, Tuyen B. Ly, Bup T.a. Bui, Phung Kim Le*

ICLCA23.0206

Potential Concrete Healing Activity of Bacillus marisflavi Isolated in Vietnam

My-Dung Hoang, Thanh Truc Tran, Phuc Hoang-Bui, Nga Phan Thi Thanh*

ICLCA23.0098

Novel Production Methods of Biochar from Durian (Durio Zibethinus) Rind to be Used as Smokeless Fuel

Tuyen B. Ly, Co Dang Pham, Kien Anh Le, Phung Kim Le*

ICLCA23.0011

Catalytic pyrolysis of fuel oil blended stock (FOBS) to light olefins using Ni/ZSM-5 catalyst

Wan Nur Anis Amira Wan Ranizang, Siti Sarah Mohamad Shukri, Mohd Asmadi Mohammed Yussuf, Mazura Jusoh, Zaki Yamani Zakaria*

ICLCA23.0257

Optimization of Sulfonated Sago Pith Waste Catalyst for Conversion of Palm Fatty Acid Distillate to Biodiesel

Wan Ting Tan, Zaki Yamani Zakaria*, Mazura Jusoh Jusoh

ICLCA23.0015

Response Surface Methodology Design and Optimization of Inorganic Phosphate Removal from Simulated Wastewater Effluent Utilizing Caulerpa lentillifera Algal Powder

Tristan Roy Panaligan*, Jared Andrei Pagal, Sharwin Jae Cancisio

ICLCA23.0241

Equilibrium and Kinetic Study of Methylene Blue (MB) Adsorption on the Activated East Kalimantan's Low-Rank Coal

Yuli Patmawati, Shreeshivadasan Chelliapan*

ICLCA23.0142

Design and Field Application of Gabion Mattress with Granulated Filtering Media (GFM) for Remediation of Polluted Creek in Balanga City, Bataan

Jericho Salum*, Sean Russell Velasco, Lester John Manrique, Gil Cruz, Ranier Santos

ICLCA23.0128

Banana and Orange Peel Powder as Partial Cement Replacement Materials. A Comparative Analysis on its Individual Influence on the Physicomechanical Properties of Cement

Shannen Lyka Cruz*, Francheska Edelle Lein Pamintuan, Ronan Villanueva, Gil Cruz, Jonathan Muñoz

ICLCA23.0109

Parametric Study on Synthesis of Carboxyl Methyl Cellulose from Ozone Pre-Treated Empty Fruit Bunch Using Fractional Factorial Design Study

Makam Mba Michele Raissa, Wan Nor Nadyaini Wan Omar, Muhammad Sufri Bin Abd Muhaimin, Amnani Binti Shamjuddin, Nor Aishah Saidina Amin*

ICLCA23.0114

Synthesis and Characterization of Photocrosslinkable Acrylic Prepolymers from Waste Palm Frying Oil

Munirah Onn*, Haikal Mustafa, Hairul Amiza Azman, Zuliahani Ahmad, Mat Uzir Wahit

ICLCA23.0009

Performance study of double chamber microbial fuel cell operating with dihydrogen phyllosilicate clay and activated carbon from coconut shell as proton exchange membrane

Ria Grace Abdon*, Lian Justin Salundaga, Xrystynne Jhoei Pelicano, Chelsey Myca Viado

ICLCA23.0121

Bamboo-derived Biochar as Partial Cement Replacement in Concrete for Carbon Dioxide Capturing and Sequestration

John Lester Sacdalan*, Cristine Alrie Bartolo, Coleen Ann Bautista, Gil Cruz, Jonathan Muñoz

ICLCA23.0251

Immobilization of Laccase onto Polysulfone/Sepiolite Nanocomposite using Box-Behnken Design

Lim Jia Xin, Zurina Mohamad*, Roshanida Abdul Rahman, Hasrinah Hasbullah

ICLCA23.0096

Combustion Analysis of Treated Waste Cooking Oil (WCO) Based Candles

Nurul Afwanisa' Ab Razak, Mohd Hafidzal Mohd Hanafi*, Nurul Hanim Razak, Anis Ainaa Omar

