Oral Presentation Program

AC - Analytical Chemistry

Thursday, 13th February 2025
AMETHYST

Time	Code	Title	Presenter
AC1 Instrumentation and sensor development			
Chair Assoc. Prof. Jaroon Jakmunee **Co-chair** Assoc. Prof. Kamonwad Ngamchuea			
15.30 - 15.55	AC-KN-01	CRISPR/Cas for highly sensitive paper-based analytical assays	Prof. Daniel Citterio
15.55 - 16.15	AC-I-01	Modified screen-printed graphene electrodes: Innovative sensors for biomarker analysis	Assoc. Prof. Weena Siangproh
16.15 - 16.30	AC-O-01	Flow-based amperometric sensor for dexamethasone detection using Fe-MOF/graphene oxide composites material modified pencil graphite electrode	Ms. Chanida Jakkrawhad
16.30 - 16.45	AC-O-03	Transforming rigid electrochemical devices and bioelectronics into flexible, sustainable platforms	Asst. Prof. Itthipon Jeerapan
AC1 Instrumentation and sensor development			
Chair Prof. Wittaya Ngeontae **Co-chair** Assoc. Prof. Weena Siangproh			
16.45 - 17.10	AC-KN-02	Gas-phase separation for direct sample analysis: exploring unconventional electrical detectors	Assoc. Prof. Duangjai Nacapricha
17.10 - 17.25	AC-O-04	Screen-printed copper-organic framework-modified graphene as electrochemical sensor for detection of glutathione	Mr. Anawin Promkaew
17.25 - 17.40	AC-O-05	Gold and copper nanostructure-modified electrochemical sensor for improved detection of gunshot residue and low explosives	Mr. Thinnapong Wongpakdee
17.40 - 17.55	AC-O-06	Integration of magnetophoretic slider assay with electrochemical detection for rapid SARS-CoV-2 diagnostics	Ms. Nutnaree Fukana
17.55 - 18.15	Platinum Talk	TPI Talk: TPI products for sustainable environmental development	TPI

Thursday, 13th February 2025
TURQUOISE

Time	Code	Title	Presenter
AC2 Spectroscopy & Sample preparation techniques			
Chair Assoc. Prof. Prompong Pienpinijtham **Co-chair** Asst. Prof. Patcharin Chaisuwan			
15.30 - 15.55	AC-KN-03	From simple analytical platform to inductively coupled plasma mass spectrometry in chemical analysis	Assoc. Prof. Atitaya Siripinyanond
15.55 - 16.15	AC-I-02	A biobased magnetic multi-dummy template molecularly imprinted polymer for simultaneous recognition of multi-class pesticides prior to LC-MS/MS analysis	Assoc. Prof. Rodjana Burakham
16.15 - 16.30	AC-O-07	A composite montmorillonite and sodium alginate as a green adsorbent for micro-solid phase extraction of carbamate insecticides	Ms. Chutharat Maokam
16.30 - 16.45	AC-O-08	Spectrophotometric determination of ethylenediaminetetraacetic acid in food samplesusing a sequential injection analysis system	Ms. Wipawee Chayman
16.45 - 17.00	AC-O-15	A simple hand-mixed rotational paper-based analytical device integrated with electrochemical sensors for the determination of nitrite and nitrate	Ms. Preeya Kusonpan
AC2 Spectroscopy & Sample preparation techniques			
Chair Assoc. Prof. Rodjana Burakham **Co-chair** Assoc. Prof. Sanchai Prayoonpokarach			
17.00 - 17.20	AC-I-03	Detection of nanoplastics in aqueous media using surface-enhanced Raman scattering	Assoc. Prof. Prompong Pienpinijtham
17.20 - 17.40	AC-I-06	From a chemical curiosity to a portable device	Prof. Uday Maitra
17.40 - 17.55	AC-O-11	GC-MS analysis, antimicrobial potential, haematological and some pharmacological properties of Terminalia avicennoides root extracts	Dr. Abiodun Sodamade
17.55 - 18.10	AC-O-18	A colorimetric method for the quantitative determination of Pyridoxine (Vitamin B6) in functional drink products	Ms. Sirinyakorn Chinnawat
18.10 - 18.30		Platinum talk	

Friday, 14th February 2025
AMETHYST

Time	Code	Title	Presenter
AC3 Microscale and nanoscale analytical systems			
Chair Assoc. Prof. Purim Jarujamrus **Co-chair** Assoc. Prof. Atitaya Siripinyanond			
8.30 - 8.55	AC-KN-04	Nanofluidics: Evolving and shaping the future of analytical science and technology	Assoc. Prof. Yan Xu
8.55 - 9.15	AC-I-04	Miniaturized fluorescence sensing platform using smartphone technology	Prof. Wittaya Ngeontae
9.15 - 9.30	AC-O-13	Creatinine-induced aggregation of chlorophyllin-modified gold nanoparticles for simple, rapid, and sensitive colorimetric assay of mercury (II) in environment water	Mr. Natee Lerdpiriyaskulkij
9.30 - 9.45	AC-O-14	Catalytic fluorometry of Au-Hg amalgamation: Dual approaches for mercury detection in environmental and food monitoring using a paper sensor	Dr. Nutthaporn Malahom
9.45 - 10.00	AC-O-09	Elucidation of exosomal membrane heterogeneity using nanofluidics	Dr. Nattapong Chantipmanee
AC3 Microscale and nanoscale analytical systems			
Chair Prof. Daniel Citterio **Co-chair** Assoc. Prof. Yan Xu			
10.00 - 10.20	AC-I-05	Performance enhancement of electrochemical sensors through metal dendrite materials	Assoc. Prof. Jaroon Jakmunee
10.20 - 10.40	AC-I-07	Advances in tailored functional nanomaterials on microfluidic paper-based devices for optical sensing innovations	Assoc. Prof. Purim Jarujamrus
10.40 - 10.55	AC-O-19	Detection of multiple analytes using a silver nanopaste-based microfluidic device	Prof. Mei-Lin Ho
10.55 - 11.10		*Coffee Break*	
11.10 - 11.25	AC-O-16	Ratiometric fluorescent sensor using o-phenylenediamine and N-doped graphene quantum dots on a microfluidic paper-based analytical device for glucose and cholesterol detection in blood with layered double hydroxides as peroxidase mimic	Ms. Nattasa Kitchawemgkul

Friday, 14th February 2025
AMETHYST

Time	Code	Title	Presenter
AC3 Microscale and nanoscale analytical systems			
Chair Prof. Daniel Citterio **Co-chair** Assoc. Prof. Atitaya Siripinyanond			
11.25 - 11.40	AC-O-17	3D microfluidic paper-based analytical device for sensitive colorimetric detection of triglyceridesin whole blood using a mixed indicator system	Ms. Niyada Khunkhong
11.40 - 11.55	AC-O-12	Synergistic aptamer-gold nanoparticles with enhanced peroxidase-like activity for highly selective and sensitive fluorescence detection of low-density lipoprotein	Mr. Akarapong Prakobkij
11.55 - 13.00	*Lunch*		

