



Chula
Chulalongkorn University



PETROMAT
PERDO
ศูนย์ความเป็นเลิศด้านเทคโนโลยีปิโตรเคมีและวัสดุ
Center of Excellence on Petrochemical and Materials Technology



AGENDA (Tentative)
The 32nd PPC Symposium on Petroleum, Petrochemicals, and Polymers
and
The 17th Research Symposium on Petrochemical and Materials Technology
(PPC & PETROMAT SYMPOSIUM 2026)

July 7-9, 2026

July 7, 2026

17.00–19.00	Onsite Registration Room: Mandarin AB
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July 8, 2026

7.45–8.15	Registration Room: Mandarin AB
PART 1	
08.15–08.40	Introduction and Welcome Remarks Professor Dr. Pramoch Rangsunvigit Dean of the Petroleum and Petrochemical College (PPC) Professor Dr. Hathaikarn Manuspiya Director of Center of Excellence on Petrochemical and Materials Technology (PETROMAT) Emeritus Professor Dr. Wiwut Tanthapanichakoon Representative of the President of the Thai Institute of Chemical Engineering and Applied Chemistry (TIC h E) Professor Dr. Yuttanant Boonyongmaneerat Director of Metallurgy and Materials Science Research Institute (MMRI)
08.40–08.55	Opening Remarks Professor Dr. Wilert Puriwat President, Chulalongkorn University Group Photo
08.55–09.00	Sponsorship Recognition
09.00–09.40	Plenary Session “Chemical Recycling, Upcycling of Polyesters by Catalysis” Professor Dr. Kotohiro Nomura Tokyo Metropolitan University, Japan Chair: Dr. Chuanchom Aumnate
09.40–10.00	Break & Networking

