

CESE-2024 Conference Program - Pula

Day 0: 13th October 2024 14:00 - 16:00 Registration & Placing Posters (Ulika Hall)
18:30 - 20:30 Welcome & Cocktail Reception (Ulika Hall)

Day 1: 14th October 2024

Opening Ceremony of CESE-2024 Ulika Hall

09:00 - 09:10 Welcome Message from the Conference Co-Chairs **A/Prof. Inana Ivana Grčić, Prof. Ivan Brnardić** and **Asst. Professor Vedrana Špada**

09:10 - 09:20 Welcome Message from **Mr. Boris Miletić**, Prefect of Istria County

09:20 - 09:30 Welcome Message from **Dr. Daglas Koraca**, Dean of Istrian University of Applied sciences

09:30 - 09:40 Welcome Message from the Conference Series Chair **Professor Veeriah Jegatheesan**

09:40 - 10:20 Morning Tea

Keynote Speeches

10:20 - 10:40 **Professor Nataša Novak Tušar**, National Institute for Chemistry (Ljubljana), Slovenia - **Perspectives in catalysts design for photo-Fenton heterogeneous catalytic water cleaning**

10:40 - 11:20 **Assoc. Professor Darren (Delai) Sun**, Nanyang Technological University, Singapore - **Can We Print Nano Coagulant and Membrane for Clean Water Production?**

11:20 - 12:00 **Professor Mira Petrović**, Catalan Institute for Water Research ICRA, Spain - **Urban Runoff as a Contaminant Source: Evaluating emerging microcontaminants in the context of global change**

12:00 - 12:30 Panel Session

12:30 - 14:00 Lunch Break

14:00 - 15:00 **Poster Session**

15:00 - 15:30 Afternoon Tea

Session Chairpersons		Parallel Session Ulika Hall	Parallel Session Bianca Istrina Hall	
		Professor Jae Woo Lee	Professor Ming-Chun Lu	
		Assoc. Professor Ivana Grčić	Professor Ivan Brnardić	
15:30 - 15:50	1.1	2-012 Asymmetric MXene- and MOF-based nanocomposites as electrode materials for water-energy nexus applications Ruey-An Doong	2.1	9-003 Optimization of Parameters in Fluidized-Bed Homogeneous Crystallization Technology for Carbon Dioxide Mineralization from simulated CO ₂ -enriched flue gas Ming-Chun Lu
15:50 - 16:10	1.2	2-096 Characterization of solvent based desalination (SBD) potentials of ionic liquids Jae Woo Lee	2.2	3-038 Tackling Plastic Waste Data Collection Challenges in the Lower Mekong Basin Chettiyappan Visvanathan
16:10 - 16:30	1.3	2-120 Degradation of Sulfamethazine in wastewater by UV/persulfate recirculated photo reactor Hung-Yee Shu	2.3	1-004 Effect of irrigation with RO retentate from textile wastewater treatment on growth and number of leaves of basil Davor Dolar
16:30 - 16:50	1.4	1-034 Facile Development of Ru@Pt Nanocatalysts Decorated Carbon Nanotubes on Carbon Fiber Active Anode for Improved Electrochemical Degradation of Phenol Chiung-Fen Chang	2.4	6-009 Towards zero-energy membrane filtration system with gravity-driven backwash Suhan Kim
16:50 - 17:10	1.5	1-047 Adsorption of doxorubicin hydrochloride on silica-coated Fe ₃ O ₄ magnetic nanoparticles as promising nanocarriers for drug delivery Fares Almomani	2,5	8-010 Novel strategy in bioremediation of petroleum-contaminated soil and treatment of saline oilfield produced water Weizhi Zhou

18:00 - 21:00 Scientific writing workshop by Assoc. Prof. Eldon Raj Rene for students and young researchers attending in Pula