ICLCA23.0203

Photolytic degradation of methylene blue by TiO₂ immobilized on activated carbon

Duy Nam Dao, Dieu-Anh Van, Minh Huyen Nghiem, Hai Huynh Trung*, Thi Thu Ha Vu, Hung Ha Vinh, Minh Trang Vu

Sustainable Energy Planning

Moderated by: João Graça Gomes, Norhuda Abdul Manaf

ICLCA23.0013

Building Energy Efficiency Assessment with Integration Criteria Decision Making for Energy Reduction in Campus Building

Nur Izieadiana Abidin*, Siti Mazzuana Shamsudin

ICLCA23.0153

A Reality Check on the Large Scale of Solar Energy Technology via Integrated SWOT-PESTLE-AHP Analysis

Norhuda Abdul Manaf*, Wan Aina Syahirah Wan Abdullah

ICLCA23.0256

Systematic Approach in Designing a Novel Hydrogen-based Integrated Hybrid Renewable Energy System with a Small-scale Combined Cycle Plant

Jeng Shiun Lim*, Tuck Kong Lok

ICLCA23.0049

Potential Impact of Climate Change on Hydropower System in Malaysia

Nur Atirah Ibrahim, Sharifah Rafidah Wan Alwi*, Zainuddin Abdul Manan, Azizul Azri Mustaffa, Kamarizan Kidam, Siti Nor Azreen Ahmad Termizi

ICLCA23.0163

Optimal Planning of Multi-Compressors Refrigeration System for Maximizing Efficiency with the Influence of Weather Condition

Nur Izyan Zulkafli*, Mohamad Firdaus Sukri, Musthafah Mohd Tahir, Asjufri Muhajir, Mohamad Fani Sulaima, Dawid Hanak

ICLCA23.0023

Inherent Safety and Health Assessment of Hydrogen Storage Process

Syaza Izyanni Ahmad*, Naim Hisham, Mardhati Zainal Abidin

ICLCA23.0119

Strategic Planning for a Resilient and Sustainable Energy Future: Analysis of a 100% Renewable Energy System for Portugal in 2050

João Graça Gomes*, Tianqi Yang, Juan Jiang, Yu Lin

Sustainable Waste & Water Management

Moderated by: Phongthep Hanpattanakit

ICLCA23.0116

A Perception Survey of Plastic Waste in Floating Villages on Tonle Sap Lake, Cambodia

Habuer*, Sakinah Binti Abdullah, Takeshi Fujiwara, Spoann Vin, Phat Chandara, Makoto Tsukiji

ICLCA23.0104

Recipe Recommendation System Using IoT-Based Food Inventory Management of Perishables for Household Food Waste Reduction

Kristine Joyce Ortiz*, Pocholo Nico Bautista, Mark Vincent Dimailig, Andrew Christian Llamzon

ICLCA23.0182

Optimisation of Syngas Production from Paper Waste Sludge by Up-draft Gasification: A Response Surface Methodology Approach

Nhan Tu Le Tan, Thanh Loi Le, Thien Le Nguyen Phuc, Dinh Quan Nguyen*

ICLCA23.0194

Swine Wastewater Treatment by Pilot-plant Syphon-driven Anaerobic Baffled Reactor

Junhao Shen*

ICLCA23.0180

Distribution of heavy metals and relationship of heavy metals from land used in Bangkok, Thailand

Phongthep Hanpattanakit*, Puripat Taechanitinun

ICLCA23.0078

Optimisation on the Hydrolysis Process of Paper Waste Sludge to Produce Bacterial Cellulose through Fermentation

Thuc Tri Nguyen Ngo, Nhan Tu Le Tan, Thi Tuyet Ngan Nguyen, Vo Thi Thanh Huong, Tran Kiem Gia Hung, Thien Le Nguyen Phuc, Tan Phat Vo, Quyen Huynh, Dinh Quan Nguyen*

ICLCA23.0152

Simulation of Benzene Leakage and Dispersion in the Laboratory via Computational Fluid Dynamics (CFD)

Yen Duong, Nguyen Dang Thanh, Tan Minh Le, Duc Le Tan, Khoi Le Ngoc Minh, Duong Nguyen Khoa, Tran Tan Viet*

ICLCA23.0133

Designing Stormwater Harvesting Tanks for Residential Roof Runoff Management in Three Tropical Climate Types