CC - Catalytic Chemistry

Thursday, 13th February 2025

RUBY

Time	Code	Title	Presenter
CC1 Catalysis of porous materials			
Chair Prof. Kevin Wu **Co-chair** Prof. Jatuporn, Wittayakun, Dr. Nattawut Osakoo			
15.30 - 15.55	CC-KN-01	Extra-large pore zeolites – the last frontier	Prof. Valentin Valtchev
15.55 - 16.10	CC-O-01	Hydroxyl groups in zeolites – spectra and acidity	Prof. Georgi Vayssilov
16.10 - 16.25	CC-O-02	Direct synthesis of zirconium-substituted LTL nanosized zeolites as novel heterogeneous catalysts for aldol condensation of furfural and acetone towards high-value chemical	Dr. Narongrit Sosa
16.25 - 16.40	CC-O-03	Catalytic study of porous zeolitic materials for acetylation of glycerol	Ms. Nopphawan Bunthiam
16.40 - 16.55	CC-O-04	n-Butene production from ethanol bycatalytic reaction using rice husk ash-derived catalysts	Ms. Budsaba Tedsawad
CC1 Catalysis related to the environment **CC4 Electrocatalysis**			
Chair Prof. Valentin Valtchev **Co-chair** Prof. Tawan Sooknoi, Dr. Nattawut Osakoo			
16.55 - 17.20	CC-KN-02	High-precision catalysts for biorefinery-derived organic acid platform chemicals	Dr. Kajornsak Faungnawakij
17.20 - 17.45	CC-KN-03	Catalysis at the heart of a Terpene-based biorefinery	Prof. Steven Bull
17.45 - 18.05	CC-I-01	Catalytic approaches to structurally diverse imidazole and tetrazole derivatives using novel heterogeneous nanocomposite catalysts: An efficient & greener method	Dr. Anita Pati
18.05 - 18.20	CC-O-05	DFT modeling of CO and NO oxidation on zeolite and ceria-based catalysts	Prof. Hristiyan Aleksandrov
18.20 - 18.35	CC-O-06	Electrochemical synthesis of 2,5-furandicarboxylic acid: Bridging catalyst development and process scale-Up	Dr. Pongkarn Chakthranont

Friday, 14th February 2025
RUBY

Time	Code	Title	Presenter
CC1 Catalysis of porous materials			
Chair Prof. Joongjai Panprnot **Co-chair** Prof. Tawan Sooknoi, Dr. Nattawut Osakoo			
11.15 - 11.40	CC-KN-04	SAPO molecular sieves crystallized using novel structure-directing agent for catalytic conversion of levulinic acid into ethyl levulinate under non-microwave instant heating	Assoc. Prof. Eng-Poh Ng
11.40 - 12.00	CC-I-02	Engineering the metal–support interactions on bimetallic Ni–Re catalysts for application of sustainable biorefinery	Assoc. Prof. Atthapon Srifa
12.00 - 12.15	CC-O-07	Developing Heterogeneous Catalysis for Cellulose Depolymerization from Metal-Organic Frameworks	Ms. Niza Lian Pernadi
18.10 - 18.30		*Lunch*	
CC2 Catalysis related to the environment **CC4 Electrocatalysis** **CC6 Catalysis related to the synthesis of organic, medicines, etc.**			
Chair Dr. Pongkarn Chakthranont **Co-chair** Prof. Tawan Sooknoi, Dr. Nattawut Osakoo			
13.00 - 13.25	CC-KN-05	Electrifying nanoscale catalysts for enhanced room-temperature CO_2 reduction to graphitic carbon quantum dots	Prof.Joongjai Panpranot
13.25 - 13.45	CC-I-03	Manipulation of Cu+/Cu0 species in copper phyllosilicate catalysts for fatty acid methyl esters (FAMEs) conversion to high value chemicals	Assoc.Prof. Kittisak Choojun
13.45 - 14.00	CC-O-08	Phosphorus-based organocatalyst: a Brønsted acid catalysed direct substitutions of alcohols	Dr. Lalita Radtanajiravong
14.00 - 14.15	CC-O-09	Understanding the effect of dopants on nickel oxyhydroxide (NiOOH) electrocatalysts for 2,5-furandicarboxylic acid (FDCA) production from 5-hydroxymethylfurfural (HMF) oxidation	Mr. Sanphong Khamhom
14.15 - 14.30	CC-O-10	Alkaline lignin electrolysis for co-production of green hydrogen and chemicals	Ms. Punjarat Khongchamnan

Friday, 14th February 2025
RUBY

Time	Code	Title	Presenter
14.30 - 14.45	CC-O-11	Optimizing Pulsed Electrolysis for Enhanced C-C Coupling in CO_2 Reduction on Oxide-Derived Copper	Mr. Chayapat Thammaniphit
14.45 - 15.00	CC-O-12	Effects of nitrogen functionalities on the electrocatalytic conversion of CO_2 over Cu/N-doped carbon	Mr. Pirapath Arkasalerks
15.00 - 15.15	CC-O-13	Development of highly active and stable BiOI gas diffusion electrode for electrochemical CO_2 reduction to formate	Ms. Kornkamon Meesombad

CE - Chemical Education Session

Friday, 14th February 2025
VANDA

Time	Code	Title	Presenter
Chair Assoc. Prof. Phimphaka Harding **Co-chair** Asst. Prof. Parawee Rattanakit			
8.30 - 8.55	CE-KN-01	The Gender Gap in Perception of Barriers in Chemistry Laboratories	Prof. Jung Sun Kim
8.55 - 9.15	CE-I-01	Sustainable experiments and "assorted" activities using smart devices for learning and student engagement	Assoc. Prof. Saowarux Fuangswasdi
9.15 - 9.30	CE-O-01	Exploring Color Dynamics of Oscillations and Chemical Waves in the Belousov-Zhabotinsky (BZ) Reaction: A School Laboratory Experiment	Dr. Suparinthon Anupong
9.30 - 9.45	CE-O-02	Statistical analysis of academic performance in the Chemistry Laboratory course	Dr. Nattapong Srisook
9.45 - 10.00	CE-O-03	Development of a Measurement Instrument using the Rasch Model to assess Students' Conceptual Understanding in Stoichiometry	Ms. Chanyanuch Tewapitak
10.00 - 10.15	CE-O-04	The Development of Inquiry-Based Laboratory with Model to Improve Grade 11 Students' Misconceptions about Electrolytic Cell	Ms. Amara Rodthong
10.15 - 10.30	CE-O-05	Developing a validity focused concept inventory creation tool, suitable for all chemistry curriculums in the modern global age	Dr. Richard Blackburn
10.30 - 10.50	CE-I-02	Catalysis - a game changer also in chemistry education	Dr. Angela Koehler - Kruetzfeldt
10.50 - 11.00		Elsevier talk: Will AI replace the chemists ?	Mandar Bodas, Solution Engineer, APAC, Life Sciences
11.00 - 11.15		*Coffee Break*	
Chair Prof. Jung Sun Kim **Co-chair** Assoc. Prof. Saowarux Fuangswasdi			
11.15 - 11.35	CST Awardee 4	Bridging chemical education and real-world applications through use cases from personal frontier research	Asst. Prof. Thanit Praneenararat
11.35 - 11.55	CE-I-03	The importance of Global Partnership (SDG 17) in promoting Small Scale Chemistry in Asia	Prof. Zuriati Zakaria
11.55 - 13.00		*Lunch*	