CESE-2024 Conference Program - Pula

Day 2: 15th October 2024

		Parallel Session 1 Ulika Hall		Parallel Session 1 Bianca Istriana Hall
Session Chairpersons		Professor Hung-Yee Shu		Professor Nataša Novak Tušar
		Assoc. Professor Darren (Delai) Sun		Assoc. Professor Chanhyuk Park
09:00 - 09:15	1.1	4-011 Investigation on Vapor Recovery Efficiency Measurements of Gas Station Dispensers Hung-Yee Shu	2.1	2-028 Performance Evaluation of the Coagulant Injection Prediction Control Model through Pilot Plant Operation Seungjae Yeon
09:15 - 09:30	1.2	1-016Y Membrane Capacitive Deionization of Spent Secondary Battery Wastewater by Biochar Composite Electrodes for Lithium Recovery Jeong Been Park	2.2	2-095Y Degradation of urea-polluted water by photocatalytic and ultrasound-based processes Lucija Radetić
09:30 - 09:45	1.3	2-005Y Transformation and degradation of tebuconazole and its metabolites in vertical flow constructed wetlands with the colonization of arbuscular mycorrhizal fungi Zhongbing Chen	2.3	2-104Y Functionalized precursors for water purification - a recycling approach for circularity of textile fiber wastes John Kawame Bediako
09:45 - 10:00	1.4	2-014Y UV/percarbonate process for 2-phenylbenzimidazole 5-sulfonic acid degradation in water environment Webber Wei-Po Lai	2.4	3-031Y Effect of hydraulic retention time of sponge-based trickling filter for shrimp culture recirculating tank Takahiro Watari
10:00 - 10:15	1.5	2-024Y Ammonium assimilation in biological nitrogen removal by the halophilic microbiome for saline wastewater treatment Mengru Zhang	2.5	9-002Y Investigation of the influence of natural and artificial aging on the mechanical properties of the nanocomposite Al-alloy $AlSi_3Cu_3(Fe)$ with carbon nanotubes cast by the high pressure die casting (HPDC) Ivan Pentek
10:15 - 10:45		Morning Tea		
		Parallel Session 2 Ulika Hall		Parallel Session 2 Bianca Istriana Hall
Session Chairpersons		Professor Ruey-An Doong		Asst. Professor Vedrala Špada
		Professor Mira Petrović		Professor Chettiyappan Visvanathan
10:45 - 11:00	1.6	1-002 Comparative Performance Analysis of Air gap and Direct contact Membrane Distillation for Ultra-Pure Water Recovery from Boiler Blowdown Jayaprakash Sathasivam	2.6	2-121 Methanotrophs Fermentation for single cell protein production Fares Almomani
11:00 - 11:15	1.7	1-011S Selective lithium extraction using capacitive deionization with fabricated zeolitic imidazolate framework encapsulated manganese oxide carbon electrode Sharaniya Roobavannan	2.7	3-030S Influence of rice husk biochar on the workability and flexural strength of fly ash blended self-compacting concrete Caryl Joyce Moraleda
11:15 - 11:30	1.8	1-014S Development of ceramic hollow fiber nanofiltration membranes incorporated with functionalized MoS_2 nanomaterials Hyeyool Kim	2.8	4-010S Multiphysics modelling using computational fluid dynamics for photocatalytic degradation of gas-phase pollutant Benjamin Radetić
11:30 - 11:45	1.9	1-020S Single and multi-dye degradation from reverse osmosis reject via microwave-induced catalytic activation of peroxymonosulfate by sandwich like $CuFe_2O_4/rGO/CuFe_2O_4$ Alakananda Ghosh	2.9	8-012S Sustainable Remediation Method For Hexavalent Chromium Contaminated Site Pausali Pradhan
11:45 - 12:00	1.10	1-022S Fractional – Submerged Membrane Distillation Crystallizer for Efficient Lithium Recovery Linitho Suu	2.10	2-009S Granular activated carbon enhances volatile fatty acid production in the anaerobic fermentation of garden wastes Wenwen Chen
12:00 - 12:15	1.11	2-016S Facile Preparation of Zero valent Iron loaded Sawdust Biochar using Red Mud and its Application in Paracetamol Removal from Aqueous Solution through Persulfate Activation Rejeti Venkat Srinadh	2.11	2-013S Degradation of the artificial sweetener acesulfame potassium by sunlight activated periodate Kuan-Wei Chen