Psalm Nathan Co, Kyla Shannen Vidal, Vinz Robert Yee, Karen Able-Bañas, Sergi Garbanzos, Marla Maniquiz-Redillas*

ICLCA23.0060

Urban Planning

Moderated by: Jooyoung Kim, Noor Akmal Adillah Ismail

Comparative Analysis of Open Green Spaces Policies in Enhancing Urban Resilience to Climate Change through Small Urban Parks in Malaysia and Singapore

Siti Afiqah Mohammad Sabri*, Zakiah Ponrahono, Aisyah Abu Bakar, Fatiah Abdul Aziz

ICLCA23.0167

Exploring the Research Frontier of Life Cycle Sustainability Assessment—A Systematic Literature Review of Applied Bibliometric Analysis

Sining Ma, Amir Hamzah Sharaai*, Zhijian He, Nitanan Koshy A/I Matthew, Nazatul Syadia Zainordin, Wafaurahman Wafa

ICLCA23.0092

Sustainable Success Framework of Value Management/Value Engineering in Malaysian Public Housing Projects: Research Methodology

Muhammad Shahfarhan Mohamad Yassin, Aini Jaapar*, Mohd Arif Marhani, Nor Azmi Ahmad Bari

ICLCA23.0253

Sustainable Forest Management and Effective Land Use Policies for Mitigating Forest Loss: The Case of Malaysia

Choon Keat Chan, Gabriel Hoh Teck Ling*, Chin Siong Ho, Kasturi Devi Kanniah

ICLCA23.0216

Discuss how to use urban design in territorial spatial planning and management better

Sheng Yang, Yi Yang*, Yuhong Chen

ICLCA23.0086

The Exploration of Energy Efficient Material for Shading Devices in Tropical Climates

Jian Peng*, Tengku Intan Suraya Tengku Aziz, Pau Chung Leng

ICLCA23.0141

Improvement of the Benefits for Eco-friendly Transportation Projects

Soonwook Kweon, Jongwon Lee, Donggyun Ku, Juhyeon Kwak, Sion Kim, Seungjae Lee*

ICLCA23.0067

Air Quality Modeling Using Real-time Urban Big Data

Joonsik Jo, Gahyun Kim, Juhyeon Kwak, Ilho Jeong, Donggyun Ku, Seungjae Lee*

ICLCA23.0069

Air Pollution Reduction by Optimizing Locations of Mobility Parking Hub

Gayoung Kang, Juho Lee, Juhyeon Kwak, Minje Choi, Seungjae Lee*

ICLCA23.0070

Congestion Charging Schemes for Greener Policies

Seunghoon Shin, Yongryeong Lee, Sion Kim, Minje Choi, Seungjae Lee*

ICLCA23.0074

Environmental Sustainability Increase by Activation of Public Transport and Personal Mobility

Hyeri Jeong, Munhui Yang, Minje Choi, Sion Kim, Seungjae Lee*

ICLCA23.0052

Electric Vehicle Competitiveness and Environmental Effects of Subsidy

Yeontaek Yoo, Donggyun Ku, Sion Kim, Seungjae Lee*

ICLCA23.0029

Carbon Storage Potentials of Urban Forests: A Case Study of Urban Forest in Johor Bahru, Malaysia
Siti Nur Hannah Ismail*, Sarah Baharudin, Sapura Mohamad, Wan Yusryzal Wan Ibrahim

ICLCA23.0107

Challenges of Integrating Building Information Modelling (BIM) into Sustainable Design for Green Highway Construction

Muhammad Akmal Hafiz Mohamad*, Noor Akmal Adillah Ismail, Raja Rafidah Raja Muhammad Rooshdi

ICLCA23.0243

Impact of Battery Price on Electric Bus Charging Scheduling and System

Lek Keng Lim, Zarina Ab Muis*, Wai Shin Ho, Haslenda Hashim, Wan Choy Chee

ICLCA23.0186

Environmental Implications of Autonomous Demand Responsive Bus in Microscopic Traffic Simulation Sangung Park, Jooyoung Kim*

ICLCA23.0077

Equity-Based Allocation of Mobility Hubs in Seoul

Madiha Bencekri, Doyun Lee, Sion Kim, Seungheon Shin, Seungjae Lee*

ICLCA23.0062

Fuzzy-Based Spatial Analysis and Coastal Vulnerability Assessment of Balanga City, Bataan due to Sea-Level Rise