CK: CST-KSIEC joint special session

Friday, 14th February 2025
AMETHYST

Time	Code	Title	Presenter
CST-KSIEC joint special session			
Chair Assoc. Prof. Wittawat Saenrang **Co-chair** Dr. Jakkarin Limwongyut			
13.00-13.15	CK-I-01	High-performance blue OLEDs based on organic functional materials	Prof. Jongwook Park
13.15-13.30	CK-I-02	ESIPT Derivatives as Efficient Solid-State Fluorophores for Electroluminescent Devices and Luminescent Solar Concentrators	Prof. Vinich Promarak
13.30-13.45	CK-I-03	Direct measurement of interaction forces between biopolymers using a Surface Forces Apparatus	Assoc. Prof. Dong Woog Lee
13.45-14.00	CK-I-04	3D Printing of Polymer Network for Conductive Sensors	Asst. Prof. Benjaporn Narupai
14.00-14.15	CK-I-05	Membrane Technology for Carbon Neutral Society	Assoc. Prof. Jeong Kim
14.15-14.30	CK-I-06	Silicon Photonics: Reducing the Carbon Footprint of Data Centers	Dr. Teerapat Rutirawut
14.30-14.45	CK-I-07	Particle Adhesion on Thin Liquid Layer	Assoc. Prof. Sanghyuk Wooh
14.45-15.00	CK-I-08	Photo-induced two-dimensional electrons at metal oxide surfaces and their conceptual multifunctional devices	Assoc. Prof. Worawat Meevasana

EE - Environmental Chemistry and Renewable Energy

Thursday, 13th February 2025

STARLING

Time	Code	Title	Presenter
EE1 Physicochemical and chemical treatment processes for wastewater **EE5 Techniques for environmental monitoring and analysis**			
Chair Assoc.Prof. Eugene Bacolod **Co-chair** Dr.Teera Butburee			
15.30 - 15.50	EE-I-01	Innovative fluorescent sensors for environmental and food security protection and the strategy to enhance their sensitivities	Prof. Nantanit Wanichacheva
15.50 - 16.10	EE-I-02	Recovery magnesium and calcium from seawater desalination brine using hydrate technology	Dr. Hai Truong-Lam
16.10 - 16.25	EE-O-01	[5]Helicene-based fluorescence derivatives for detecting heavy metal contaminants in environmental samples and application as fluorescence marker in petroleum product	Dr. Nirawit Kaewnok
16.25 - 16.40	EE-O-02	Removal of contaminants from river Jakara usingiron oxide nano particles prepared from Citrulluslanatus fruit waste	Dr. Paul Ameh
16.40 - 16.50		*Break*	
EE2 Water quality parameters and monitoring techniques **EE7 Energy storages, e.g., batteries, supercapacitors, hydrogen storages, and thermal storages**			
Chair Prof. Nantanit Wanichacheva **Co-chair** Assoc. Prof. Kitirote Wantala			
16.50 - 17.15	EE-KN-01	Black mass: An initial step in LIB recycling	Prof. Nurak Grisdanurak
17.15 - 17.35	EE-I-03	Biomarkers used in aquatic toxicology as affected by pollutants	Assoc.Prof. Eugene Bacolod
17.35 - 17.50	EE-O-03	Direct Regeneration of $LiNi_{0.8}Mn_{0.1}Co_{0.1}O_2$ from Different Degraded Li-ion Batteries	Ms. Phontip Tammawat
17.50 - 18.05	EE-O-04	The total use of rice husk to create highly porous silicon and sulfur-dopedactivated carbon for the fabrication of high-performance silicon-anode lithium-ion capacitors	Mr. Thanapat Jorn-am
18.05 - 18.20	EE-O-05	One-step Recycling Process of MnO_2/C from Spent Alkaline Battery for Zn-ion Battery Application	Ms. Auscha Thongsri
18.20 - 18.35	EE-O-06	Development of high-performance, low-cost hybrid ASCs from corn leaf-derived activated carbon and copper hydroxy compounds	Ms. Nareekarn Meebua

Friday, 14th February 2025
STARLING

Time	Code	Title	Presenter
EE6 Renewable energy, e.g., solar, wind, hydropower, biomass, hydrogen			
Chair Assoc.Prof. Ekasith Somsook **Co-chair** Assoc.Prof. Rapee Utke			
8.30 - 8.55	EE-KN-02	Efficient, Selective Production of Solar Fuels and Value-Added Chemicals on 2D-Colloidal Photocatalysts	Prof. Doh Lee
8.55 - 9.10	EE-O-07	Kinetics and Optimization of Glucose Production from Ofada-Rice husk by Microwave-assisted Alkali Pretreatment and Acid Hydrolysis	Mr. Uzosike Okechukwu
9.10 - 9.25	EE-O-08	The Impact of Various Factors on Biohydrogen Production through Dark Fermentation	Dr. Angkana Khuenpetch
9.25 - 9.40	EE-O-09	Removal of Hydrogen Sulfide in Biogas Using Biomass Ash-Based Adsorbent	Ms. Rusmanee Ma
9.40 - 9.55	EE-O-10	Hydroisomerization of palm fatty acid distillate for production of sustainable aviation fuels over Cu promoted Ni-based catalysts supported on modified zeolites	Mr. Warodom Hunsiri
9.55 - 10.10	EE-O-11	Prototype for biogas and fertilizer production from cow manure and palm oil decanter cake	Mr. Dhammachai Chongsuksri
10.10 - 10.30	EE-I-04	Engineering Coordinative Environment of Single Atom Catalysts for Efficient and Selective Chemical Conversion	Dr.Teera Butburee
10.30 - 10.45	*Coffee break*		
EE6 Renewable energy, e.g., solar, wind, hydropower, biomass, hydrogen			
Chair Prof. Doh Lee **Co-chair** Assoc.Prof. Pei-Chen Su			
10.45 - 11.05	EE-I-05	Sustainable biofuel production utilizing alkaline catalysts in a packed-bed reactor	Assoc.Prof. Kitirote Wantala
11.05 - 11.20	EE-O-13	Two-Dimensional, Ultrathin MoS_2 Nanoplates Fabricated Within One-Dimensional N-Doped Porous Carbon Nanofibers as Counter Electrodes for Dye-Sensitized Solar Cells	Ms. Saranporn Limtasopon
11.20 - 11.40	Platinum Talk	TRR Group Talk: Biochemicals and Biofuels	TRR Group
11.35 - 11.55			
11.55 - 13.00	*Lunch*		

