







# Berita IKM - Chemistry December 2025 in Malaysia









**Institut Kimia Malaysia** 



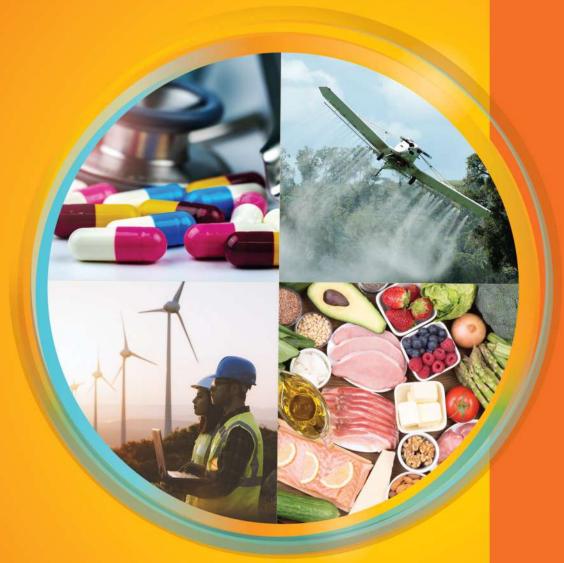
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December 2025

**BERITA IKM** 

Issue No. 161

*in* Malaysia

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### MESSAGE FROM THE PRESIDENT



**BERITA IKM** 

We are coming to the end of 2025. I believe that 2025 has been an excellent year with a number of major events with record numbers of attendees. Below are some of these major events:

- ◆ The first is the IKM 58th Annual General Meeting (58AGM) which was held on 22nd March 2025 at M World Hotel, Petaling Jaya with a record 223 members present.
- ◆ The most significant event in 2025 is the IUPAC 2025 that comprised the IUPAC 53rd General Assembly (53GA) and 50th World Chemistry Congress (50WCC). IUPAC 2025 was held from 12th - 19th July 2025 at the Kuala Lumpur Convention Centre (KLCC), Kuala Lumpur, Malaysia with a record number of 3,450 delegates from 97 countries. It is also rated as one of the best IUPAC events. To

quote Prof Natalia Tarasova, a past President of IUPAC, "May I say that based on my more than 30-years of experience with IUPAC, it was the best-organized event, both in science dimension, and also in human dimension."

- Kuiz Kimia Kebangsaan Malaysia (K₃M) 2025 also received a record number of 41.273 participants from 879 schools. It was held on 25th September 2025 in all schools taking part. This is the second year in a roll that the number of participants exceed 40,000.
- Malam Kimia 2025 54th IKM Gala Dinner and Presentation of IKM Awards was held in One World Hotel. Petaling Jaya on Saturday, 6th December 2025. A record 690 quests attended this IKM gala dinner.
- IKM Professional Centre also conducted a record number of 52 training programmes in 2025.

For 2026, we also have the following major events:

One major event in 2026 is the IUPAC 51st World Polymer Congress (MACRO 2026) which will be held in BCCK. Kuching, Sarawak from 28 – 31st July 2026. MACRO 2026 is expected to attract up to 1,000 delegates from all the world.

Another major event is the International Congress on Pure & Applied Chemistry (ICPAC) which will be held in Colombo, Sri Lanka from 13 – 16th October 2026. ICPAC Colombo 2026 is jointly organised with the Institute of Chemistry, Ceylon (ICC) and Foundation for Interaction of Science and Technology (FIST), Japan.

Another significant endeavour of IKM in 2026 is the **Accreditation of Undergraduate Chemistry Programmes** in local universities. Starting 2026, IKM will accredit undergraduate chemistry programme in local universities under the provision of the Malaysian Qualifications Agency (MQA).

All in all, it is a great 2025 and we are expecting more to come in 2026.