12:15 - 12:30	1.12	2-099S Synthesis and Application of Piezo-assisted $KNbO_3/BiOCl$ Heterojunction for Enhanced Photocatalytic Degradation of Dye from Aqueous System Sivasankari Jeyabalan	2.12	2-021S Nutrients recovery by coupled bioreactor of heterotrophic microorganism and microbial fuel cell in saline wastewater Chuanfu Zhao
12:30 - 14:00		Lunch		

		Parallel Session 3 Ulika Hall		Parallel Session 3 Bianca Istriana Hall
Session Chairpersons		Professor Gianluca Li Puma		Professor Chiung-Fen Chang
		Professor Suhan Kim		Assoc. Professor Dovor Dolar
14:00 - 14:15	1.13	2-023S Revealing bioresponses of biofilm and flocs to salinity gradient in halophilic biofilm reactor Fei Han	2.13	3-028S Microplastics from recycled rubber tiles: The role of TiO ₂ protective coating Paula Benjak
14:15 - 14:30	1.14	2-032S Microalgae-bacteria consortia: simultaneous removal of nutrients and majorly occurring antibiotics, revealing metabolic pathways and physiological responses Yogita Gupta	2.14	3-002S Co-pyrolysis Behaviour and Synergistic effect of Municipal Solid Waste Components on Biochar Production through Microwave-Assisted Pyrolysis Rejeti Venkat Srinadh
14:30 - 14:45	1.15	2-052S Assessing the Roles of Components (Plants and Biochar) Removing Methylparaben in Hybrid Constructed Floating Wetlands Bhesh Kumar Karki	2.15	3-009S Enhancing methane production in anaerobic digestion of food waste leachate with digestate return Eunyoung Lee
14:45 - 15:00	1.16	2-069S Degradation of Benzophenone 1 in Aqueous Solution Using nZVI-Activated Peroxodisulfate Pavelina Tesinska	2.16	6-006S Experimental investigation on the efficiency of polyacrylamide hydrogel for clean water recovery from wastewater Gayathri Ravi
15:00 - 15:15	1.17	2-101S Optimization of the Total Vermibed Depth and Submerged Bed Depth of High-Rate Horizontal Subsurface Flow Macrophyte-Assisted Vermifilters Treating Synthetic Brewery Wastewater Sanket Dey Chowdhury	2.17	2-091S The influence of soil characteristics on the composition and performance of Prosopis juliflora based activated carbon for antibiotics laden water treatment Manimegalai Ambayieram
15:15 - 15:30	1.18	2-102S Shift of system performance and indicators of biofilm development in constructed wetland integrated with vermifilter treating rice mill wastewater Sudeep Kumar Mishra	2.18	2-004S Nitrogen removal of anaerobically treated leachate from municipal solid waste incineration plant based on heterotrophic nitrification aerobic denitrification and analysis of nitrogen removal pathways Facai An
15:30 - 16:00		Afternoon Tea		
		Parallel Session 4 Ulika Hall		Parallel Session 4 Bianca Istriana Hall
Session Chairpersons		Professor Weizhi Zhou		Professor Dezhi Sun
		Dr. Jayaprakash Saththasivam		Professor Yan Dang
16:00 - 16:15	1.19	7-007Y Improving landslide risk prevention and management in coastal areas – project RESONANCE Josipa Bilic	2.19	1-013S Innovative approaches to high-speed ceramic membrane filtration for microplastic mitigation in urban wastewater treatment facilities Yeon So
16:15 - 16:30	1.20	3-014Y Electrodialytic extraction and separation of rare-earth elements from municipal solid waste incineration bottom ash Huilin Li	2.20	5-002S Valorization of lignin for lipid production by Rhodosporidium toruloides 9564 ^T Divyani Kumari
16:30 - 16:45	1.21	3-023Y Interactions between solvents and polymeric membrane for microfiltration applications in non-aqueous system Fida Tibi	2.21	9-006S Passive Adsorption Direct Air Capture (PADAC) Utilizing Nature-Inspired Thermal Dynamics Ismail Filahi
16:45 - 17:00	1.22		2.22	
17:00 - 17:15	1.23		2.23	
18:30 - 22:00		Cultural Show, Gala Dinner and Awards Ceremony (Ulika Hall)		