FA - Food and Agricultural Chemistry

Friday, 14th February 2025
RUBY

Time	Code	Title	Presenter
FA1 Material Science and Nanotechnology Applications in Food, Agriculture, and Cosmetics			
Chair Assoc. Prof. Jirawat Yongsawatdigul **Co-chair** Asst. Prof. Piyanut Pinyou			
08.30 - 08.55	FA-KN-01	Kokumi Substances in Thai Fermented Freshwater Fish "Pla-ra"	Prof. Preecha Phuwapraisirisan
08.55 - 09.15	FA-I-01	Retrogradation/Crystallization behavior of starch in relation to resistant starch formation	Assoc. Prof. Sunanta Tongta
09.15 - 09.30	FA-O-01	Co-encapsulation of resveratrol and piperine using zein/beta-cyclodextrin composite nanoparticles for oral delivery	Ms. Asmita Khanal
09.30 - 09.45	FA-O-02	Controlled release and stability of elderberry extract in alginate/carrageenan beads: insights from physical characterization and GI simulation	Mr. Thasaphol Phaisanwanichkul
09.45 - 10.00	FA-O-03	Activity and stability enhancement of proteolyticenzyme obtained from pineapple waste for aquatic feed application	Ms. Chanyakan Skulborisutsuk
10.00 - 10.15	FA-O-04	Influence of synbiotic feed supplementation on the variation in sow milk metabolome revealed by 1H-NMR metabolomics approach	Ms. Methaporn Juarjan
FA2 Antioxidants, Phytochemicals, and Botanicals			
10.15 - 10.30	FA-O-05	Valorization of Bamboo Leaves, Flavonoid Extraction, Product Development, and Community-Based Market Expansion for Sustainable Economic Impact	Mr. Ratchaphong Katrung
FA3 Chemistry of Food Additives, Contaminants, Agro-chemicals, and Toxicologys			
10.30 - 10.45	FA-O-06	Production of L-lysine from Sugarcane Molasses	Mr. Sukrit Aemareerut
10.45 - 11.00			
11.00 - 11.15		*Coffee break*	

IC - Inorganic Chemistry

Friday, 14th February 2025
FALCON2

Time	Code	Title	Presenter
Chair Assoc. Prof. Thanthapatra Bunchuay **Co-chair** Assoc. Prof. David J. Harding			
8.30 - 8.55	IC-KN-01	Atomic-resolution structure analysis inside an adaptable porous framework	Prof. Masaki Kawano
8.55 - 9.15	IC-I-01	Insight into titanium-based complexes for the ring-opening polymerization of cyclic ester monomers	Assoc. Prof. Pimpa Hormnirun
9.15 - 9.30	IC-O-01	Catalytic polymerization of cyclopentenone and its analogues by aluminium-based Lewis acid complexes	Ms. Neelofur Sou'aad Jaunnoo
9.30 - 9.45	IC-O-02	Pyrrolylaldiminate magnesium complexes for the production of polylactide and chemical recycling	Ms. Sirawan Kamavichanurat
9.45 - 10.00	IC-O-03	Heterocyclic modification leading to luminescent 0D metal organochalcogenide with stable X-ray scintillating properties	Mr. Rattapon Khamlue
10.00 - 10.15	IC-O-04	Electro-Polymerization of An Inorganic-Polymer Nanocomposite Film Applied for The Modification of Screen-Printed Electrodes	Dr. Porntip Khownarumit
10.15 - 10.30	IC-O-05	Naga[2]rotaxane in Metallo-Supramolecular Assembly	Mr. Pasit Srisawat
10.30 - 10.45	IC-O-06	Multifunctional fluorescent Eu-MOF probe for tetracycline antibiotics and dihydrogen phosphate sensing and visualizing latent fingerprints	Asst. Prof. Theanchai Wiwasuku
10.45 - 11.05			
11.05 - 11.15		*Coffee break*	
Chair Assoc. Prof. David J. Harding **Co-chair** Assoc. Prof. Pimpa Hormnirun			
11.15 - 11.35	CST Awardee 1	Application of zeolites and their composites as adsorbents and heterogeneous catalysts	Prof. Jatuporn Wittayakun
11.35 - 11.55	IC-I-02	Crystal Engineering of Rare-Earth based MOFs for CO_2 Adsorption	Assoc. Prof. Kittipong Chainok
11.55 - 13.00		*Lunch*	

IE - Industrial and Engineering Chemistry

Friday, 14th February 2025
STARLING

Time	Code	Title	Presenter
IE **Industrial and Engineering Chemistry**			
Chair Prof. Sirirat Jitkarnka **Co-chair** Dr. Supunnee Junpirom			
13.00 - 13.25	IE-KN-01	Digital Transformation for Sustainable Petrochemistries	Mr. Choosak Kiwjaroen
13.25 - 13.45	IE-I-01	Thermophysical data and models as a basis for improved or novel designs in chemical process simulation	Prof. Juergen Rarey
13.45 - 14.00	IE-O-01	Acyclic Lithium Ionophores Outperforming Crown Ether in Selective Recognition and Recovery of Lithium	Mr. Thanayot Jullapak
14.00 - 14.15	IE-O-02	Biodiesel production from industrial poultry waste oil in the production process	Ms. Chayhachon Worawongsorn
14.15 - 14.30	IE-O-03	Effects of Oxidative Torrefaction on the Properties and %EMC of Untreated and Water-Washed Durian Peel	Mrs. Nuttawan Soukaew
14.30 - 14.45	IE-O-04	Development of neural network architectures for prediction of energy consumption and carbon dioxide emission in natural gas separation process	Mr. Bhiranat Pongsri

MN - Material Chemistry and Nanotechnology

Thursday, 13th February 2025
FALCON2

Time	Code	Title	Presenter
MN1 Materials synthesis and characterization			
Chair Assoc. Prof. Theeranun Siritanon **Co-chair** Prof. Vinich Promarak			
15.30 - 15.55	MN-KN-01	Hierarchically structured nanoporous aluminosilicates and their catalytic applications	Prof. Gopinathan Sankar
15.55 - 16.15	MN-I-01	Catalytic insights for biofuel upgrading and CO_2 reduction	Dr. Pongtanawat Khemthong
16.15 - 16.30	MN-O-01	Metal-organic nanotubes with π-lacking and fluorescent ligands	Dr. Phattananawee Nalaoh
16.30 - 16.45	MN-O-02	Solution growth of hybrid organic-inorganic materials: Are insoluble materials really insoluble?	Ms. Petcharaphorn Chatsiri
16.45 - 17.00	MN-O-03	Functional Finishing of Acrylic Fabrics via Microwave Radiation Technology	Ms. Piyakorn Boonmak
17.00 - 17.20	MN-I-02	Fluorescence quenching detection of oxytetracycline with functionalized Ta2C Quantum Dots	Prof. Yan Li
17.20 - 17.40	MN-I-03	Blue glazes: from the laboratory to the Temple of Heaven	Prof. Peng Jiang
17.40 - 17.55	MN-O-04	Microwave-assisted controlled synthesis of size-tunable iron oxide nanocubes with benchmark magnetic heating properties	Dr. Wid Mekseriwattana
17.55 - 18.10	MN-O-05	Surface Modification and Dyeing of BUALUANG-Banana Fabric with Lignin and Silver Nanoparticles for Enhanced Antibacterial and UV Protection Properties	Mr. Sirachat Nongsok
18.10 - 18.25	MN-O-06	Novel zinc-based luminescence metal-organic frameworks as high solid-state red to near-infrared emission phosphors for LED applications	Mr. Arthit Pikulngam