PART 2							
	Session: PETROMAT Room: Budsaba	Session 1: AI Digital Tools for Process & Materials Engineering Chair: Dr. Treerat Vacharanukrauh, PPC Room: Kannika	Session 2: Cutting-Edge Catalysis Chair: Prof. Bunjerd Jongsomjit, CU Room: Karaked	Session 4: Frontier Materials for Future Energy Chair: Asst. Prof. Junjuda Unruangsri, CU Room: Rodsukon	Session 5: Advanced Functional Materials Chair: Dr. Nitikorn Ditthawat, MUT Dr. Phimchanok Sakunpongpitiporn, MUT Room: Mandarin A	Session 7: Emerging Net-Zero Technologies Chair: Dr. Chitiphon Chuaicham, CU Room: Pomphairin	
10.00-10.30	Project Progress Report "Postdoctoral and Postgraduate Researchers Incubation Project through the Center of Excellence Platform for Future Industry (Year 6)" [Grant Number B13F690029] (Presented in Thai) Prof. Hathaikarn Manuspiya The Petroleum and Petrochemical College, Chulalongkorn University with the Project's Postdoctoral Fellows	“Theoretical Perspective on Electronic Factors Promoting C-C Coupling for CO2 Reduction Reaction on Graphyne Surface” Dr. Kaito Takahashi Sirindhorn International Institute of Technology (SIIT)	“Phosphorus-Enhanced Supported Metal Catalysts: A Leap in Selective CO2 to CO Conversion” Prof. Tetsuya Shishido Tokyo Metropolitan University	“Amorphous Materials for Next-Generation Batteries” Assoc. Prof. Jie Zhao College of Smart Materials and Future Energy, Fudan University	“Designing color by dye-nanospace interactions” Prof. Makoto Ogawa Institute for Aqua Regeneration, Shinshu University	“Phase-separation-based CO2 capture from air and catalytic CO2 conversions using base polyoxometalates” Prof. Seiji Yamazoe Tokyo Metropolitan University	
10.30-11.00		“Natural Hydrogen Generation via Serpentinization: A Reaction Engineering Perspective” Dr. Cindy Dianita Universitas Indonesia	“Harnessing Pore Architecture and Functional Design in Metal-Organic Frameworks for High-efficiency Ammonia Separation” Dr. Shih-Yuan Chen National Institute of Advanced Industrial Science and Technology	“Lithiated Organic Coverages on SiOx Anodes: Promoting Li2O Formation and Suppressing Lithium Silicate Growth for Stable Lithium-Ion Batteries” Prof. Fu-Ming Wang National Taiwan University of Science and Technology	“Functional Gels and Coatings for a Sustainable Water Environment” Assoc. Prof. Wei Han The Hong Kong University of Science and Technology	“Bio-enhanced Hydrogen Production and Carbon Mineralisation in Mafic-Ultramafic Rocks” Prof. Hamid Roshan University of New South Wales	
11.00-11.10		“Machine Learning in Flow Assurance: Gas Hydrate mitigation” Assoc. Prof. Dr. Bhajan L. Rahanu Universiti Teknologi PETRONAS (UTP)	“Ash particles from biomass residue: Mechanistic understanding of biomass ash adhesion at high temperatures” Dr. Genki Horiguchi National Institute of Advanced Industrial Science and Technology	“Preparation of conductive carbon from softwood kraft lignin and its application” Prof. Yasumitsu Uraki Hokkaido University	“Polyspectral Volumetric Printing – Reshaping the Future of Precision & Multimaterial Manufacturing” Assoc. Prof. Aminul Islam Technical University of Denmark		
11.10-11.20			“Half-Titanocene Catalysts Bearing Unsymmetrical Imidazolin-2-Iminato Ligands for Ethylene/Cyclic Olefin Copolymerization” Ketsanee Jantawan , TMU				
			Session 3: Sustainable and Green Materials Chair: Prof. Peerasak Paoprasert, TU				
11.20-11.30			“Solid-liquid equilibrium and kinetic-adjusted modeling for the fractional crystallization of long-chain fatty acids in tert-butanol” Mr. Tinn Nakdee CU	“Fiber Production Technologies Oriented Toward Environmental Sustainability” Prof. Takeshi Kikutani Tokyo Institute of Technology	“Cellulose as a Versatile Source for Bioproducts” Prof. Mochamad Chalid Universitas Indonesia		“Development of Multifunctional Bi-Layer Electrospun PLA/CMNP and PVA/Aloe vera Nanofibers for Advanced Wound Dressing Applications” Dilanka Dimuthu , PPC
11.30-11.40		“Privacy-Preserving Federated Learning Framework for Distributed Chemical Process Optimization “ Mr. Teetat Pipattaratonchai Triumdom Suksa				“Plant-Mediated Preparation of Zn/Hydroxyapatite and Antibacterial Activity Examination” Mr. Galih Dwiki Ramanda, Institut Teknologi dan kesehatan Muhammadiyah Kalimantan Barat	“Enhancing Climate Resilience and Flood Disaster Prevention in Strategic Industries through SIHYDRO: An IoT-Based Digital Environmental Intelligence Platform” Mr. Muhammad Rayhan , Persero
11.40-11.50		“Enzymatic Hydrolysis of Pectin to Pectic Oligosaccharide: Utilization of Lime Peel Waste” Asst. Prof. Satit Phiyanalinmat , CMU				“Functionalization of regenerated cellulose membrane for electrodialytic separation of Nickel and Iron via assisting chloride coordination” Assoc Prof. Ganjar Fadillah , UII	“Plant-Mediated Synthesis of Cu2O Nanoparticles as Potential Antibacterial Agent” Ms. Ashliha Latifatuni 'sa, UII
11.50-12.00							
12.00-13.30	Lunch						