Day 3: 16th October 2024				
Keynote Speeches (Bianca Istriana Hall)				
09:00 - 09:40	Professor Gianluca Li Puma , University of Palermo (UNIPA), Italy - Recent Advances in the Degradation of Pharmaceuticals Residues in Macroscale and Microscale Photoreactors			
09:40 - 10:20	Professor Piet Lens , IHE-Delft, The Netherlands - From agro-waste treatment to biorefineries in dryland			
10:20 - 10:40	Panel Session			
10:40 - 11:10	Morning Tea			
Session Chairpersons		Parallel Session 1 Bianca Istriana Hall		Parallel Session 1 Belica Hall
11:10 - 12:20	Round Table	Round Table Discussions on Air Pollution Control for Sustainable Management of Cement Factories in Pula and around the Globe	Workshop	Workshop on Balancing Nature and Technology in Water
12:20 - 12:40	Closing Ceremony			
12:40 - 14:00	Lunch			
Day 4: 17th October 2024 From 8:00 -12:30 Field Trip				
	1	CALUCEM Cement Factory		
	2	TEHNOMONT Shipyard		
	3	METRIS Research Centre		

CESE-2024 Conference Program

Posters - Pula

1	1-017Y	Performance evaluation of ceramic ultrafiltration-reverse osmosis processes for the removal of ions and bitumen in OSPW(Oil sands process-affected waters) Jeong Been Park
2	1-019Y	Performance analysis of advanced oxidation process combined with granular activated carbon on the reduction of organic matter and membrane fouling Nirmal Kumar Shahi
3	1-021S	Microwave accelerated CuFe 2 O 4 @N-doped carbon/PMS activation for degradation of methyl orange dye from reverse osmosis reject of textile effluent Alakananda Ghosh
4	2-001	Machine-learning technologies for biochar applications Duu Jong Lee
5	2-002	Biofilm models for wastewater treatment processes Duu Jong Lee
6	2-011	Photodegradation of tetracycline using eco-friendly composite photocatalytic membranes irradiated with simulated sunlight Ching Yuan
7	2-026	Acute mixture toxicity and ecological risk assessment of benzophenone-3 and its metabolites on Daphnia magna Yun-Ru Ju
8	2-040	Rapid screening by electronic nose to evaluate the removal of toxic compounds in the oil sands process-affected water (OSPW) Eunju Kim
9	2-041	Rapid identification of taste and odor compounds in water using electronic nose and multivariate analysis Eunju Kim
10	2-043	Application of Ni-Fe catalyst from fluidized-bed crystallization reactor for treatment of RB5 azo dye using a Fenton-like system Ming-Chun Lu
11	2-050	Automated detection and measurement of pharmaceuticals in wastewater effluent using online solid-phase extraction coupled with ultra-high performance liquid chromatography–tandem mass spectrometry system Homin Kye
12	2-051	Comprehensive GHG emission assessment of urban water utilities : A step towards carbon neutrality in water sector Homin Kye
13	2-072	Estimating greenhouse gas emissions from municipal wastewater treatment plants based on different treatment process Jongkuen Lee
14	2-100	Study on TDS removal and concentration efficiency of Membrane Capacitive deionization (MCDI) circulation process using pilot-scale module Hyunje Oh
15	2-113S	Spatial distribution of per- and polyfluoroalkyl substances (PFAS) in surface water in clean areas, agricultural areas, and suburbanized zones along the main rivers in Thailand Jedsada Chuiprasert
16	2-122	Polydimethylsiloxane dialysis passive sampler monitoring of chlorinated solvent contaminated sites – A field study Chenju Liang
17	3-007	Application of gas-water separation membrane used for removing water vapor from flue gas in the livestock manure drying process Seung-Jae Lee
18	3-012Y	Comparative Adsorption of Cd and Pb by Biochars Produced from Solidago canadensis via Hydrothermal Carbonization and Pyrolysis Xin Zhao
19	3-021	Hydrothermal pretreatment for anaerobic digestion and effects of biomass degrading intermediates formation onto biogas production efficiency Jongkuen Lee
20	3-022S	Evaluation of Behavioral Interventions for Improving Plastic Waste Separation in Thailand's Shopping Mall Pavinee Pongpunpurt
21	3-025Y	Microwave-induced sustainable catalytic steam reforming for hydrogen-rich syngas production from spent transformer oil using sewage sludge activated carbon Jurarat Nisamaneenate
22	3-029	Optimization of the ammonia recovery efficiency from high concentration nitrogen containing wastewater using decompression stripping processes Junmin Park
23	3-032Y	Development of an anaerobic denitrifying down-flow hanging sponge reactor for closed recirculating aquaculture system Takahiro Watari
24	3-039	Hydrocarbon Recovery from Onshore Oil-Based Drill Cuttings (OBDCs) by Fast Pyrolysis Over Waste-Derived ZSM-5 and CaO Catalysts Using Py-GC/MS Supawan Vichaphund
25	4-002	Characterization of atmospheric suspended particles in the vicinity of a steel plant Yun-Ru Ju
26	4-004	Comparison of PMF Results with and without Organic Compounds: A Study on PM2.5 Moonkyung Kim
27	4-005	Source Apportionment and Oxidative Potential of PM2.5 and PM1.0 in Seoul Moonkyung Kim
28	4-006Y	Predicting and interpreting missing values of intermittently measured PM 2.5 -bound chemical constituents using deep neural network and explainable artificial intelligence Young Su Lee
29	4-007Y	Prediction of PM 2.5 chemical constituents using generative adversarial network machine learning models in Seoul, South Korea Young Su Lee
30	4-008Y	Enhancing of particulate matter removal using PES filter coated with zeolite using a coupling agent Jurarat Nisamaneenate
31	4-009S	Photocatalytic oxidation of benzene on TiO ₂ supported on recycled rubber granulates Marija Tomas
32	4-012	Utilization coal-bottom ash and sludge from wastewater for fabricating porous ceramic PM filter: Properties and PM filtering performance Supawan Vichaphund
33	5-001S	Hexavalent chromium treatment using Biochar in constructed wetland-microbial fuel cell Divyani Kumari
34	6-007	The Study on Environmental Aspect of Sustainability Reports (2023) for Climate Leadership Award Winners (Manufacturing and Energy Industries) in Taiwan Ming-Chin Chang
35	6-008	The Study on the Environmental Aspect of Corporate Sustainability Report of Steel Industry in Taiwan Ming-Chin Chang
36	7-004S	Integrating Circular Economy in Food Waste Management: Insights from Thailand's Shopping mall and Community Pavinee Pongpunpurt
37	8-001	Electrochemical remediation of Cu, Zn, and Pb contaminated site by Fe/Al oxidation electrodes in an in-situ electrokitic system: Investigation of electrode configuration and metal-bonding forms Ching Yuan
38	8-008Y	Biochar Mitigates the Impact of Microplastics on Soil Properties Xin Zhao

CESE-2024 Conference Program - Online

Beijing Time

13th October

15:00 - 19:00 (Beijing Time)	Scientific writing workshop by Assoc. Prof. Eldon Raj Rene for students and young researchers attending virtually
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14th October