Friday, 14th February 2025
FALCON1

Time	Code	Title	Presenter
MN1 Materials synthesis and characterization **MN4** Advanced materials and emerging technologies **MN5** Smart and responsive materials			
Chair Prof. Vinich Promarak **Co-chair** Dr. Phattananawee Nalaoh			
08.30 - 08.55	MN-KN-02	Conjugated oligoelectrolytes: a versatile platform for membrane modifications	Prof. Guillermo Bazan
08.55 - 09.15	MN-I-04	Molecular Siblings: Single Component White Light Emissive Molecular Europium Complexes for Light Emitting Diodes	Dr. Sivakumar Vaidyanathan
09.15 - 09.30	MN-O-07	Sustainable Conversion of Sawdust into 3D-Printed Composite Materials for Environmental Application	Mr. Adel Jalaee
09.30 - 09.45	MN-O-08	High-Performance Self-Absorption Free Luminescent Solar Concentrators based on Excited-State Intramolecular Proton Transfer Dyes	Mr. Phatsathorn Chonlateeroj
09.45 - 10.05	MN-I-05	Aggregation induced emission (AIE) based donor-π-acceptor luminophores and their versatile applications	Dr. Sabita Patel
10.05 - 10.20	MN-O-09	How noncovalent interactions affect the structure and properties of metal-organic frameworks	Prof. Petko Petkov
10.20 - 10.35	MN-O-10	Eco-Friendly Synthesis of Silver Nanoparticles from Spent Coffee Grounds: Antibacterial Application on Fabrics and Toxicity Assessment	Dr. Dewi Kurnianingsih Kusumahastuti
10.35 - 10.50	MN-O-11	Bio-Based Lignin as a Sustainable Flame Retardant for Polyethylene Terephthalate	Ms. Dujdow Niyomdacha
10.50 - 11.05	MN-O-12	Understanding the Mechanism of MOF-derived $Mn_{0.5}Fe_{2.5}O_4$@NC Electrocatalyst in Oxygen Redox Reactions	Dr. Gopalakrishnan Mohan
11.05 - 11.15		*Coffee Break*	
11.15 - 11.30	MN-O-13	Peroxidase Mimetic Activity of Sulfur-Doped Mangosteen Carbon Dots	Ms. Pongsiri Rueangprat
11.30 - 11.45	MN-O-14	Antimicrobial surgical sutures of multilayered nano thin films of ampicillin-modified silver nanoparticles	Ms. Napat Naiyavitit
11.45 - 12.00	MN-O-15	Magnetic Fe_3O_4/CZTS Composite: Preparation and Application for Efficient Gold Ion Recovery	Ms. Kittiya Tarahan
12.00 - 13.00		*Lunch*	

Time	Code	Title	Presenter
MN1 Materials synthesis and characterization **MN4** Advanced materials and emerging technologies			
Chair Prof. Pierre-Henri AUBERT **Co-chair** Prof. Vinich Promarak			
13.00 - 13.25	MN-KN-03	MOFs for Carbon Neutral Society: as Effective Solid Catalysts for Waste Biomass and Plastic Conversion & as Ionic Selective Membranes for Power Generation	Prof. Kevin C.-W. Wu
13.25 - 13.45	MN-I-06	Hierarchical assembly of porous monolayers from metallo-supramolecular cages	Prof. Yi-Tsu Chan
13.45 - 14.00	MN-O-16	Prepared and modified cellulose from pineapple bran using potassium permanganate as a heavy metal adsorbent	Asst. Prof. Kittiya Wongkhan
14.00 - 14.15	MN-O-17	Sustainability in celadon glazes using lampang kaolin waste and longan wood ash on the characteristics and heat-resistant properties for sankampang kiln wares	Asst. Prof. Nophawan Dechboon
14.15 - 14.30	MN-O-18	ZnS Synthesis on BUALUANG Banana Fabrics for Methylene Blue Removal	Ms. Thanawan Kaewsri
14.30 - 14.45	MN-O-19	Preparation and Characterization of Magnetic Fe_3O_4/ CZTS-Au Composite for Effective Photocatalytic Degradation of Titan Yellow Dye	Ms. Maniwara Boonkam

Friday, 14th February 2025
FALCON2

MN2 Nanomaterials design, fabrication, lithography, and functionalization, **MN3** Chemistry of nanomaterials **MN6** Surface chemistry and interface engineering			
Chair Dr. Pongtanawat Khemthong **Co-chair** Dr. Sabita Patel			
13.00 - 13.25	MN-KN-04	Cyclodextrin-based nanocarriers for tumor-targeted delivery	Prof. Dae-Duk Kim
13.25 - 13.45	MN-I-07	Microwave-assisted synthesis of Covalent Organic Frameworks and their composites for application in energy storag	Prof. Pierre-Henri Aubert
13.45 - 14.00	MN-O-20	Chirality induction and regioselective photocyclodimerization of anthracene-2-carboxylate in organic-silica nanoribbons	Asst. Prof. Wijak Yospanya
14.00 - 14.15	MN-O-21	Modified Cellulose Nanocrystals as Hair Straightening Agents for Cosmetic Applications.	Ms. Ruby Osei-Bonsu
14.15 - 14.30	MN-O-22	Nanoscale precision on a budget: A lab-built super-resolution fluorescence microscope for single-particle tracking	Mr. Kanoksak Saelee
14.30 - 14.45	MN-O-23	Enhancing hydrophobicity of calcium carbonate from green mussel shells waste for nanoplastics removal	Ms. Katty Rahayu
14.45 - 15.00	MN-O-24	Porous Organic Polymers Containing Redox-Active Disulfide as Electrode Materials for High-Performance Lithium-Sulfur (Li-S) Batteries	Mr. Wittawat Punyaarthansakun

NP - Natural Products, Biological Chemistry and Chemical Biology

Friday, 14th February 2025
TURQUOISE

Time	Code	Title	Presenter
NP1 **Natural Products, Biological Chemistry and Chemical Biology**			
Chair Prof. Wipa Suginta **Co-chair** Prof. James Ketudat-Cairns			
08.30 - 08.55	NP-KN-01	Structure of cyanobacterial photosystem I complexed with cytochrome c6 and ferredoxin	Prof. Genji Kurisu
08.55 - 09.20	NP-KN-02	Chemistry without borders: green chemistry and natural product research	Prof. Prasat Kittakoop
09.20 - 09.40	NP-I-01	Exploring new antimicrobial targets: *in vitro* and live cell inhibition of Asp-tRNA^{Asn}/Glu-tRNA^{Gln} amidotransferase (GatCAB) by aminoacyl-adenosine analogs	Assoc. Prof. Pitak Chuawong
09.40 - 09.55	NP-O-01	Anti-xanthine oxidase and anti-breast cancer geranyl-resorcinol derivatives from *Hericium erinaceus* and structure revision of 3-[2,3-dihydroxy-4-(hydroxymethyl) tetrahydrofuran-1-yl]-pyridine-4,5-diol	Dr. Tawatchai Thongkongkaew
09.55 - 10.10	NP-O-02	Anti-tumor effects of pinocembrin in hepatocellular carcinoma: A multi-kinase inhibitor flavonoid isolated from *Uvaria dulcis* Dunal	Assist. Prof. Charupong Saengboonmee
10.10 - 10.25		*Coffee break*	
NP2 **Natural Products, Biological Chemistry and Chemical Biology**			
Chair Prof. Prasat Kittakoop **Co-chair** Assoc. Prof. Panida Khunkaewla			
10.25 - 10.45	NP-I-02	Novel design of chitinase immobilization for high value chitooligosaccharide production from chitin conversion	Prof. Wipa Suginta
1045 - 11.05	NP-I-03	Advanced functional materials based on renewable chemicals for a sustainable society	Prof. Braja Bag
11.05 - 11.25	NP-I-04	Total syntheses of sulfur-containing complex pyrroloiminoquinone alkaloids	Asst. Prof. Juri Sakata
11.25 - 11.40	NP-O-03	Synthesis of viriditins A and B	Dr. Sopan Khandare
11.40 - 11.55	NP-O-04	Impact of SARS-CoV-2 RBD mutations on ACE2 Binding: Insights from molecular dynamics simulations	Mr. Linh Truong
12.00 - 13.00		*Lunch*	