Datuk ChM Dr Soon Ting Kueh President, Institut Kimia Malaysia

Date: 15th December 2025

**BERITA IKM** 

### IKM Strengthens Collaboration through MoU with the Polymer Society of Korea (PSK), Participation in the PSK Fall Meeting 2025, and Visit to Samyang Corporation's R&D Center

Issue No. 161

Soon Ting Kueh, Phang Sook Wai, Siti Nurul Ain Md Jamil, Rusli Daik

The President of the Institut Kimia Malaysia (IKM), Datuk ChM Dr. Soon Ting Kueh, together with several IKM representatives, attended the Polymer Society of Korea (PSK) Annual Fall Meeting 2025, held in Busan, South Korea, from 29th September to 1st October 2025. The PSK Fall Meeting is one of the largest annual polymer conferences in South Korea, attracting around 2,000 participants including, scientists, researchers, academicians, and industry experts. The event serves as a premier platform for sharing the latest innovations and developments in polymer science and technology, particularly for members of PSK.

The IKM delegation was led by Datuk ChM Dr. Soon Ting Kueh, President of IKM. The delegation also included Prof. ChM Dr Rusli Daik (IKM / Universiti Kebangsaan Malaysia); Prof. ChM Dr. Phang Sook Wai (IKM / Tunku Abdul Rahman University of Management and Technology); and Assoc. Prof. ChM Dr. Siti Nurul Ain Md Jamil (IKM / Universiti Putra Malaysia). The presence of IKM delegates reflects strong representation at the international level, highlighting Malaysia's active participation and leadership in the global polymer community. The participation of the IKM delegation in the PSK Fall Meeting 2025 provided an excellent platform to strengthen professional networking and also promote international collaboration in the field of polymer science. In this event, Prof. ChM Dr Rusli Daik was invited to give a Keynote Talk, entitled "Aqueous Processing of Natural Rubber-Synthetic Polymer Nanocomposites". presentation highlighted the potential of agueous-phase methodologies for developing polymer nanocomposites.

A major highlight of the meeting was the signing of a Memorandum of Understanding (MoU) between the Polymer Society of Korea (PSK) and the Institut Kimia Malaysia (IKM). The MoU aims to enhance collaboration in research, scientific exchange, professional development, and the organization of joint conferences and workshops. The MoU was signed by Datuk ChM Dr. Soon Ting Kueh, President of Institut Kimia Malaysia (IKM), and Prof. Dr. Yong Ku Kwon, President of the Polymer Society of Korea (PSK). This milestone event marks the beginning of a stronger partnership between the two organizations. During the MoU ceremony, Datuk ChM Dr. Soon Ting Kueh introduced IKM and its professional roles in Malaysia, highlighting its ongoing initiatives and contributions to chemical sciences. He also promoted IKM's upcoming major international conferences, including IUPAC MACRO 2026, which will be held from 28th to 31st July 2026 in Kuching, Sarawak, under the auspices of the International Union of Pure and Applied Chemistry (IUPAC). In addition to formal sessions, the IKM actively promoted IUPAC MACRO 2026 delegates throughout the conference sessions, networking events, dinners, and luncheons, ensuring wide visibility and interest among international participants. These efforts were wellreceived by PSK members and other attendees, many of whom expressed interest in MACRO 2026.

In addition to the MoU signing with the Polymer Society of Korea (PSK), the IKM delegation also visited the Samyang Corporation, Chemical R&D Center (Chemical Research Institute) in Daejeon, South Korea, on 1st October 2025. The IKM delegates were warmly welcomed by the institute's senior management and research team, including:

- Dr. Chi-Wan Lee, Head of Chemical R&D
- Mr. Sang-Hyun Park, Head of Tech Solution
- Mr. Deok-Yun Kim, Team Manager







The participation of IKM in the PSK Fall Meeting 2025 and the subsequent visit to Samyang Corporation's Chemical R&D Center were highly successful in strengthening IKM's international relations and promoting Malaysia's contributions to polymer science. The MoU signing between PSK and IKM symbolizes a new chapter of collaboration in polymer research, professional development, and knowledge exchange. Moreover, the networking activities and outreach during the conference effectively promoted IUPAC MACRO 2026, positioning Malaysia as an emerging regional hub for polymer science collaboration.



