

16 March 2023

Time	Hall			
08.00	Registration			
09.00	Opening Ceremony Mr.Surachate Chalothorn (President of TIChE) Assoc.Prof.Kasama Sirisomboon (Deputy Dean of Faculty of Engineering and Industrial Technology, Silpakorn University)			
09.20	Plenary Speaker I (Dr.Supalak Parn-anurak) Topic: CCUS Technology Development in Energy Transition			
10.00	Plenary Speaker II (Prof. Tetsuya Kida) Topic: Carbon-Based Electrochemical Membrane Reactors using Proton-Conducting Graphene Oxide			
10.40	Break			
11.00	Plenary Speaker III (Prof. Sotiris E. Pratsinis) Topic: Flame Aerosol Particle Technology: from carbon black to devices (breath sensors)			
11.40	Lunch			
	Hall	Midas 3	Midas 4	Midas 5
13.00	Prof.Shigeru Fujino	BIOF-O-01	ENVI-O-01	PROS-O-01
		BIOF-O-02	ENVI-O-02	PROS-O-02
		BIOF-O-03	ENVI-O-03	PROS-O-03
	Assoc.Prof.Supareak Praserthdam	BIOF-O-04	ENVI-O-04	PROS-O-04
		BIOF-O-05	ENVI-O-05	PROS-O-05
		BIOF-O-06	ENVI-O-06	ENVI-O-11
	Dr.Rujira Jitrwung	BIOM-O-01	ENVI-O-07	ENVI-O-12
		BIOM-O-02	ENVI-O-08	ENVI-O-13
14.40	Break			
15.00	Assoc.Prof. Chin Kui Cheng	BIOM-O-03	ENVI-O-09	SBCG-O-01
		BIOM-O-04	ENVI-O-10	SBCG-O-02
		BIOM-O-05	CATA-O-01	SBCG-O-03
	Dr.Pawin Iamprasertkun	BIOM-O-06	CATA-O-06	SBCG-O-04
		BIOM-O-07	CATA-O-07	SBCG-O-05
		BIOT-O-01	CATA-O-08	SBCG-O-06
	INDT-O-01	BIOT-O-02	CATA-O-09	SBCG-O-07
	INDT-O-02	BIOT-O-03		SBCG-O-08
	INDT-O-03			SBCG-O-09
	INDT-O-04			SBCG-O-10
18.00	Dinner			

17 March 2023

Time	Hall	Midas 3	Midas 4	Midas 5
08.30	(09:00) Prof.Pornpote Piumsomboon Asst.Prof.Apinan Soottitantawat	BIOM-O-08	SEPP-O-01	PROS-O-06
		BIOM-O-09	SEPP-O-02	PROS-O-07
		BIOM-O-10	SEPP-O-03	PROS-O-08
		BIOM-O-11	SEPP-O-04	PROS-O-09
		CATA-O-02	SEPP-O-05	PROS-O-10
		CATA-O-03	SEPP-O-06	PROS-O-11
		CATA-O-04	SEPP-O-07	PROS-O-12
		CATA-O-05	SEPP-O-08	PROS-O-13
10.10	Break			
10.30	Plenary Speaker IV (Prof.Serm Janjai) Topic: Parabola Dome Dryer: a large-scale solar dryer for commercial applications			
11.10	Poster Presentation			
12.30	Lunch			
13.30	TIChE National Chemical Engineering Design Competition "Next Generation of Ethane Recovery Unit"			
14.50	Break			
15.10	Lucky Draw Introduction to TIChE2024 Closing Ceremony			

Hall

Thursday 16th March

Time 13:00-14:40

Chairman: Dr.Wasu Chaitree

Co-Chairman: Dr.Nardrapee (Karuna) Sanchez

No	CODE	Topic	Presenter
1	Invited Speaker	Laser Fabrication Method for 3D Complex Silica Glass	Prof.Shigeru Fujino
2	Invited Speaker	High-Throughput Heterogeneous Catalyst Screening by Quantum Chemistry and Machine Learning	Assoc.Prof.Supareak Praserttham
3	Invited Speaker	Carbon Dioxide Utilization Combining with Methane to Biomethanol by 3-step Process	Dr.Rujira Jitrwung