OM - Organic Synthesis and Medicinal Chemistry

Thursday, 13th February 2025
SAPPHIRE

Time	Code	Title	Presenter
OM1 **Synthetic methodology & total synthesis**			
Chair Prof. Rungnapha Saeeng **Co-chair** Assoc. Prof. Punlop Kuntiyong			
15.30 - 15.55	OM-KN-01	Does the total synthesis of therapeutically significant natural products have a future in the era of sustainability?	Prof. Martin Banwell
15.55 - 16.15	OM-I-01	Recent Progress in the Synthesis of Natural Products	Assoc. Prof. Roderick Bates
16.15 - 16.30	OM-O-01	The two-step synthetic strategies for the straight-chain glycan motifs found on the surface of Mycobacterium tuberculosis	Dr. Nutchapong Suwanwong
16.30 - 16.45	OM-O-02	Synthesis and Structural Modification of Thymidine Derivatives via Multicomponent Pd-Catalyzed Coupling Reaction	Ms. Kamonwan Jaithum
16.45 - 16.55	*Coffee Break*		
OM2 **Synthetic methodology & total synthesis**			
Chair Assoc. Prof. Roderick Bates **Co-chair** Dr. Watchara Srimontree			
16.55 - 17.15	OM-I-02	Double nucleophilic addition to chiral succinimide for enantiodivergent synthesis of Amaryllidaceae alkaloids from L-aspartic acid	Assoc. Prof. Punlop Kuntiyong
17.15 - 17.30	OM-O-03	One-pot synthesis of O-glycosyl propargylamine by O-glycosylation-A3 coupling reaction	Ms. Jarinya Promjaro
17.30 - 17.45	OM-O-04	Confirmation of the structure of (±)-preisomide by total synthesis	Mr. HongKang Teo
17.45 - 18.00	OM-O-05	Photoinduced acylation of quinoxalin-2(1*H*)-ones via electron donor-acceptor complexes	Dr. Worawat Niwetmarin
18.00 - 18.15	OM-O-06	Beyond conventional organic synthesis: Transition-metal catalysis for a sustainable future	Dr. Watchara Srimontree

Friday, 14th February 2025
SAPPHIRE

Time	Code	Title	Presenter
OM3 **Molecular recognition & chemosensor**			
Chair Prof. Tirayut Vilaivan **Co-chair** Asst. Prof. Rung-Yi Lai			
08.30 - 08.55	OM-KN-02	Fluorescent chemosensors and imaging agents	Prof. Tony James
08.55 - 09.15	OM-I-03	Development of Fluorogenic Molecular Rotors for Detecting Human Islet Amyloid Polypeptide	Assoc. Prof. Wei-Min Liu
09.15 - 09.30	OM-O-07	Heteroditopic Macrocyclic Ligands for Recognition of Alkali Metal/Halide Ion Pairs	Mr. Theerapat Khianjinda
09.30 - 09.45	OM-O-08	Non-symmetrical Macrocyclic Ligands Containing the Halogen-bond (XB) and Hydrogen-bond (HB) Donors Capable of Enhanced Anion Affinities and Selectivity in Aqueous Media	Mr. Sutthipoj Vigromsitdet
09.45 - 10.00	OM-O-09	Novel coumarin-based fluorescent sensors for selective detection of F^-, CN^-, HPO_4^{2-}, SO_4^{2-} and Fe^{3+} ions	Asst. Prof. Rukkiat Jitchati
10.00 - 10.15	OM-O-10	Imidazole-based styryl dyes as viscosity-sensitive agents	Mr. Sirimongkhon Aryamueang
10.15 - 10.30		*Coffee Break*	
OM5 **Bioorganic & medicinal chemistry**			
Chair Assoc. Prof. Wei-Min Liu **Co-chair** Asst. Prof. Rung-Yi Lai			
10.30 - 10.50	OM-I-04	A highly potent fluorinated rhodacyanine induces cancer cell apoptosis via mitochondrial damage and cell cycle arrest	Dr. Chanat Aonbangkhen
10.50 - 11.05	OM-O-11	Synthesis of furanyl- and thiophenyl-3-phenyl-1*H*-indole-2-carbohydrazide derivatives as potent tubulin inhibitors and anticancer agents	Dr. Rungroj Saruengkhanphasit
11.05 - 11.20	OM-O-12	Halogenated BOIMPY Photosensitizers for Imaging-Guided Photodynamic Therapy: Synthesis, Optical Properties and Tumor Inhibition Efficiency	Dr. Worakrit Saiyasombat
11.20 - 11.35	OM-O-13	Development of cationic conjugated oligoelectrolytes with membrane-active antimicrobial activities	Dr. Jakkarin Limwongyut
11.35 - 11.50	OM-O-14	Employing Self-Attention Transformers for the Discovery of Novel Small Molecules in Breast and Cervical Cancer Treatment	Dr. Ittipat Meewan
12.00 - 13.00		*Lunch*	

Time	Code	Title	Presenter
OM6 **Bioorganic & medicinal chemistry**			
Chair Prof. Tirayut Vilaivan **Co-chair** Assoc. Prof. Anyanee Kamkaew			
13.00 - 13.20	OM-I-05	Development of RNA targeted cell-based fluorescent probes	Prof. Dev Arya
13.20 - 13.40	OM-I-06	Utilizations of nanotechnology in medicinal chemistry: materials design and theranostic applications	Dr. Kantapat Chansaenpak
13.40 - 13.55	OM-O-15	Development of MRI-based imaging probes for early diagnosis	Prof. Suying Xu
13.55 - 14.10	OM-O-16	Rational Development of Human Serum Albumin Selective Fluorescent Probes	Mr. Yo-Cheng Chang
14.10 - 14.30	CST Awardee 2	Designing Photosensitizers for Maximized Phototheranostic Efficiency	Assoc. Prof. Anyanee Kamkaew

PC - Polymer Chemistry and Bio-based materials

Thursday, 13th February 2025

QUARTZ

Time	Code	Title	Presenter
Chair Prof. Suwabun Chirachanchai **Co-chair** Assoc. Prof. Nitinat Suppakarn			
15.30 - 15.55	PC-KN-01	Supramolecular polymers for nanomedicine and sustainable development	Prof. Jun Li
15.55 - 16.15	PC-I-01	Highly stretchable hydrogels and organogels with N-vinylamides	Prof. Hiroharu Ajiro
16.15 - 16.30	PC-O-01	Development of chitosan loaded peppermint extracted-based anti-acne hydrogel	Ms. Thipawal Naewthong
16.30 - 16.45	PC-O-02	Green solvent-based fabrication of polystyrene and biochar adsorbents for norfloxacin removal	Mr. Thanh Danh Huynh
Chair Prof. Chi-How Peng **Co-chair** Assoc. Prof. Tatiya Trongsatitkul			
16.45 - 17.00	PC-KN-02	Functional polymeric membranes for producing green hydrogen using water electrolysis technology	Prof. Sang Yong Nam
17.00 - 17.25	PC-O-03	Biobased Polybenzimidazole/sulfonated Nanolignin Composite Membrane for Energy Storage Application	Ms. Fernanda Britodos Santos
17.25 - 17.40	PC-O-04	Boron-Nitrogen Functional Supramolecular Polymers	Dr. Pongphak Chidchob
17.40 - 17.55	PC-O-05	Effect of citric acid on mung bean [Vigna radiata (L.)] film characteristics for potential electrolytic application	Dr. Wanrudee Kaewmesri