Institut Kimia Malaysia (IKM) successfully organized the Malam Kimia 2025 - 54th IKM Gala Dinner & Presentation of Awards on 6 December 2025 at One World Hotel, Petaling Jaya, Selangor. YBhg. Datuk Seri Hj. Hasnol Zam Zam bin Hj. Ahmad, Secretary General, Ministry of Science, Technology & Innovation was the Guest-of-Honour at this event. Malam Kimia is an annual gala event where we recognise excellence in chemistry and contributions to IKM and the development of chemistry in Malaysia. The awards presented were as follows: K<sub>3</sub>M Top Scorer Awards, IKM Merit Awards, IKM Graduate Chemistry Medals, IKM Research Prize in Polymer & Materials Science, IKM/RSC-Synthomer Award in Polymer Science, Tan Sri Datuk Ong Kee Hui Postgraduate Chemistry Medal, Outstanding Young Chemist Awards, IKM Citation Awards, New Fellows of IKM, IKM Gold Medal and IKM Laboratory Excellence Awards.

This year we presented IKM Final Examination Certificates to those who passed the IKM Final Examinations in 2025. A total of 50 candidates passed the examination in 2025. Malam Kimia 2025 managed to attract a total of 690 guests comprising IKM members, S&T organizations, universities and industries as well as wellwishers. The event was a great success. On behalf of the Organizers, IKM would like to record our sincere appreciation to

Award	Recipient			
IKM Gold Medal	Prof ChM Dr Ramesh T Subramaniam			
New Fellows of IKM	ChM Dr. Li Hui Ling, Assoc. Prof. ChM Dr. Khor Sook Mei, ChM Nor Aidora Binti Saedon, ChM Dr. Shanmuga Suntharam A/L Kittappa			
IKM Citation Award	Asst. Prof. ChM Dr. Low May Lee, ChM Dr. Marina Binti Mokhtar, Assoc. Prof. ChM Dr. Mohd Aidil Adhha Abdullah, ChM Nordiana Binti Salleh, ChM Dr. Thiruventhan Karunakaran			
IKM Outstanding Young Chemist Award	Academic Category - Assoc. Prof. ChM Dr. Goh Pei Sean Industry Category - ChM Dr. Ng Sing Muk			
Tan Sri Datuk Ong Kee Hui Postgraduate Chemistry Medal	r. Nur Shamimie Nadzwin Binti Hasnan			
IKM/RSC – Synthomer Award in Polymer Science sponsored by Synthomer Sdn Bhd	ChM Dr Norfarhana binti Abdul Samad			
IKM Research Prize in Polymer and Materials Science sponsored by HARPS Global and Synthomer Sdn Bhd	Abu Hurairah Darwisy bin Alias, Jacky Yong, Muhammad Hasnun bin Md Yusoff, Nadiene Salleha binti Mohd Nawi, Theaveraj Ravi, Yusra Nadzirah Binti Yusoff			
IKM Graduate Chemistry Medals	Abby Amin Tung, Hiaw Jia Hui, Koh Wei Fang, Muhammad Izz Bin Muhamad Safian, Putri Nur Amelina Muhammad Shamsudin Ng, Yap Ynhuey			