8:00 - 8:05	Opening and Welcome Remarks for the CESE-2024 Online Conference
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8:05 - 8:25	Keynote Speech Professor Taku Fujiwara
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8:25 - 8:45	Keynote Speech 2-042 Professor Ramaraj Boopathy, Nicholls State University, USA - Biodegradation of Sulfamethoxazole, a Common Antibiotic by Alcaligenes faecalis Isolated from the Hurricane Ida Sediment
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8:45 - 8:55	Q&A
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		Parallel Session 1 Breakout Room 1	Parallel Session 1 Breakout Room 2	Parallel Session 1 Breakout Room 3
Session Chairpersons		Professor Seok Dockko	Professor Ramaraj Boopathy	Assoc. Professor Ching-Lung Chen
		Assoc. Professor Jia-Hong Kuo	Dr. Hojung Rho	
09:00 - 09:15	1.1	1-010 Continuous electrochemical synthesis of mesoporous magnetite nanoparticles for adsorptive removal of As(III) and As(V) Jui-Yen Lin	2.1 2-109Y Insights into adsorptive behavior of tetracycline hydrochloride onto magnetic powdered activated carbon from aquatic environments Sirirat Sangkarak	3.1 3-013 Selective extraction of valuable metals from spent NMC batteries using deep eutectic solvent Ching-Lung Chen
09:15 - 09:30	1.2	2-110Y Chemical modification of reused activated carbon from carbon cartridge filter and its performance in removing hexavalent chromium from electroplating wastewater Sirirat Sangkarak	2.2 2-076Y Treatment of livestock and poultry aquaculture wastewater containing tetracycline in a sequencing batch reactor of algal-bacterial aerobic granular sludge Yuanda Du	3.2 9-001Y Mesoporous ceria nanorods for catalytic cathode materials in lithium-CO2 batteries Wei-Fan Kuan
09:30 - 09:40	1.3	2-035Y Electrochemical Reduction of Nitrate from Wastewater to Ammonia using Homogeneous Bimetallic Catalyst Jenn Fang Su	2.3 3-016Y Impact of Metal-Based Nanoparticles in Treated Municipal Wastewater on Greenhouse Gas Emissions and Soil Health in Paddy Rice Cultivation Duc Luc Phung	3.3 8-002Y Legacy effect of invasive alien plant and microplastic contamination on the soil properties and its feedback mechanism on the Triticum aestivum L. crop Babar Iqbal
09:40 - 09:50	1.4	2-015Y Transforming waste from bioethanol production process into biochar for effective utilization in industrial wastewater treatment Kirana Somsook	2.4 2-064Y Characteristic of uptake of organic pollutants in water by aged microplastics: performance and mechanisms Nirmal Kumar Shahi	3.4 10-001S Optimization of Hydrogen Production through Biophotolysis in Chlamydomonas reinhardtii-Activated Sludge Bacteria Co-cultures Abdelsalam Zidan
09:50 - 10:00	1.5	2-018Y Biotic/Abiotic Transformation Mechanisms of Phenanthrene in Iron-rich Constructed Wetland under Redox Fluctuation Zhen Hu	2.5 2-045Y Environmental Application of Nanocarbon Materials for Gastrointestinal Biosafety Assessment Yi Chun Chen	3.5 10-002S Pt QDs-Decorated Hexagonal Iron Titanate Nanostructures as Bifunctional HER and OER Electrocatalyst in AEM Electrolysis Kannankuzhiyil Surjith
10:00 - 10:10	1.6	2-077Y Effects of DOM on the adsorption-desorption process and bioavailability of PAHs matrix in constructed wetlands Yuanda Du	2.6 5-003Y Lithiophilic surface engineering on copper current collector for high-voltage anode-free lithium-metal batteries Wei-Fan Kuan	3.6 10-003S Bifunctionality of In-incorporated NiCo LDH towards HER and OER in alkaline water electrolyzers Kannankuzhiyil Surjith
10:10 - 10:30		Q&A	Q&A	Q&A
10:30 - 11:00		Morning Tea		
		Parallel Session 2 Breakout Room 1	Parallel Session 2 Breakout Room 2	Parallel Session 2 Breakout Room 3
Session Chairpersons		Assoc. Professor Perlie Velasco	Dr. Vikash Singh	Professor Hongliang Guo
		Dr. Jui-Yen Lin		Assoc. Professor Remya Neelancherry
11:00 - 11:15	1.7	3-004 Lithium recovery from low-concentration wastewater by crystal growth of lithium phosphate at room temperature Jui-Yen Lin	2.7 2-029 Investigating the Oxidation of Bioplastics and Their Blends via Hydrothermal Fenton Reaction Vikash Singh	3.7 1-003 Performance of Carbon Fibre Cloth – Bismuth Oxybromide-Green Silver Nanocomposite on Visible Light Induced Photocatalytic Degradation of Paracetamol Remya Neelancherry
11:15 - 11:30	1.8	1-006S Behavioral study of magnetic κ-keratan nanoparticles coupled with DES for the treatment of heavy metal chromium in aqueous solution Yi Xiao	2.8 2-066S Insights into enhanced anaerobic degrading process of acetone in UASB system Hong Dao Nguyen Pham	3.8 2-106S Recovery of Copper from Wastewater using Fluidized-Bed Reactor in Acidic Condition with Sulfide (II) as Precipitant Charles Wijaya
11:30 - 11:40	1.9	1-008S Adsorption studies of chromium (VI) in water by magnetic carbon nanotubes modified with polyethyleneimine Yingli Wang	2.9 2-067S Application of next generation sequencing to identify filamentous bacteria in activated sludge treating water wastewater Shan-Shan Yang	3.9 2-107S Removal of Molybdenum from Synthetic Wastewater using Fluidized Bed Homogeneous Crystallization Technology with Iron(III) as Precipitant Cai-Sheng Lin
11:40 - 11:50	1.10	1-007S Removal of Cr(VI) from wastewater with magnetic cellulose nanoparticles coated with a deep eutectic supramolecular polymer Yi Xiao	2.10 2-071S Mechanically induced fragmentation of microplastics into nanoplastics in wastewater treatment: experimental insights and theoretical Correlation Sirajum Monira	3.10 2-108S Reclamation of Sulfide as Manganese Sulfide from Sulfide-contained Wastewater using Fluidized Bed Homogeneous Crystallization Technology Guang Chen Jheng
11:50 - 12:00	1.11	2-020S Removal of Pharmaceutical Contaminants from Wastewater by a Three-dimensional Heteroatom-doped Graphene Structure Wan Ting Tee	2.11 2-075S Modified Layered metal oxide membrane for the degradation of pharmaceutical micropollutants in advanced water treatment and the impact of polystyrene nanoplastics on it S M Alamgir Kabir	3.11 2-111S Recovery of Magnesium from wide-range Salinity Brine as Magnesium Hydroxide using Fluidized Bed Homogeneous Crystallization Technology Ting-Kuan Lu
12:00 - 12:10	1.12	2-025S Multi-stage tandem electroactive wetlands treatment of mixed pesticide agricultural wastewater Jinhui Wang	2.12 2-078S A new perspective on the treatment of mariculture wastewater: the role of magnetite on interspecies electron transfer of salt-tolerant microorganisms Jinhui Wang	3.12 2-123S Developing high-strength adsorbents for in-situ destruction of the adsorbed antibiotics from hospital wastewater Muhammad Wahyu Nugraha
12:10 - 12:30		Q&A	Q&A	
12:30 - 13:30		Lunch		