Thursday 16th March

Time 15:00-16:40

Chairman: Dr.Pawin Iamprasertkun

Co-Chairman: Dr.Wasu Chaitree

No	CODE	Topic	Presenter
1	Invited Speaker	Sand Dune-derived Mesoporous Silica Supported Ni/Co Catalyst for Dry Methane Reforming	Assoc.Prof. Chin Kui Cheng
2	Invited Speaker	The Application of Machine Learning in Electrochemical Engineering for Materials Design and Performance Evaluation	Dr.Pawin Iamprasertkun
3	INDT-O-01	Modeling of Polypropylene Production with a Two-Reactor System using Machine Learning	Jirayu Pornjaturawit
4	INDT-O-02	Artificial Neural Networks for Production of Ethylene/1-Butene Copolymers with Multi-site type Catalysts	Siripon Anantawaraskul
5	INDT-O-03	Design and Development of an Expansion System to Reduce the Deterioration of Thermal Oil in Industry	Kittipon Pisuttipaisarn
6	INDT-O-04	Optimal Drying Conditions for Chemical and Bio-Sludges from Rubber Composites Industry	Tulyatut Naruephai

Midas 3

Thursday 16th March

Time 13:00-14:40

Chairman: Assoc.Prof.Chaiyan Chaiya

Co-Chairman: Asst.Prof.Mutsee Termtanun

No	CODE	Topic	Presenter
1	BIOF-O-01	The Catalytic Pyrolysis of Coconut Shell Over A Ni-doped Activated Carbon Catalyst for High Bio-oil Production	Iyarin Tongdang
2	BIOF-O-02	Effect of Palm Oil Methyl Ester in Transesterification Reaction of Palm Olein in Batch Reactor by Using Na ₃ PO ₄ as Catalyst	Thanatip Thananitikorn
3	BIOF-O-03	High-quality of bio-coal production by hydrothermal carbonization of giant salvinia	Piyanut Phuthongkhao
4	BIOF-O-04	Deoxygenation of Palm Oil via Continuous Packed Bed Reactor over Alkaline Catalyst on Different Calcination Temperature	Ratchadaphon Chueaphetr
5	BIOF-O-05	Synthesis of processing oil via epoxidation of fatty acid methyl ester derived from palm oil for rubber vulcanizates production	Krittiya Phempim
6	BIOF-O-06	Development of Solid Fuel Produced from Waste Cellulosic Materials	Supawan Inthawong
7	BIOM-O-01	Development of Shape Memory Polymer Based on Cardanol and Bisphenol A Benzoxazine	Chananya Nunwong
8	BIOM-O-02	Mechanical and Thermal Properties of Polybenzoxazine Composites: Effect of Bamboo Charcoal Content	Napatsorn Jantapanya

Thursday 16th March

Time 15:00-16:40

Chairman: Asst.Prof.Weerinda Mens

Co-Chairman: Dr.Sunthon Piticharoenphun

No	CODE	Topic	Presenter
1	BIOM-O-03	Synthesis and Characterization of End-chain Bio-based Benzoxazine Functionalized Polyethylene Glycol	Manisa Mahahing
2	BIOM-O-04	Mechanical and Thermal Property of Glass Fiber-Reinforced Biopolybenzoxazine Composites.	Kanlayanee Chumjitr
3	BIOM-O-05	Improvement of Mechanical and Thermal Properties of Bio-based Polybenzoxazine/Epoxy Composites Reinforced with Glass Fiber	Anuchon Mahawan
4	BIOM-O-06	Improving Water Barrier Properties of Paper Packaging with Bio-based Coating from Trimethylsilyl Cellulose	Atichar Thanawinitcharoen
5	BIOM-O-07	Characterizations of Thermal and Physical Properties of Benzoxazine Resin Coated Sand	Thanjira Chuathai
6	BIOT-O-01	Stress Distribution in Tooth Restored with Glass Fiber Reinforced Biopolybenzoxazine Post : A Finite Element Analysis Study	Nichakarn Sukmee
7	BIOT-O-02	Effects of Physical and Chemical Properties of Activated Carbon Derived from Jujube Branches on H ₂ Storage	Suphakorn Anuchitsakol
8	BIOT-O-03	Mechanical Properties of the Recycled Blend of Natural Rubber and Polycaprolactone	Thossapit Wissamitanan