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**Chemistry** 

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IKN	/I Mer	it Award 2025		
Reciepients		Parent	Examination	
Aira Adenin Binti Hisam	Chl	M Aniza Binti Abdul Ghani	SPM	A 20 1 20
Caitlin How Jay Min	Chl	// How Kian Ming	O-Level	
Chaw Cheok Fong		oc Prof ChM Dr. Wong Lai Peng	SPM	\"\\\\\"\\\"\\\"\\\"\\\\"\\\\\\\\\\
Eunice Yeoh Zi Yu	Chl	M Dr. Yeoh Chee Beng	SPM	
Hafiz Hamizan Bin Shahrul Azhar @ Sabu		/ Noorazlenawati Binti Borhan	SPM	
K'ng Yu Hui	Chl	// Kan Poh Ping	SPM	W W
Koh Lee Eang		M Lee Kooi Ping	SPM	
Lim Zheng Qing		A Lim Sing Hock	SPM	resentation of Awara
Mabel Bong Chia Yee		ChM Alvin Bong Cheng Hong SPI		E Describer 2025
Muhammad Zamir Zafran Bin Abdul Rani		И Haizarul Aida Binti Sapahin	SPM	6 December 2025
Nyla Safiyyah Binti Mohammed Amin	Chl	M Nor'ashikin Binti Ahmad Chek	SPM	The state of the s
Tok Ewin		M Dr. Li Hui Ling	O-Level	
Yeow Shuen Zi		M Yeow Liang Ming	SPM	
Denisha Nair		M Haemavathy Krishnan	Matriculation	
Edmond Gan		M Dr. Gan Chong Leong	Foundation	Enhance Rubber-Based C
Joel Pang Kai Chen		If Dr. Pang Suh Cem	A-Level	Membane for Palm Oil M
Koh Lee Wern		M Lee Kooi Ping	Matriculation	Treament
Marsha Aira Binti Mohamad Fadzil		M Wan Mazlina Wan Hussein	Matriculation	
			Matriculation	
Tang Jun Hu		M Ong Siew Lee		
Sim Kai Bin		/I Lau Gaik Sim	Foundation	
		(K₃M) 2025 Top Scorer Award N nary Level	Vinners	
Au Yeang Chee Yuan		Chong Hwa Independent High School, W.P. KL		
Yap Yit Chern		Han Chiang High School, Pulau Pinang		
Ng Jen Jun		Sekolah Sri Tenby, Shah Alam, Selangor		Presentation of Awa
Lim Yihong Isaac		SM Kuen Cheng, W.P. KL		
Yee Yu Heng		SMJK Tsung Wah, Kuala Kangsar, Perak		December 2025
Puah Min Xuan		SMJK Yuk Choy, Ipoh, Perak		
Belven Tan Tze Bin		SMK Bandar Baru Seri Petaling, W.P. KL		
Ong Jia Wen		SMK Bandar Baru Seri Petaling, W.P. KL		
Chan Er Kang		SMK Dato' Mohd Taha, Negeri Sembilan		
Tee Jing Han		SMK Dato Mond Tana, Negeri Sembilan		
Davis Soon Chen Seng		SMK Methodist, Sibu, Sarawak		
Dennis Chiong Teck Siong		SMK Methodist, Sibu, Sarawak		
Enoch Wong Ba Xuan		SMK Methodist, Sibu, Sarawak		ecember 2025
Hannah Ting Shi Huai SMK Methodist, Sibu, Sarawak				
Jonathan Tay Liang Yaw  SMK Methodist, Sibu, Sarawak  SMK Methodist, Sibu, Sarawak				
Rachel Yek Jian Ern		SMK Methodist, Sibu, Sarawak		
Benedict Chieng Zhu Ming		SMK Sacred Heart, Sibu, Saraw	rak	
Vincent Kiu Siong Lung				on world
Caleb Lee Jia Le		SMK St. Francis, Melaka	MIX.	
How Yuan Qi	·		/ CHEMICAL H.	
Justin Lee Jia Xing				
Kathir A/L Ramesh SMK St. Francis, Melaka		HEALTH (CHL)		
,		BANGIAS		
Soh Wen Feng	uull			
<u> </u>		SMK St. Francis, Melaka		
Choo Guo Kang		SMK Tinggi St. David, Melaka		
Wang Zhi Chih	۰۰ . ام ۸	SMK Tinggi St. David, Melaka		
	Aava	nced Level	Damali	
China Ci Vina		Kolej Matrikulasi Perak, Gopeng, Perak Kolej Matrikulasi Perak, Gopeng, Perak		PAGE TANGET PAGE
Ching Si Ying Liang Shu Ying		<del></del>		



### IKM Laboratory Excellence Gold Award: 15 years (2011 - 2025)

- 1. National Institute of Occupational Safety and Health (NIOSH), Bandar Baru Bangi, Selangor
- 2. PETRONAS Chemicals Ethylene Sdn Bhd, Central Laboratory, Kertih, Kemaman, Terengganu
- 3. PETRONAS Chemicals MTBE (M) Sdn Bhd, PC MTBE Laboratory, Kuantan, Pahang

### IKM Laboratory Excellence Silver Award: 10 years (2016 - 2025)

- 1. Chemsain Konsultant Sdn Bhd, Shah Alam, Selangor
- 2. National Poison Centre, Toxicology Laboratory, USM, Pulau Pinang
- 3. Pengurusan Air Selangor Sdn Bhd, Southern Regional Laboratory, Sg. Labu Water Treatment Plant, Sepang, Selangor
- 4. PETRONAS Chemicals Ammonia Sdn Bhd, Kertih, Kemaman, Terengganu
- 5. PETRONAS Chemicals Derivatives Sdn Bhd, Central Laboratory, Kertih, Terengganu