Maan Josue*, John Melvin Petito, Nikki Hershey Dionisio, Rommel Glenn Mendova, Gil Cruz, Sam Olarte

ICLCA23.0087

Development of Localized 3D-Printed Ultrasonic Wind Anemometer with Cloud Data Transfer and Storage

Jewel Leila Mae San Pedro*, Dan William Martinez, Patrick James Gozun, Kyle Andrew Reyes, Suzaine Joice Ruiz

ICLCA23.0115

A Systematic Literature Review on BIM-based Facilities Management towards Sustainable Construction

Noor Akmal Adillah Ismail*, Raja Rafidah Raja Muhammad Rooshdi, Shaza Rina Sahamir, Mohd Arif Marhani

ICLCA23.0246

Rainwater to Potable Water: Mini Review

Chee Yang How, Mazura Jusoh Jusoh*, Zaki Yamani Zakaria, Aishah Rosli

Carbon Management 1

Moderated by: Toshihiko Masui, Maria Victoria Migo-Sumagang

ICLCA23.0004

Mathematical Modeling and Monte Carlo Simulation of Negative Emissions Technology (NET) Portfolios

Maria Victoria Migo-Sumagang, Raymond R. Tan, Kathleen Aviso*

ICLCA23.0020

Pathways toward Achieving Carbon Neutrality in the Commercial and Residential Sectors of Tokyo with a Focus on Electrification and Energy Saving

Hiroaki Katano*, Toshihiko Masui

ICLCA23.0211

Land use Change Monitoring Systems for spatial GHG emissions and reduction Assessment in Chiang Mai, Thailand.

Wasinee Wannasiri*

ICLCA23.0002

A Rule-based Model for Predicting Airline Financial Performance from Environmental, Social, and Governance Data

Josiah Kurt Aviso, Jonalyn Baquillas, Kathleen Aviso*, Tsai-Chi Kuo, Hsiao-Min Chen, Raymond R. Tan

Carbon Management 2

Moderated by: Yee Van Fan, Huiyi Tan, Misuzu Asari

ICLCA23.0095

Life Cycle Assessment of Renewable Energy System for Residential Building Heating, Cooling and Electricity Production

Ting Pan, Paweł Ocłoń, Yee Van Fan*, Petar Sabev Varbanov

ICLCA23.0244

Integrated Framework for Carbon Accounting, Mitigation, and Offsetting for Greening of Industry

Haslenda Hashim*, Muhammad Afiq Zubir, Nasyitah Husniyah Mahbob, Hesam Kamyab, Wai Shin Ho

ICLCA23.0017

The influence of global value chain on regional carbon intensity: The moderating effect of market segmentation

Xiongfeng Pan*, Sai Yuan

ICLCA23.0247

Cobalt Content in Mine Tailing Areas: in Bato-Bato, Narra Palawan, Philippines

Liwayway Acero*

ICLCA23.0144

Modelling Supply Chain Dynamics for Sustainable Production of Bioplastics

Monika Dokl*, Jafaru Egieya, Yee Van Fan, Zdravko Kravanja, Lidija Čuček

Carbon Management 3

Moderated by: Joni Adiansyah, Kok Sin Woon

ICLCA23.0053

Pearson Correlation Analysis Between Carbon Dioxide Emissions and Socioeconomic Factors Across Nations' Income Groups

Yuting Qin, Min Yee Chin, Zheng Xuan Hoy, Chew Tin Lee, Musharib Khan, Kok Sin Woon*

ICLCA23.0084

Environmental Performance of Three Coal Ash Management Strategies in a Copper Mine Site Using End Point Impact Category

Joni Adiansyah*

ICLCA23.0183

Scenarios on the reduction of greenhouse gas emissions from municipal solid waste incineration plant

Ge Yichen*, Hashimoto Seiji

ICLCA23.0170

How do population aging and sub-replacement fertility affect carbon efficiency in European Economic Area? A multi-level and multivariate mediation analysis of population flow and technological innovation

Li Jiang, Xiongfeng Pan, Hua Shang*

ICLCA23.0262

Carbon Neutral Conditions of Woody Biomass Power Generation in Japan: Examination of Bioenergy Conversion Factor