		Parallel Session 3 Breakout Room 1		Parallel Session 3 Breakout Room 2		Parallel Session 3 Breakout Room 3	
Session Chairpersons		Assoc. Professor Werasak Raongjant		Dr. Chih-Feng Chen Dr. Kullaya Saricheewin		Professor Edita Baltreinaite-Gedienė	
13:30 - 13:45	1.13	4-001 Case Study: Small Scale Cooling Towers Bleed-Off (blow down) in Water Recycle System at a Local Hospital Handojo Djati Utomo	2.13	2-046S Development and performance of a novel polymer clay composite coating material for corrosion prevention in concrete sewer structures Sagor Pramanik	3.13	3-005 Modelling of the PFAS soil-plant uptake Edita Baltreinaite-Gedienė	
13:45 - 14:00	1.14	3-008S Effect of inorganic carbon and feed pattern change in algal bacterial consortium behavior during the treatment of primary effluent of municipal wastewater Thinojah Thiruchelvam	2.14	2-079S Preparation of magnetic Carboxylated carbon layer encapsulates iron(III) oxide and its adsorption performance for copper ion (Cu ²⁺) Xu Wang	3.14	3-024S Chemical recycling and its life-cycle assessment: a case study using aggregated literature and Aspen data Md Monjurul Islam	
14:00 - 14:10	1.15	1-023S Metal-organic frameworks based MIL-101 (Fe) derived microwave responsive catalyst for rapid degradation of tetracycline via persulfate activation Saptarshi Bose	2.15	2-081S Highly Soluble Triton-B Extended Layer Modified MXene to Enhanced Adsorption of Dyes in Wastewater Ying Shi	3.15	3-026S Sustainable route for Nd recycling from end-of-life NdFeB magnet using a deep eutectic solvent Jaishree Yadav	
14:10 - 14:20	1.16	1-025S A ratiometric probe composed of silver nanoclusters and nitrogen-sulfur co-doped carbon quantum dots for fluorescence detection of mercury ions (II) Hang Yu	2.16	2-083S Preparation of Nb2C-MXene by in hydrofluoric acid etching of Nb2AC: Process optimization using random forests optimized by genetic algorithms Hongyang Zheng	3.16	3-019S Utilization of composted sewage sludge to promote growth of brown algae <i>Sargassum horneri</i> Takeya Sato	
14:20 - 14:30	1.17	1-027S Differentiation and determination of tetracycline homologues using fluorescent sensor array based on carbon nanodots Xiaopei Li	2.17	2-086S Dual contamination of CuO and ZnO nanoparticles in composted sewage sludge enhances rice nutrition but compromises yield and soil health Anh The Vu	3.17	6-004S Development of an integrated process for the production of microbial polyhydroxyalkanoates and biofertiliser using agro-waste Pritam Patil	
14:30 - 14:40	1.18	1-029S Penicillamine-modified gold nanoparticles probed with rhodamine 6G derivatives for Hg (II) fluorescence detection in cells Honglin Xie	2.18	2-044S Ni-supported Cu foam electrodes for superior nitrate reduction and nitrogen selectivity Thi Nhat Tuyen Nguyen	3.18	6-001S Optimizing Drainage Frequency in Treated Municipal Wastewater Fertigation to Reduce Greenhouse Gas Emissions in Rice Paddies Ulya Nur Rzanah	
14:40 - 15:00		Q&A		Q&A		Q&A	
15:00 - 15:30		Afternoon Tea					
		Parallel Session 4 Breakout Room 1		Parallel Session 4 Breakout Room 2		Parallel Session 4 Breakout Room 3	
Session Chairpersons		Professor Taku Fujiwara Professor Panyue Zhang		Professor Jian Huang		Professor Alex T Kuvarega Professor Ku-Fan Chen	
15:30 - 15:45	1.19	6-002S Evaluation of greenhouse gas emissions for the natural rubber industry in Vietnam Hong Dao Nguyen Pham	2.19	5-004S Role of hydrophytes in constructed wetlands for carbon sequestration and nitrogen removal Yaje Zhang	3.19	2-124 Application of photothermal effect-activated persulfate for the treatment of 1,4-dioxane in groundwater and in vitro toxicity assessment of biochar Ku-Fan Chen	
15:45 - 16:00	1.20	6-003S Environmental Footprint of Poly Lactic Acid Production: An LCA Case Study using Primary Inventory Data Md Monjurul Islam	2.20	2-073S Phenol adsorption from aqueous solution using activated carbon derived from one-stage and two-stage pyrolysis of orange peel Lalit Kumar	3.20	1-015S Coupling granular activated carbon and waste iron shavings to enhance anaerobic digestion of acidic and toxic Polybutylene Adipate Terephthalate (PBAT) wastewater Qi long Jin	
16:00 - 16:10	1.21	7-001S Organic fertilizers enhance corn yield and soil fertility while mitigating greenhouse gas emissions from cornfields Marius Chrisphine Ouma	2.21	2-074S Transport of microplastics in stormwater systems using computational fluid dynamics approaches S M Alamgir Kabir	3.21	1-039S Deciphering the Role of Ionic Liquids in Enhancing Proton Conductivity of PVA/Chitosan Membrane Systems for Fuel Cell Application Hanna Arif	
16:10 - 16:20	1.22	7-002S Comparison of different methods for analysis of fatty acid by green solvent from FOG sample Anika Amir Mohana	2.22	2-125S Impacts of Treated Wastewater Irrigation on Fecal Contamination and Antibiotic Resistance in Paddy Field Siti Asah Md Ali	3.22	1-042S Harnessing lab-scale biogenic zero-valent metallic nanoparticles and composites for fluoride remediation of water Hanna Arif	
16:20 - 16:30	1.23	8-004S Effects of composted sewage sludge on yield and greenhouse gas emissions from rice paddies Angelo Alfice	2.23	2-093S Investigating FOG Deposit Formation in Sewer Systems: The Role of Wastewater Composition and Sanitary Products Hamza Hassan Yusuf	3.23	3-042Y Thermal Conversion of Contaminated Fishing Nets from Thailand: Recovery of Marketable Materials for Optimized Waste Management Yotwadee Hawangchu	
16:30 - 16:40	1.24		2.24		3.24		
16:40 - 17:00		Q&A		Q&A		Q&A	
17:00 - 17:30	Keynote Speech	Professor Alex T Kuvarega, University of South Africa, South Africa - Z- and S-Scheme Heterojunction Photocatalysts for Water/Wastewater Treatment Applications					
17:30 - 18:00		Awards Ceremony					