### **IKM Laboratory Excellence 2025 Award**

- 1. ALS Technichem (M) Sdn Bhd, Johor Bahru, Johor
- 2. ALS Technichem (M) Sdn Bhd, Perai, Pulau Pinang
- 3. ALS Technichem (M) Sdn Bhd, Shah Alam, Selangor
- 4. ASEAN Bintulu Fertilizer Sdn Bhd, Bintulu, Sarawak
- 5. Asiatest Laboratory Service Sdn Bhd, Kota Kinabalu, Sabah
- 6. AWWAM Environmental Laboratory Services Sdn Bhd, Airwastewater Management Sdn Bhd (HQ), Seremban, Negeri Sembilan
- 7. Bio Synergy Laboratories Sdn Bhd, Petaling Jaya, Selangor
- 8. Borneo Samudera Sdn Bhd, Central Laboratory, Tawau, Sabah
- 9. Bunge Loders Croklaan Oils Sdn Bhd, Pasir Gudang, Johor
- 10. Chemsain Konsultant Sdn Bhd, Kota Kinabalu, Sabah
- 11. Dewan Bandaraya Kuala Lumpur, Pusat Analisis dan Sekuriti Makanan (FoSAC). Selayang, Kuala Lumpur
- 12. ExcelVite Sdn Bhd, Chemor, Perak
- 13. Fedmas Assay Office Sdn Bhd, George Town, Pulau Pinang
- 14. FGV Agri Services Sdn Bhd, FGV Analytical Laboratory, Bandar Jengka, Pahang
- 15. FGV Agri Services Sdn Bhd, FGV Analytical Laboratory, Lahad Datu, Sabah
- 16. FGV Johor Bulkers Sdn Bhd, FJB Testing Laboratory, Pasir Gudang, Johor
- 17. Forest Research Institute Malaysia (FRIM), Natural Product Quality Control (NPQC), Kepong, Selangor
- 18. Forest Research Institute Malaysia (FRIM), Soil Chemistry Laboratory, Kepong, Selangor
- 19. Forest Research Institute Malaysia (FRIM), Wood Composite Testing Laboratory (WCTL), Kepong, Selangor
- 20. Forest Research Institute Malaysia (FRIM), Wood Preservative Analytical Laboratory, Kepong, Selangor
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- 25. Indah Water Konsortium Sdn Bhd, Southern Laboratory Services, Ayer Keroh,
- 26. Jabatan Kimia Malaysia, Cawangan Bintulu, Bintulu, Sarawak
- 27. Jabatan Kimia Malaysia, Negeri Johor, Johor Bahru, Johor
- 28. Jabatan Kimia Malaysia, Negeri Melaka, Bukit Katil, Melaka
- 29. Jabatan Kimia Malaysia, Negeri Sarawak, Kuching, Sarawak
- 30. Jabatan Kimia Malaysia, Petaling Jaya, Selangor
- 31. Johor Plantations Berhad, Central Analytical Laboratory, Kota Tinggi, Johor

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- 38. Malaysian Refining Company Sdn Bhd, Sungai Udang, Melaka
- 39. Pengurusan Air Selangor Sdn Bhd, Northern Regional Laboratory, Sg. Selangor Phase 2 WTP, Bestari Jaya, Selangor
- 40. Pengurusan Air Selangor Sdn Bhd, Southern Regional Laboratory, Langat 2 Water Treatment Plant, Hulu Langat, Selangor
- 41. Pengurusan Air Selangor Sdn Bhd, Southern Regional Laboratory, Sg. Semenyih Water Treatment Plant, Putrajaya
- 42. Perbadanan Bekalan Air Pulau Pinang (PBAPP), PBA Central Laboratory, Tasek Gelugor, Pulau Pinang
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- 45. PETRONAS Chemicals Fertiliser Sabah Sdn Bhd, PCFSSB Laboratory, Sipitang, Sabah
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- 69. UMW Lubetech Sdn Bhd, Pulau Indah, Selangor
- 70. Universiti Kebangsaan Malaysia, Makmal i-CRIM, UKM Bangi, Selangor
- 71. Universiti Teknologi PETRONAS, Environmental Laboratory, Bandar Seri Iskandar, Perak



## A Glimpse into Malaysia's Rubber and Chemical Industry – IKM Division of Polymers and Materials Chemistry at Budget Champ, Klang

Eng Aik Hwee

On 1 October 2025, the Division of Polymers and Materials Chemistry, Institut Kimia Malaysia (IKM), organised a factory visit to Budget Champ, located at Jalan Wawasan 3/KU7, Sungai Kapar Indah, Klang, Selangor. The visit, which took place from 10.30 am to 12.15 pm, provided valuable exposure to industrial chemical manufacturing practices and innovations, particularly in the field of rubber and surface treatment chemistry.