Ryosuke Hayashi*, Hashimoto Seiji, Chew Tin Lee, Pei Ying Ong

Food, Agriculture, and Farming 1

Moderated by: Xiaobin Dong, Aristotle Ubando

ICLCA23.0032

Do Sustainable Agricultural Practices Improve Rice Productivity and Soil Fertility? An Empirical Study in Shiga Prefecture, Japan

Ho Thanh Tam*, Tran Quoc Thinh, Koji Shimada

ICLCA23.0035

Inducing soil organic carbon transport through biochar amendment in a vegetable field

Jining Zhang, Huifeng Sun, Xianxian Zhang, Cong Wang, Sheng Zhou*

ICLCA23.0050

A win-win strategy for minimizing methane and nitrous oxide emissions in rice paddies by coupling water-saving irrigation and nitrification inhibitor

Xianxian Zhang, Huifeng Sun, Jining Zhang, Cong Wang, Sheng Zhou*

**Food, Agriculture, and
Farming 2**

ICLCA23.0221

Formulation and Characterisation of EFB Compost Formulation with Additives as Soilless Growing Media for Ornamental Plants

Sarah Baharudin*, Thohirah Lee Abdullah, Rosenani Abu Bakar

Moderated by: Habuer

ICLCA23.0200

Composting Activities in Vietnam – The Situation, Problems, and Challenges

Bao Nguyen Duy, Takeshi Fujiwara, Cuong Le Dinh, Song Toan Pham Phu*

ICLCA23.0145

A Low-Cost Electronic Food Nose IoT-Based Fish Quality Monitoring System

Maribelle Pabiania*, Jose Antonio Marasigan, Nathaniel Paulo Mercado, Laurence Rivera

ICLCA23.0193

Developing A Thermal-Composting System for Recycling Household Biodegradable Solid Waste

Song Toan Pham Phu*, Misuzu Asari, Bao Nguyen Duy, Cuong Le Dinh

ICLCA23.0099

Technical Efficiency of Sustainable and Conventional Rice Farming: Evidence from the Mekong Delta of Vietnam.

Nguyen Thi Thu Hien*, Ho Thanh Tam, Koji Shimada, Hoang Ha Anh, Nguyen Van Cuong, Le Cong Tru

**Food, Agriculture, and
Farming 3**

Moderated by: Pei Ying Ong

ICLCA23.0051

Effects of Conservation Agricultural Patterns on Greenhouse Gases from Rice-based Rotation Systems: Results from A 10-years Field In-situ Study

Cong Wang, Huifeng Sun, Xianxian Zhang, Jining Zhang, Sheng Zhou*

ICLCA23.0157

Nitrous oxide emissions from different fertilizer management of cassava cultivation in Thailand

Patikorn Sriphirom*, Amnat Chidthaisong, Wanlee Amornpon, Kazuyuki Yagi, Wanida Nobuntou, Kruamas Smakgahn

ICLCA23.0072

Food Supply Chains under Covid-19 Lockdown in Shanghai: Problems and Countermeasures

Shuyu Han, Xintong Zhao, Zengjing Liu, Lei Jia*

ICLCA23.0260

RICE YIELD ESTIMATIONS BASED ON TRANSFORMED SURFACE REFLECTANCE FROM ORBITAL HYPERSPECTRAL REMOTE SENSING

Poonsak Miphokasap*

ICLCA23.0056

Oxygen-nanobubble-modified biochar mitigates methane emissions from paddy soils

Shuhan Xu*

ICLCA23.0199

OPTIMIZING POULTRY GROWTH AND SUSTAINABILITY WITH INNOVATIVE COOLING TECHNIQUES

Muhammad Afiq Zubir*, Mas Arman Sugindj, Ahmad Badruddin Amin, Mohamad Il-Hadi Mustafa, Abdul Razak Abdul Rahman, Haslenda Hashim

**Green Process, Technology &
Material 1**

Moderated by: Manimagalay Chetty, Nor Alafiza Yunus

ICLCA23.0124

Minimisation of Waste via the Valorisation of Spent Coffee Grounds into High-Value Products.