PART 3							
	Special Lecture and Workshop Room: Budsaba	Session 6: Energy Landscape Transformation Chair: Assoc. Prof. Teerawat Sema, CU Room: Kannika	Session 3: Sustainable and Green Materials Chair: Assoc. Prof. Sasiradee Jantasee, RMUTT Room: Karaked	Session 5: Advanced Functional Materials Chair: Dr. Nithiwach Nawaukkaratharnant, CU Room: Rodsukon	Session 5: Advanced Functional Materials Chair: Assoc. Prof. Stephan Thierry Dubas, PPC Room: Mandarin A	Session 7: Emerging Net-Zero Technologies Chair: Asst. Prof. Nutchapon Chiarasumran, KU Room: Pornphairin	
13.00–13.30	“Accelerating Deep-Tech Innovation into Sustainable Impact” Mr. Alistair D'rozario Arakus Black Co., Ltd. and Mr. Narith Phadungchai KP Venture Partners Co., Ltd. 14.30-14.40 14.40-14.50 14.50-15.00	“Catalytic Transformation of Triglycerides and Fatty Acids into Sustainable Biofuels” Prof. Taufiq Yap Yun Hin Universiti Putra Malasia	“Advanced Functional Carbohydrate Biomaterials for Medical Applications.” Prof. Ravin Narain University of Alberta	“A unified mechanistic framework for drug release from polymeric materials: the Multicomponent Interactive Release (MIR) model” Prof. Pitt Supaphol PPC	“Self-repairing transparent coatings” Assoc. Prof. Daniel Crespy VISTEC	“Offshore Hydrate-Based CO ₂ Sequestration: Challenges and Prospects” Assoc. Prof. Zhenyuan Yin Tsinghua Shenzhen International Graduate School	
13.30–14.00		“Net Zero CO2 target and understanding the potential role of gas hydrates in carbon capture and sequestration at scale” Dr. Rajnish Kumar Indian Institute of Technology Madras	“The Digital Revolution of Recycled Plastics: Materials Informatics Driving the Circular Economy” Prof. Masanobu Naito National Institute for Materials Science	“Colloidal building blocks for advanced materials” Prof. Beniamino Sciacca	“Solvate Crystallization for Separation on Industrial Solvents” Prof. Dr. Adrian Evan Flood VISTEC	“Accelerated Carbon Mineralisation: Bridging Fundamental Mechanisms with Scalable Climate Solutions” Dr. Apurav Krishna Koyande Universiti Teknologi PETRONAS (UTP)	
14.00-14.10		“Organic Waste-to-Energy in Southeast Asia: Pathways for Methane Reduction and Renewable Energy” Assoc. Prof. Andante Hadi Pandyaswargo Waseda University	“FeCl ₃ –Amine Catalyzed Transesterification for Quantitative Chemical Recycling of PET Wastes” Dr. Kanticha Jaiyen, TMU “Techno-Economic Evaluation of Butadiene Production from Bioethanol” Kanokporn Pongjunla CU	“Photocatalyst of Hydroxyapatite-supported Co ₃ O ₄ prepared from Snail Shell for Degradation of Dye-Contaminated” Mr. Raihan Baihaqi, UII	“Hydrophilic Macromolecular Immobilisation and Release as a Route to Surface Engineering of High- Performance Materials” Asst. Prof. Gareth Ross Naresuan University	“Biomass-Derived Carbon-Supported Catalysts for Sustainable Emission Control and Energy Applications” Dr. Ibrahim bin Yakub Universiti Malaysia Sarawak	
14.10-14.20				“Light-Responsive Cyclodextrin/Azobenzene- Based Supramolecular Hydrogels” Mr. Henry Chukwunenye Ndibe, CU			
14.20-14.30		“Stress Corrosion Cracking of Aluminum in Chloride-Containing Solution” Assoc. Prof. Dr. Eng. Sri Hastuty, S.T., M.T. Universitas Pertamina	“Characterization of Carbon Fiber-Reinforced Polybenzoxazine Composites for Self- Lubricating Performance” Ms. Runghapa Boonchaimart SWU “Fabrication of Foam Ceramics from Lignite Bottom Ash for Construction Material Applications” Mr. Chhich Thai CU	“Magnetic Biochar Derived from Orange Peel Waste for Laboratory Wastewater Treatment” Ms. Solekah, UII	“Biomimetic Hot-Melt Adhesive using Galloyl- grafted Polypropylene for Multi-substrates” Dr. Paripat Kraisornkachit, National Institute for Material Science	“Enhancing Asset Reliability Through AI-Driven Control Valve Monitoring” Assoc. Prof. Ir. Dr. Haslinda binti Zabiri Universiti Teknologi PETRONAS (UTP)	
14.30-14.40				“Upcycling of Chicken Bone Waste as Raw Material for the Preparation of Hydroxyapatite-supported Fe ₂ O ₃ Photocatalyst Upcycling of Chicken Bone Waste as Raw Material for the Preparation of Hydroxyapatite-supported Fe ₂ O ₃ Photocatalyst” Ms. Septiana Intan Permata, UII			
14.40-14.50		“Geoscience Pathways to Geologic Hydrogen Exploration in ASEAN” Prof. Ir. Eddy Ariyono Subroto Universitas Pertamina	“Thermo-Mechanical Devulcanization of Ground Tire Rubber by Twin-Screw Extrusion: Effect of TESPT and Processing Conditions” Ms. Sochetra Sen, CU “Direct Air Capture Using Free-Flowing Silica- Hybrid Deep Eutectic Solvent Powder” Mr. Jerald Tupaz Villarmino CU	“Conversion of chicken bone waste into magnetic photocatalyst of CuFe ₂ O ₄ -supported hydroxyapatite for dye degradation under UV- illuminated photocatalytic treatment” Mr. Ibnu Maulana, UII	“NiFe ₂ O ₄ -Modified Hydroxyapatite using Chicken Bone Waste as Photocatalyst for Bromophenol Blue Removal” Ms. Zakiyya Salma Hamidah, UII		
14.50-15.00							
Break							
PART 4							
15.00-17.00	Poster Presentation & Evaluation						