The IKM delegation comprised Mr. Ivan Tay, Prof. Dr. C. C. Ho, Dr. Nor Yuziah Yunos and her sister, and Dr. Eng Aik Hwee. The group was warmly received by Dr. Chan Kah Khiong (Managing Director), Dr. Chan Yin Thai (R&D Director), and the company's Chief Chemist.

The session began with a company briefing by Dr. Chan Yin Thai and Dr. Chan Kah Khiong. They introduced Budget Champ's core business activities, which are organised into four main divisions:

- 1. Rubber Division focusing mainly on glove-related applications.
- 2. Metal Surface Treatment specialising in corrosion prevention,
- 3. Food Sanitization manufacturing hand sanitizers and gels, and
- 4. Wastewater Treatment Chemicals.

Among these, the rubber division is the company's largest and most established segment.

Budget Champ was originally founded in 1994 under the name *Cosmic Discovery* and operated from Taman Teknologi, Sungai Buloh, before relocating to its present

facility in 2012. The company currently employs 37 staff, including 19 executives, and manages an impressive 422 stock keeping units (SKUs). Its products are distributed both locally and internationally, reaching as far as Russia and Mexico.

After the briefing, the visitors were taken on a guided tour of the company's laboratory and production facilities. The laboratory houses an array of modern analytical instruments, including a particle size analyser, FTIR, desktop SEM with EDAX, tensiometer, UV-Vis spectrometer, and turbidimeter—all essential tools for maintaining product quality and supporting R&D activities.

The group also visited the production and storage areas, where two large centrifuge machines were installed outdoors. An in-house effluent treatment facility was observed in operation, reflecting the company's commitment to responsible wastewater management and environmental sustainability. During the visit, Dr. Chan Kah Khiong showcased several of the company's successful products, including hand gels, sanitizing sprays, hand creams for chemical protection, and powder-free gloves. These products highlight Budget Champ's versatility in developing formulations that serve diverse market needs, from industrial safety to personal hygiene.

The visit concluded with a lively discussion on recent trends in rubber manufacturing technologies and advances in polymer research, sparking an engaging exchange of insights between industry professionals and IKM members.

> Overall, the visit to Budget Champ offered participants an enriching opportunity to observe the integration of chemistry, technology, and innovation within Malaysia's industrial landscape. The Division of Polymer and Materials Chemistry looks forward to continued engagement a n d collaboration with the company in future initiatives.







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December 2025

**BERITA IKM** 

Issue No. 161

### From Gaza to Nobel Inspiring Science and Nation through the Frameworks of Omar Yaghi

Prof. ChM Dr. Mohd Basyaruddin bin Abdul Rahman Faculty of Science, Universiti Putra Malaysia

Imagine that once unimaginable structures can now be infinitely synthesised from metal ions and organic ligands, or even non-metal ions and organic ligands. These undeniably beautiful structures possess limitless characteristics, which develop over time. This marks the epic birth of Reticular Chemistry, which will subsequently change the textbook, particularly the Inorganic section. I recall chairing a plenary presentation by Professor Omar Mwannes Yaghi at Universiti Putra Malaysia (UPM) in 2015. He shared that while working on inorganic synthesis in his laboratory in mid 90s, he was unable to achieve his intended results. However, instead of discarding the samples, he kept them, and after a few days, he observed the formation of crystals. This led to the Metalorganic Frameworks (MOFs), a term he coined. This is a lesson all chemists should learn: do not throw away your samples but continue to observe them.

After three decades, on 8 October 2025, Professor Omar Yaghi was awarded the most prestigious Nobel Prize in Chemistry, together with Susumu Kitagawa and Roger Robson, for "the development of metal-organic frameworks". He had been a leading candidate for several years based on votes and popularity, but the many recent applications of MOFs, particularly his work on water harvesting from arid conditions, as well as advances in catalysis, gas storage and separation, sensors, medical, agricultural, and water research, made the award timely and well deserved.