Midas 4

Thursday 16th March

Time 13:00-14:40

Chairman: Assoc.Prof.Suwimol Wongsakulphasutch

Co-Chairman: Asst.Prof.Nutchapon Chotigkrai

No	CODE	Topic	Presenter
1	ENVI-O-01	Photocatalytic Reduction of Carbon Dioxide to Liquid Fuels using the Copper-Doped Dtitanate/Graphene Photocatalyst: The Role of Triethanolamine as a Sacrificial Agent	Wannisa Neamsung
2	ENVI-O-02	Regeneration of the Copper-Doped Dtitanate/Graphene Oxide Photocatalyst Heterostructure for the Photoreduction of CO ₂	Prowpatchara Chanthara
3	ENVI-O-03	Prediction Model for PM Mass Concentration Related to Primary and Secondary PM from Light-Duty Diesel and Gasoline Vehicles in Bangkok	Chinnawat Phetblengsri
4	ENVI-O-04	A Mechanistic Study of the CO ₂ Photoreduction using Alcohols as Sacrificial Reagents	Nutkamol Kitjanukit
5	ENVI-O-05	Microplastic Contamination in Thai Vinegar Crabs in Bang Pu Mangrove Forest, Samutprakarn Province, Thailand	Rungpilin Jittalerk
6	ENVI-O-06	Greenhouse Gas Emissions from Fossil Fuels Combustion for Paper Products in Thailand based on Input-Output Model	Kullawut
7	ENVI-O-07	Development of technology for bio-oil production from pyrolysis of water hyacinth	Ukrit Amphaiphan
8	ENVI-O-08	Effects of Binder Materials on Development of Refuse-Derived Fuel Properties	Emma Asnachinda

Thursday 16th March

Time 15:00-16:40

Chairman: Asst.Prof.Sisiradee Jantasee

Co-Chairman: Assoc.Prof.Okorn Mekasuwandumrong

No	CODE	Topic	Presenter
1	ENVI-O-09	Efficient glyphosate degradation through iron–polyphenol nanoparticles activated persulfate	Anusara Kaeokan
2	ENVI-O-10	Levels and Risk Assessment of Heavy Metals and Trace Elements in Indoor Particulate Matter: Case Study in Bangkok Metropolitan, Thailand	Kanitthika Santhaweesuk
3	CATA-O-01	The Effect of Co-solvent in Transesterification of Palm Olein Oil Using Sodium Phosphate as A Catalyst	Sarunu Thawonphat
4	CATA-O-06	Comparative Study of HDPE and PP on the Resistance to Performic Acid Attack	Nollapan Nornil
5	CATA-O-07	Effect of Sulphuric Acid on the Stability of Performic Acid	Natthanicha Viputcha
6	CATA-O-08	Some Aspects of Sn Addition in the Pt/TiO ₂ Catalyst for the Selective Hydrogenation of Furfural to Furfuryl Alcohol	Pimlapat Nakvichein
7	CATA-O-09	Effect of Anions Contaminated in Water on the Synthesis of Peracetic Acid	Wanida Malaphum