Nikita Singh*, Manimagalay Chetty, Nirmala Deenadayalu

ICLCA23.0258

Prediction of Freezing Point of Jet Fuel Compounds using Group Contribution Method

Nor Alafiza Yunus*, Haslenda Hashim, Makam Mba Michele Raissa

ICLCA23.0125

Experimental Study on the Application of Mussel Shell as Partial Replacement for Fine Aggregates and Rice Husk Ash as Partial Replacement for Cement in the Production of Pavement Bricks

Krishna Mae Inieto, Michaela Faye De Leon*, John Dale Jornal, John Denver Catapang, Gil Cruz

ICLCA23.0198

Methane production and hydrolysis rate in anaerobic co-digestion of alternative bedding material and cattle manure

Shohei Riya*, Teppei Nitta, Megumi Kuroiwa, Shohei Yasuda, Akihiko Terada

Green Process, Technology & Material 2

Moderated by: Cheng Tung Chong

ICLCA23.0254

Study of carbon dioxide methanation performance using nickel-based catalyst and new synthesised catalyst

Noraziah Omar, Muhammad Afiq Zubir*, Haslenda Hashim, Wan Muhammad Faris Wan Ramli, Jia Le Ng, Wai Shin Ho

ICLCA23.0149

Simulation of the LPG Leakage and Dispersion Process to the Factory Environment Using Computational Fluid Dynamics (CFD)

Khoi Le Ngoc Minh, Yen Duong, Tan Minh Le, Nguyen Dang Thanh, Duc Le Tan, Tran Tan Viet*

ICLCA23.0232

Hydrogen-free Deoxygenation of Waste Cooking Oil over Unreduced Bimetallic NiCo Catalysts for Biojet Fuel Production

Brandon Han Hoe Goh, Cheng Tung Chong*, Jo-Han Ng

ICLCA23.0083

Exploring the Adhesion Characteristics of Dewatered Sewage Sludge during Indirect Thermal Drying

Junyeong Yoo, Kazuyuki Oshita*, Masaki Takaoka, Taketoshi Kusakabe

Sustainable Energy Planning 1

Moderated by: Michael Walmsley, Joey Ocon

ICLCA23.0264

Decarbonising New Zealand Industry through Process Integration and Renewable Energy Integration

Michael Walmsley*

ICLCA23.0151

Subsidy Requirements and Financial Sustainability of Electrifying 634 Philippine Off-grid Islands using Hybrid Renewable Energy Systems

Michael Castro, Laurence Delina, Joey Ocon*

ICLCA23.0150

Optimization of a Sodium-ion Battery Pack for Energy, Power, and Cost via Combined Multiphysics and Cost Modeling Approaches

Michael Castro*, Marcel Roy Domalanta, Julie Anne Del Rosario, Joey Ocon

ICLCA23.0154

Screening of Hybrid Renewable Energy System Projects for Philippine Off-grid Islands based on Techno-economic, Environmental, and Geographic Feasibility

Arizeo Salac, Jairus Dameanne Somera, Myron Alcanzare, Michael Castro, Jan Goran Tomacruz, Joey Ocon*

ICLCA23.0233

Cold Energy Storage Cascade Analysis for Waste Cold Energy Recovery from Liquid Nitrogen

Yin Seng Oh, Gaurav Shukla, Jeng Shiun Lim*, Bohong Wang

Sustainable Energy Planning 2

Moderated by: Wongkot Wongsapai, Kathleen Aviso

ICLCA23.0005

Tracking the Real-World Energy Efficiency Measures: Does Past Industrial Sector Performance Can Accelerate Thailand's NDC Target Achievement?

Sopit Daroon, Wongkot Wongsapai*

ICLCA23.0063

Storm hardening and insuring energy systems in typhoon-prone regions: A technoeconomic analysis of hybrid renewable energy systems in the Philippines' Busuanga island cluster

Michael Castro, Laurence Delina*, Joey Ocon

ICLCA23.0204

A Peer-to-Peer Control Strategy for the Optimal Trading Price of Larger Solar Thermal Integrated Systems

Muhammad Imran Ismail*, Nor Alafiza Yunus, Haslenda Hashim

ICLCA23.0226

Technology Roadmap for Achieving Carbon Neutrality of Thai Industrial Estate: The Case of Map Ta Put Area.

Tassawan Jaitiang, Wongkot Wongsapai*

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