Friday, 14th February 2025
QUARTZ

Time	Code	Title	Presenter
Chair Prof. Jun Li **Co-chair** Assoc. Prof. Wimonlak Sutapun			
8.30 - 8.55	PC-KN-03	15 Years of renewable plastics development: lessons learned	Prof. Gert-Jan Gruter
8.55 - 9.15	PC-I-03	Natural Product of Hinokitiol and Its Derivatives in Controlling Vinyl Acetate Radical Polymerization	Prof. Chi-How Peng
9.15 - 9.30	PC-O-06	Improvement of asphalt properties by nitrile rubber glove scraps	Ms. Panida Ketsri
9.30 - 9.45	PC-O-07	Thermal insulation performance of silica aerogel composite with different pre-vulcanization times of natural rubber latex	Ms. Chayanan Boonrawd
9.45 - 10.00	PC-O-08	Elastomeric dielectric material from natural rubber composite: effects of copper-doped activated carbon	Assoc. Prof. Nathapong Sukhawipat
10.00 - 10.15	PC-O-09	Finite Element Analysis of Density Reduction Effects on Impact Protection in Eco-friendly Natural Rubber Latex Cushions	Mr. Theerapat Taweebraksa
10.15 - 10.30	PC-O-10	Preparation and Characterization of Paving Blocks From Polyethylene-Based Plastic Waste and Natural Fibre	Dr. Abubakar Birnin-Yauri
10.30 - 10.45	PC-O-11	Apatite growth on bioactive glass modified with biopolymer	Ms. Phimmada Nithipongwarodom
10.45 - 11.15		*Coffee Break*	
Chair Assoc. Prof. Gert-Jan Gruter **Co-chair** Assoc. Prof. Chaiwat Ruksakulpiwat			
11.15 - 11.40	PC-KN-04	Revisiting Starch as Sustainable Polymeric Materials: Learning from the Past for Practical Applications in the Future	Prof. Suwabun Chirachanchai
11.40 - 11.55	PC-O-12	Development of MnO_2 modified bacterial cellulose coatings for oil-water separation	Ms. Juree Chunjit
11.55 - 12.10	PC-O-13	Cellulose Nanocrystal-Based Ratiometric Fluorescence Probes with Modified Rhodamine B and Fluorescein	Dr. Jongjit Chalitangkoon
12.10 - 13.00		*Lunch*	

PT - Physical and Theoretical Chemistry

Thursday, 13th February 2025

AMBER

Time	Code	Title	Presenter
Chair Prof. Jumras Limtrakul **Co-chair** Prof. Kritsana Sagarik			
15.30 - 15.55	PT-KN-01	Design of melting MOFs and application to soft materials	Prof. Satoshi Horike
15.55 - 16.15	PT-I-01	Ferroelectric materials for photocatalytic water splitting: DFT prediction & experimental validation	Prof. Lichang Yin
16.15 - 16.30	PT-O-01	The theoretical study of competitive behavior between CO_2 and H_2O in CALF-20 under flue gas condition	Mr. Poobodin Mano
16.30 - 16.45	PT-O-02	Insights into the product selectivity in iridium-catalyzed transfer dehydrogenation of alkane	Mr. Norraset Cheevatanomsak
16.45 - 17.10	PT-KN-02	Shape Effects of Colloidal Quantum Dots	Prof. Yong Hyun Kim
17.10 - 17.30	PT-I-02	A Computational View on Single File Diffusion and Its Application to Gas Separation	Prof. Cheng-chau Chiu
17.30 - 17.50	PT-I-03	Multistate transition metal carbonyl bonding interaction through spin-orbit coupling	Dr. Kaito Takahashi
17.50 - 18.10	PT-I-04	Revisiting the Mechanism of Fluoroacetate Dehalogenase-Catalyzed Degradation of Fluorocarboxylic Acids using DFT Calculations	Dr. Manussada Ratanasak
18.10 - 18.25	PT-O-03	The theoretical design of metal-organic frameworks for CO_2 capture in humid flue gas	Mr. Sodara Thao

Friday, 14th February 2025
AMBER

Time	Code	Title	Presenter
Chair Dr. Supawadee Namuangruk **Co-chair** Prof. Suwit Suthirakun			
08.30 - 08.55	PT-KN-03	Data science approaches to MOF sensor design and chemical biology	Prof. Daniel Packwood
08.55 - 09.15	PT-I-05	Influence of Dopants on Cerium Oxide Reactivity in Hydrocarbon Oxidation	Assoc. Prof. Alejandro Montoya
09.15 - 09.35	PT-I-06	Bridging the Pressure Gap between Ideal and Real Surfaces using Machine Learning Molecular Dynamics	Prof. Yoshitada Morikawa
09.35 - 09.50	PT-O-04	Reaction Pathways for Photocatalytic Water Splitting to Enhance Hydrogen Production: A Theoretical Study	Mr. Tanongsak Sukkasem
09.50 - 10.05	PT-O-05	Metadynamics study of oxygen evolution reaction over Ni-doped $BaTiO_3$ with a reactive neural network potential	Mr. Kajjana Boonpalit
10.05 - 10.25	PT-I-07	Promising two-dimensional transition metal carbide materials (MXenes) for catalysis and sensing applications	Dr. Anchalee Junkaew
10.25 - 10.45	PT-I-08	The Ratings Concept as a Combined Density Functional Theory and Microkinetic Modeling Tool for an on-Line Optimization of Integrated Carbon Capture and Conversion	Assoc. Prof. Supareak Prasertdam
10.45 - 11.00		*Coffee Break*	
11.00 - 11.20	PT-I-09	Microscopic understanding of interface at liquid/solid-oxide and molecular adsorption on the surface by neural network potentials	Prof. Akira Nagayama
11.20 - 11.35	PT-O-06	Dual Atom Decoration on Ni_3S_2 Bifunctional Catalysts as Cathodes of Zn–air Batteries: A First-Principles Study	Mr. Pariwut Falun
11.35 - 11.50	PT-O-07	Computational Screening of Single Atom Catalysts on $Mo_2B_2O_2$ as Cathode Materials of High-Performance Lithium-Sulfur Batteries	Mr. Wongsathorn Kaewraung
11.50 - 12.05	PT-O-08	Screening of Phytochemicals Compounds from Chasmanthera dependens and Carissa edulis as Potential Inhibitors of Carbonic Anhydrases CA II (3HS4) Receptor using a Target-based Drug Design	Mr. Abayomi Owonikoko
12.05 - 13.00		*Lunch*	