Midas 5

Thursday 16th March

Time 13:00-14:40

Chairman: Asst.Prof.Veerayut Lersbamrungsuk

Co-Chairman: Assoc.Prof.Okorn Mekasuwandumrong

No	CODE	Topic	Presenter
1	PROS-O-01	Prediction of Ash Deposition Thickness on Tube Surfaces in Economizer of Circulating Fluid Bed Boiler by Computational Fluid Dynamics Simulation	Nutthawan Sangnawakit
2	PROS-O-02	3D-CFD SIMULATION OF NONISOTHERMAL CO ₂ CAPTURE RISER WITH COOLING WATER TUBES	Arena Damnernsawat
3	PROS-O-03	Economic Evaluation of Ethyl Lactate Production via Reactive Distillation at Different Concentrations of Lactic Acid	Nattapat Klin-u-bol
4	PROS-O-04	Glycerol Carbonate Production from Glycerol and Diethyl Carbonate: A Comparative Study Between A Separated Reaction/Distillation (SRD) Process VS A Reactive Distillation (RD) Process	Chayanin Sriharuethai
5	PROS-O-05	Design of Lactic Acid Purification Process by Reactive Distillation Using Column with Side Stream	Thanalux Ngampanja
6	ENVI-O-11	Isolation and characterization of cellulose nanofibers from postconsumer cotton waste: Fabrication and characterization membranes for dye removal application	Dr. Mohd JahirKhan
7	ENVI-O-12	Data Analytic Approach to Predict Air Quality in Thailand	Narisara Thongboonchoo
8	ENVI-O-13	PRODUCTION OF COAGULANT FROM SPENT ACID AND SLUDGE FOR WATER TREATMENT IN INDUSTRIES	Walailak Nuinoi

Thursday 16th March

Time 15:00-16:40

Chairman: Prof.Tetsuya Kida (1-5) + Prof.Shigeru Fujino (6-10)

Co-Chairman: Assoc.Worapon Kiatkittipong

No	CODE	Topic	Presenter
1	SBCG-O-01	Carbon Dioxide Capture with Alcohols-Ionic Liquids Solutions; Absorption and Desorption in Continuous Stirred Tank Reactor	Bhavuddhi Chuntharin
2	SBCG-O-02	Cu-based catalyst for CO ₂ conversion to methanol via alcohol-assisted synthesis method	Kantika Sitdikovit
3	SBCG-O-03	Sorption-Enhanced Steam Methane Reforming Processes for Hydrogen and Synthetic Gas Production	Mr. Napasrapee Hemsap
4	SBCG-O-04	SYNTHESIS OF DIGLYCERIDES VIA GLYCEROLYSIS OF PALM OIL	Paweemas Hiranlordsanti
5	SBCG-O-05	Synthesis of Multifunctional Pellet for Hydrogen Production	Pasin Pong-Art
6	SBCG-O-06	Operating Condition Studies on Deoxygenation of Palmitic Acid for Bio-hydrogenated Diesel Production	Patravee Ounsuk
7	SBCG-O-07	Effect of Operating Parameters for Green Diesel Production by Deoxygenation of Triglycerides	Montida Lalitpattarakit
8	SBCG-O-08	Deoxygenation under glycerol as a hydrogen donor over NiMo/ZrO ₂ catalyst	Nitchakul Hongloi
9	SBCG-O-09	Green Solvent Production for Low Pressure Biohydrogenated Diesel Production	Sirapat Triampitak
10	SBCG-O-10	Techno-economic Assessment of Biodiesel Production Process Using Homogeneous Catalysts with Rotating Tube Reactor for Community	Arthit Jarungwongsathien

Hall

Thursday 16th March

Time 09:00-11:10

Chairman: Dr.Wasu Chaitree

Co-Chairman: Dr.Nardrapee (Karuna) Sanchez

No	CODE	Topic	Presenter
1	Invited Speaker	Process Dynamics and Control Class with the Flip Learning Approach	Prof.Pornpote Piumsomboon
2	Invited Speaker	Teaching for Outcome Based Education in Chemical Engineering	Asst.Prof.Apinan Soottitantawat
break			
3	Plenary Speaker	Parabola Dome Dryer: a large-scale solar dryer for commercial applications	Prof.Serm Janjai

Thursday 16th March

Time 13:30-16:00

No	Topic
1	TIChE National Chemical Engineering Design Competition "Next Generation of Ethane Recovery Unit"
2	Lucky Draw Introduction of TIChE2024 Closing Ceremony