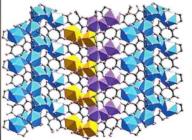
As is customary every year, scientists around the world celebrate the Nobel Prize winners, and so do I. This year is particularly special, as Professor Omar Yaghi responded immediately to my congratulatory email, despite receiving thousands of similar messages. He has visited and collaborated with my laboratory in UPM, and I was also invited to work at the University of California, Berkeley (UCB) as a Distinguished Visiting Scholar in 2017. UPM researchers, including my postgraduate students, enjoyed

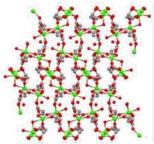
the 'laureate ambience' at UCB, which is home to 10 faculty Nobel Prize winners in Chemistry, including Jennifer Doudna for her work on CRISPR (2020), and more than 11 UCB chemistry alumni who have become Nobel Prize winners in Chemistry. Professor John Clarke, who received 2025 Nobel Prize in Physics for his work on quantum tunnelling, adding to the overall total of 28 faculty and 39 alumni Nobel Prize winners from UCB. What a place to be, surrounded by other prestigious institutions, particularly the Lawrence Berkeley National Laboratory and the Advanced Light Source Synchrotron.

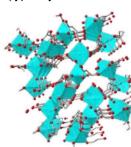
Professor Omar Yaghi was conferred the Honorary Degree of Doctor of Science during the 41st UPM Convocation for his contributions not only to UPM but also to Malaysian researchers, which led to the signing of an Memorandum of Understanding (MoU) between UPM and UCB and the establishment of the Foundry of Reticular Materials for Sustainability (FORMS-UPM), headed by Professor ChM Dr Mohd Basyaruddin Abdul Rahman, as one of the nodes in his global mentoring network via the Berkeley Global Science Institute. Since then, he inspired the collaborations with other nodes, namely in Madrid, Amman, Tokyo and Wuhan. Within 5 years, it sparks a new wave in MOFs research in UPM, generating million value research grants and high-quality publications in reputable journals including two cover pages in prestigious journals like Dalton Transaction and ACS Applied Materials & Interfaces.

What are MOFs, and what about other new terms he coined, such as Covalent Organic Frameworks (COFs) and Zeolitic Imidazolate Frameworks (ZIFs)? What are their remarkable characteristics that merit the Nobel Prize? MOFs, COFs, and ZIFs are porous crystalline materials developed through reticular chemistry, which links molecular building blocks into strong, extended frameworks. MOFs combine metal ions and organic linkers to form hybrid, sponge-like structures. COFs are composed entirely of lightweight organic elements (such as carbon, hydrogen, and oxygen) joined by covalent bonds, resulting in highly stable and robust porous frameworks. ZIFs, a subclass of MOFs, feature metal ions (typically zinc









The first newly synthesised MOF in UPM / Malaysia (thus far, but not to overclaim) under the guidance of Kyle Cordova from UCB UPMOF-1 (C<sub>12</sub>H<sub>11</sub>Ca<sub>3</sub>O<sub>18</sub>) 1986348

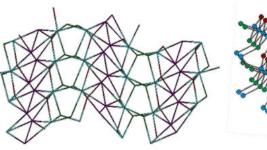
or cobalt) linked by imidazolate ligands to create zeolite-like cages with superior tunability.

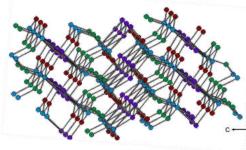
Their remarkable characteristics include high porosity, tunable structures, and impressive surface area (recorded at more than 20,000 m²/g; imagine a gram of powder with the surface area of a football field). The synthesis may seem straightforward, as it appears you

simply mix a metal salt and an organic linker solution. However, in reality, each new MOF may undergo more than 300 reactions with different ratios and solvents. FORMS-UPM has so far managed to synthesise more than 20 new MOFs, COFs, and ZIFs, termed Universiti Putra MOF or UPMOF, which are used for nanodelivery, catalysis, environmental applications, and energy storage. Machine learning (ML) and artificial intelligence (AI) are invaluable, as Professor Omar Yaghi has developed MOFinformatics, using ML-AI to predict the synthesis ratio and structure of MOFs, thereby reducing the time and cost of synthesis.