CESE-2024 Conference Program

Posters -Online

1	1-009S	Adsorption of azo dyes from water by coupled deep eutectic supramolecular polymer chitosan porous membrane and plants cultivation Yingli Wang
2	1-012Y	Fabrication of asymmetric polyethersulfone (PES) ultrafiltration membranes by Dry Wet Phase Inversion method: Effects of glycerol contents in the dope Jenn Fang Su
3	1-018	Performance of biological ion exchange resin and biological activated carbon as a pretreatment of organic matter to prevent membrane fouling Seok Dockko
4	1-026S	Activation of PDS by Fe/g-C ₃ N ₄ for tetracycline degradation Hang Yu
5	1-028S	Sulfhydryl functionalized carbon quantum dots as a turn-off fluorescent probe for sensitive detection of glutathione Xiaopei Li
6	1-032S	Microwave assisted synthesis of Ni-MOF derived catalyst for rapid treatment of antibiotic laden wastewater in microwave system: Persulfate activation, parameter optimization, and treatment mechanism Saptarshi Bose
7	1-033S	Polyvinylimidazole modified PVDF membranes with good anti-bacterial fouling properties Ru Cheng
8	1-036S	Comparing the effects of pre-deposited and pre-mixed anion exchange resin on algal fouling during ultrafiltration Xiao Lu Gong
9	1-037S	A novel cleaning method for tubular membrane bioreactor treating (TMBR) produced water from polymer flooding: Effects and Mechanisms Man Wu
10	1-038S	Ultrafiltration of bilge oily wastewater with hydrophilized polyvinylidene fluoride (PVDF) membrane modified by nano-sized Al ₂ O ₃ Man Wu
11	1-040	Influence of copper nanoparticles of various sizes on the efficiency and microbial community structure in biological treatment system Yi-Tang Chang
12	1-041	Intracellular biosynthesis of ZnO nanoparticles by metal-tolerant bacterial strains and their Antibacterial Properties Yi- Tang Chang
13	2-017	Solar Photocatalytic Degradation of Congo Red from Aqueous Medium using Modified ZnO/g-C ₃ N ₄ Remya Neelancherry
14	2-033	Metal-free cocoa pod husk biochar for enhancing the degradation of tetracyclines antibiotics by peroxymonosulfate and its effects on zebrafish (Danio rerio) embryos Chang-Mao Hung
15	2-034	Ecological responses of combined polyethylene microplastics and copper in microbial community and extracellular polymeric substances on the coral reef Chang-Mao Hung
16	2-039	Phthalate esters and nonylphenol concentrations correspond with microplastic distribution and their adsorbed contaminate in sludges Ming-Huang Wang
17	2-047S	Fabrication and performance of MIL-101(Cr) MOF-Epoxy composite coatings for enhanced corrosion resistance in concrete sewer systems Sagor Pramanik
18	2-053	Development of Adsorbent from Modular Retaining Wall Blocks Incorporating Coffee Grounds through Activation with Phosphoric Acid and Microwave Radiation Werasak Raongjant
19	2-054	Arsenic Removal from Water Using Chemically Activated Durian Peel Carbon: A Sustainable Approach to Valorizing Agricultural Waste in Environmental Remediation Sompit Thantavoranart
20	2-055	Heavy metal adsorption in wastewater by carboxymethyl cellulose (CMC) from Rice Straw Kullaya Saricheewin
21	2-056	Sustainable Bioethanol Residue-Derived Activated Carbon for Effective Wastewater Treatment Kullaya Saricheewin
22	2-070S	Seasonal variation and removal efficiency of microplastics at different stages of the municipal wastewater treatment plant Sirajum Monira
23	2-080S	Rapid Degradation of Chlortetracycline via Ultrasound Triggered PiezoCatalysis Using MoS ₂ @Fe ₃ O ₄ Xu Wang
24	2-082S	Preparation of highly stable and easily regenerated zirconium metal-organic framework via a simple one-pot method for simultaneous detection and removal of tetracycline Ying Shi
25	2-084S	Preparation and characterization of ALK-MXene for chrysomycin hydrochloride adsorption via a machine-learning-based optimization framework Hongyang Zheng
26	2-085S	Conditions optimization and mechanistic study of ofloxacin adsorption by N-Nb ₂ C ₂ T _x : Prediction results based on Random Forest-Genetic Algorithm Honglin Xie
27	2-087S	Effect of COD on performance and microbial community structure in Anammox reactor with mixed floc-biofilm activated sludge Xianglong Peng
28	2-088S	Enhanced nitrogen removal from wastewater through Biochar and anaerobic ammonium oxidation bacteria encapsulated in Hydrogel beads Xianglong Peng
29	2-089S	The role, difference and relationship between flocculent sludge and aerobic granular sludge in one reactor: A review Yihang Ma
30	2-090S	Influence of Algal Integration on Aerobic Granular Sludge for Enhanced Nitrogen and Phosphorus Removal Yihang Ma