Midas 3

Friday 17th March

Time 08:30-10:10

Chairman: Assoc.Prof.Kitirote Wantala

Co-Chairman: Dr.Sunthon Piticharoenphun

No	CODE	Topic	Presenter
1	BIOM-O-08	Stress Distribution in Tooth Restored with Glass Fiber Reinforced Biopolybenzoxazine Post : A Finite Element Analysis Study	Nichakarn Sukmee
2	BIOM-O-09	Effects of Physical and Chemical Properties of Activated Carbon Derived from Jujube Branches on H2 Storage	Suphakorn Anuchitsakol
3	BIOM-O-10	Mechanical Properties of the Recycled Blend of Natural Rubber and Polycaprolactone	Thossapit Wissamitanan
4	BIOM-O-11	Metformin hydrochloride tablets coating by co-oling crystallization of sugar	Lek Wantha
5	CATA-O-02	Selective Hydrogenation of Furfural into Tetrahydrofurfuryl Alcohol over NiMn/ γ -Al ₂ O ₃ Catalyst	Auruha Kittisabhorn
6	CATA-O-03	Effect of Promoter of Catalyst on Catalytic Performance in Hydrogenolysis of Glycerol to 1,3-Propanediol	Kornkanok Omark
7	CATA-O-04	Catalytic dehydration of ethanol to produce ethylene using SUZ-4 zeolite	Pichanan Sriuthai
8	CATA-O-05	Recycling Process of Single-use Plastic to Produce Ethylene by Photocatalysis .	Suttida Pomsri

Midas 4

Friday 17th March

Time 08:30-10:10

Chairman:

Asst.Prof.Mutsee Termtanun

Co-Chairman:

Asst.Prof.Weerawat Patthaveekongka

No	CODE	Topic	Presenter
1	SEPP-O-01	High Water Permeability Thin Film Nanofiber Composite Membrane for Reverse Osmosis Seawater Desalination	Anniza Cornelia Augusty
2	SEPP-O-02	Papain Precipitation by Anti-solvent	Sasitorn Boonkerd
3	SEPP-O-03	Effect of salts on the solubility of L-histidine	Lamphoun Inthavideth
4	SEPP-O-04	Separation Efficiency of Hydrocyclone to Separate Glycerol from Biodiesel using Computational Fluid Dynamics	Warissara Trisap
5	SEPP-O-05	Study Effect of Time and Amount of DI Water for Rinse Step in the Cleaning Process for Implant Medical Devices.	Phenphak Prayutte
6	SEPP-O-06	Experimental Optimization of Hydrogen Sulfide Absorption with Sodium Carbonate Solution in A Packed Column Using RSM-BBD Methodology	Worached Laothong
7	SEPP-O-07	The study of α -amylase crystallization from commercializes α -amylase broth with various salt precipitants	Chonut XAIYATHOUMMA
8	SEPP-O-08	Study of the total organic carbon analysis for cleaning validation of the implant medical devices	Thitima Naovong

Midas 5

Friday 17th March

Time 08:30-10:10

Chairman: Prof.Thongchai Srinopakhun

Co-Chairman: Asst.Prof.Veerayut Lersbamrungsuk

No	CODE	Topic	Presenter
1	PROS-O-06	DWSIM Simulation of Multiple Effect Evaporator of Raw Sugar	Terasut Sookkumnerd
2	PROS-O-07	Digital Twin for Decision Support System of Industrial Utility Management	Thanatip Satjeenphong
3	PROS-O-08	Surrogate Model-Based Performance Prediction of Glycerin Purification Process	Tawesin Jitchaiyapoom
4	PROS-O-09	CFD Simulation of Droplet/Aerosol Distribution During Dental Procedure	Nontakorn Udampol
5	PROS-O-10	Numerical investigations of aerosol distribution in negative pressure airborne infectious isolation room	Thanchanok Kaeopphet
6	PROS-O-11	Mixing Efficiency of High Viscosity Liquid by Static Mixers Using Computational Fluid Dynamics	Supakit Thongsong
7	PROS-O-12	Predictive Model of Carbon Dioxide Adsorption with Zeolite 5A for Sustainable Innovation	Purita Suppanich
8	PROS-O-13	Economic Evaluation of Modified Furfural Separation Process with Thermally Coupled Distillation (TCD) and Bottom Dividing Wall Column (BDWC) Using Aspen Plus Program	Patcharapuek Pattaramanon