S1: Emerging Technologies for Climate Change Solutions

Thursday, 13th February 2025
FALCON1

Time	Code	Title	Presenter
S1 Emerging Technologies for Climate Change Solutions			
Chair Prof. Anongnat Somwangthanaroj **Co-chair** Prof. Siriporn Jungsuttiwong			
15.30 - 15.55	S1-KN-01	Roles of Research Technology for Climate Change Solutions in Thailand	Assoc. Prof. Wongkot Wongsapai
15.55 - 16.15	S1-I-01	Enhanced Zinc-Ion Battery Performance through NH_4^+ Preintercalation: Understanding MnO_2 Cathode Stability	Assoc. Prof. Soorathep Kheawhom
16.15 - 16.35	S1-I-02	From Waste to Value: Converting Spent Primary Batteries into Zinc-ion Batteries and Photocatalysts	Prof. Rojana Pornprasertsuk
16.35 - 16.55	S1-I-03	Recent advance in photocatalyst for new hydrogen energy source	Prof. Tomoaki Watanabe
16.55 - 17.15	S1-I-04	X-ray Absorption Spectroscopy : The State of The Art Synchrotron-based Characterization for Energy Materials	Dr. Pinit Kidkhunthod
17.15 - 17.40	S1-KN-02	Enhancing Electrochemical Performance of Perovskite Electrodes through Surface Modification Techniques	Prof. Pei-Chen Su
17.40 - 18.00	S1-I-05	Functional materials for low- cost processing, high-performance, and stable perovskite solar cells and rechargeable Zinc-based batteries	Dr. Rongrong Cheacharoen
18.00 - 18.15	S1-O-01	Direct flue gas conversion to syngas by coupling O_2 reduction reaction with CO_2 reduction reaction in membrane electrode assembly	Dr. Suwiwat Sangon
18.15 - 18.30	S1-O-02	Mycelial Membranes as a Sustainable Enzyme Immobilization Platform for Water Treatment Applications	Ms. Victoria French

Friday, 14th February 2025
GRAND BALLROOM (A)

Time	Code	Title	Presenter
S1 Emerging Technologies for Climate Change Solutions			
Chair Assoc. Prof. Soorathep Kheawhom **Co-chair** Dr. Chanon Pornrungroj			
08.30 - 08.55	S1-KN-03	Tailoring Ni based Nanocatalysts for CO_2 upcycling	Prof. Jun Huang
08.55 - 09.15	S1-I-06	Advanced Metrology for Studying Catalyst Degradation & Li-ion Battery Drying Process	Prof. Yeshui Zhang
09.15 - 09.35	S1-I-07	Advancing zinc-ion battery electrolytes through molecular dynamics and experimental studies	Asst. Prof. Manaswee Suttipong
09.35 - 09.55	S1-I-08	Synchrotron-based X-ray diffraction and grazing-incident X-ray absorption spectroscopy for advanced characterizations of aqueous zinc-ion batteries	Dr. Suttipong Wannapaiboon
09.55 - 10.15	S1-I-09	Direct regeneration method of spent NMC and LFP lithium-ion batteries	Prof. Lukman Noerochim
10.15 - 10.35	S1-I-10	Combined treatments of graphite from spent Zn-C batteries for Li-ion batteries	Asst. Prof. Jitti Kasemchainan
10.35 - 10.50	S1-O-03	Metal single-atom electrocatalysts for carbon-efficient CO_2 conversion from flue gas in a zero-gap electrolyzer	Mr. Sothearoth Heng
10.50 - 11.05	S1-O-04	Direct Production of Formate from Contaminated CO_2 Feed via a Hybrid MOF/BiOI Gas Diffusion Electrode	Ms. Ampawan Prasert
11.05 - 11.15	*Coffee Break*		
11.15 - 11.35	S1-I-11	Thermal Management Strategies for Enhancing Solar Utilization in Solar Fuels Synthesis	Dr. Chanon Pornrungroj
11.35 - 11.50	S1-O-05	Effect of key factors on coupled monoethanolamine-based CO_2 absorption and CO_2 mineralization	Ms. Tanasorn Thumpanisakool
11.50 - 12.05	S1-O-06	CO_2 Capture via Electro-Swing Absorption of Poly(anthraquinone) Materials	Mr. Chanatip Butkaew
12.05 -13.00	*Lunch*		

S2: Novel Materials and Technologies for Future Semiconductors

Friday, 14th February 2025

QUARTZ

Time	Code	Title	Presenter
Chair Assoc. Prof. Panomsak Meemon **Co-chair** Dr. Wanvisa Talataisong			
13.00 - 13.25	S2-KN-01	Hybrid Si photonics based on thin film technology	Prof. Yi-Jen Chiu
13.25 - 13.45	S2-I-01	Modification of Metal Oxide Gas Sensors using Organic Semiconducting Materials Integrated with UV Light Activation	Assoc. Prof. Rawat Jaisutti
13.45 - 14.05	S2-I-02	Tailoring Crystallization in Metal Organochalcogenide Semiconductors: From Large Structures to Nanocrystals	Dr. Watcharaphol Paritmongkol
14.05 - 14.20	S2-O-01	Hot-Injection Synthesis of Metal Organochalcogenide Semiconductors and Their Hole-Transport Properties	Dr. Pimpan Leangtanom

S3: Intersection of Chemistry and Quantum Technology

Friday, 14th February 2025

AMBER

Time	Code	Title	Presenter
Chair Assoc. Prof. David J. Harding **Co-chair** Assoc. Prof. Phimphaka Harding			
13.00 - 13.20	S3-KN-01	Strategies for Accessing Spin Molecular Quantum Processors	Prof. Guillem Aromi
13.20 - 13.40	S3-KN-02	Application of Pulse ESR Method to Quantum Technology	Dr. Hideyuki Hara
13.40 - 13.55	S3-O-01	Substituent and anion effects on spin crossover in Fe(II) complexes with methylated 2-imidazole-based ligands	Dr. Theerapoom Boonprab
13.55 - 14.10	S3-O-02	Magnetic and structural studies of $[Fe(salBzen\text{-}5\text{-}OMe)_2]A$ complexes	Ms. Nadia Natputree

S4: Advancing Healthcare through Bio-Chemistry

Friday, 14th February 2025

TURQUOISE

Time	Code	Title	Presenter
Chairs Assoc. Prof. Varodom Charoensawan, Dr. Chayasith Uttamapinant			
13.00 - 13.25	S4-KN-01	Translational Chemical Biology	Prof. Xiaoguang Lei
13.25 - 13.45	S4-I-01	Theranostic Potential of Riboflavin-Functionalized SPIONs: Advancing Breast Cancer Diagnosis and Treatment	Assoc. Prof. Kanlaya Katewongsa
13.45 - 14.05	S4-I-02	Functional and Mechanistic Characterization of Radical SAM Enzymes	Dr. Qi Zhang
14.05 - 14.25	S4-I-03	Mass Spectrometry in Cancer Diagnosis and Microbial Metabolomics	Prof. Cheng-Chih Hsu
14.25 - 14.40	S4-O-01	Development of New Chemical Agent for Cleaning Implant Devices	Ms. Voradanu Visetvichaporn
14.40 - 14.55	S4-O-02	Exploring compounds in human serum correlated with thyroid function	Dr. Yuki Mizuno
14.55 - 15.10	S4-O-03	Evaluation of species differences in susceptibility to anticoagulant rodenticides based on in silico protein structure analysis	Ms. Moyu Miyamae