31	2-094S	Development of a hybrid grease interceptor to remove fat, oil and grease from kitchen wastewater to improve sewer performance Hamza Hassan Yusuf
32	2-097S	Aminophenol adsorption from aqueous solution using low-temperature and high-temperature pretreated biochar pyrolysis of orange peel Lalit Kumar
33	2-103S	Is adhesion of natural organic matter a significant cause of irreversible fouling during surface water treatment using ultrafiltration? Xiao Lu Gong
34	2-105Y	Enhancing the removal efficiency of ciprofloxacin in aqueous solutions using waste iron powder from industry Kirana Somsook
35	2-112	A Novel Machine Learning Approach for Assessing Water Quality Using Daphnia Swimming Behavior in Environmental Education Tai-Yi Yu
36	2-115	Effects of polypropylene nanoplastics on microbial communities and microbial metabolic pathways during biological nitrogen removal Hua Zhang
37	2-116	Mechanism of manganese ion-driven key microbial communities for organic matter degradation during waste leachate treatment Hua Zhang
38	2-117	Effect and mechanism of Mn ²⁺ on extracellular polymers of anaerobic microorganisms in waste leachate Jian Huang
39	2-118	Effect mechanism of polypropylene nanoplastics on biological denitrification and microbial extracellular polymers Jian Huang
40	2-119	Effect of modified vermiculite on nitrogen and phosphorus removal in membrane bioreactors Hongliang Guo
41	3-015	Synthesis of Activated Carbon from Bioethanol Residue Waste by Phosphoric Acid Activation for the Remediation of Bioethanol Process Wastewater Sompit Thantavoranart
42	3-017S	Improving the quality of solid fuel through co-HTC of swine manure and coffee bean grounds Doo Young Oh
43	3-018S	Enhanced phosphate solubilization and adsorption from anaerobic digestate of livestock manure through sonication pretreatment Jae Hwa Lee
44	3-027S	Deep eutectic solvents for sustainable recovery of rare earth elements from phosphate-rich mining tailings Jaishree Yadav
45	3-035	Enzymatic efficiency enhancement of pine wood lignocellulose Hongliang Guo
46	3-040	Enhancing syngas quality from gasification of solid recovered fuel by using Ni-Fe/Al ₂ O ₃ catalyst with microwave-assisted two-stage annealing method Jia-Hong Kuo
47	3-041	Thermodynamic, kinetic, and machine learning investigation of tar removal in biomass gasification using biochar from Mikania Micrantha Jia-Hong Kuo
48	3-043Y	ALDFG Characterization for Circular Economy: Thermal Recycling and Heavy Metal Quantification Yotwadee Hawangchu
49	5-005S	Characterization and driving mechanisms of greenhouse gas emissions from urban wetlands Yajie Zhang
50	6-005S	Fabrication of biodegradable and eco-friendly packaging material by blending Polyhydroxyalkanoates with starch Pritam Patil
51	7-003S	Development of an optimized wet digestion method for analyzing metal soaps in fat, oil, and grease deposits using the Taguchi method Anika Amir Mohana
52	8-003Y	Synergistic effect of fungus-mediated iron oxide nanoparticles and melatonin to reverse cobalt-induced toxicity by regulating the photosynthetic system, cellular ultrastructural damages, and antioxidant defense system in rice Babar Iqbal
53	8-006	Relationship between PAHs and organic matter characteristics in port sediments Chih-Feng Chen
54	8-007	Microplastics in shells and soft tissues of cultured hard clams (<i>Meretrix taiwanica</i>) and associated risks of metal consumption Chih-Feng Chen
55	8-009	Predicting Potential Soil and Groundwater Contamination Risks from Gas Stations Using Three Machine Learning Models (XGBoost, LightGBM, and Random Forest) Tai-Yi Yu
56	8-011	Enhancing Erosion Resistance of Dispersive Soil Using Biodegradable Biopolymer Composites from Rice Straw and Chitosan Werasak Raongjant
57	8-013S	Study on the transport model of chromium in soil-groundwater system Ru Cheng
58	8-014	Advanced Remediation of Uranium-Contaminated Soil Using Hexagonal Boron Nitride Adsorption: A Random Forest Approach Hojung Rho