Malaysia once adopted Nobel Prize-winning technology. graphene, a two-dimensional material awarded the 2010 Nobel Prize in Physics into the National Graphene Action Plan (NGAP) to accelerate research and industrial Similarly, application of graphene. metal-organic frameworks, a three-dimensional material with unlimited combinations. adjustable characteristics, biocompatibility, should be highlighted in national policies. including Malaysia 10-10 MySTIE Framework and ASEAN 10-10-10. After all, their names also refer to a framework! In short, we should not be left behind, as MOF research has attracted many major industries to explore the translation of MOF discoveries into commercial applications.

Through strategic policy integration, research excellence, and strong academia-industry linkages, MOFs can drive





mbr topology (new) 3,3,6,8-c, 4-nodal

economic growth, create high-value industries, and deliver sustainable solutions to national challenges. Their applications in clean energy, water purification, agriculture, and environmental protection align perfectly with Malaysia's green economy and carbon-neutral aspirations. By investing in MOF research, commercialisation, and talent development, Malaysia can position itself as a regional leader in advanced materials, bridging science, innovation, and sustainability for a resilient and competitive future.

Lastly, why do we celebrate Professor Omar Yaghi more than other laureates? In the current fragility of the world, he serves as a strong example of someone of Palestinian origin whose family fled from Gaza to Amman, where he was born and raised in poverty, even sharing a room with cattle. At 15, he travelled alone to the USA to find work and later pursued the molecular structures that had fascinated him as a young boy. In short, with education and perseverance, more laureates can emerge regardless of their background. No child should be left uneducated.

### Source:

https://inspire.berkeley.edu/get-inspired/nobels https://en.wikipedia.org/wiki/Omar M. Yaghi



## Technical Visit to SGS Malaysia Sdn Bhd

Lee Kian Mun, Lee Hwei Voon, Phang Sook Wai

On 9th September 2025, the Division of Physical and Theoretical Chemistry, Institut Kimia Malaysia (IKM), organized a technical visit to SGS Malaysia Sdn. Bhd. located at Seksyen 22, Shah Alam, Selangor. A total of 13 participants attended the technical visit. Upon arrival, IKM members were hosted by the Multi-Business Laboratory Manager, Ms. Lee Shei Meih, the Technical and Compliance Manager, Ms. Tay Siam Pine, and the Technical Specialist, Ms. Felicia Ng. Established in 1971, SGS Malaysia is part of the SGS Group, the world's leading inspection. verification, testing, and certification organization, with over 99,600 employees and 2,600 offices and laboratories worldwide. In Malaysia, SGS serves a diverse portfolio of industries, including oil and gas, manufacturing, environmental management, agriculture, food, and consumer goods, offering integrated solutions that safeguard quality, integrity, and compliance. SGS Shah Alam focuses on two main sectors: connectivity and products (automotive, toys, packaging, etc.) and health and nutrition (food, cosmetics, hygiene products, etc.).

During the introduction, participants were briefed on the company's strategic mission to support Malaysia's industrial transformation through robust quality frameworks and sustainable practices. The management team emphasized SGS's commitment to maintaining impartiality and reliability while adapting to evolving regulatory landscapes and client needs. The tour began with an introduction to SGS's state-of-the-art analytical laboratories, where advanced instrumentation and rigorous methodologies underpin every testing process. Several high-end instruments, such as Liquid Chromatography (LC), Gas Chromatography (GC), Ion Chromatography (IC), Inductively Coupled Plasma (ICP), Optical Emission Spectroscopy (OES), etc., are available to cater to a wide range of chemical analysis requirements. Each laboratory reflected the company's adherence to ISO/IEC 17025 accreditation, ensuring that every test conducted meets international precision and reliability benchmarks. Besides, SGS

invests heavily in achieving the Sustainable Development Goals (SDGs) by incorporating various policies and practices. For instance, integrating a laboratory information management system (LIMS) with laboratory equipment has helped minimize paper use, as readings from equipment such as weighing balances are recorded directly in LIMS, thereby helping achieve SDG 12 to ensure sustainable

consumption and production patterns. In addition, SGS is also committed to reaching net-zero greenhouse gas emissions by 2050 to combat climate change. This, in turn, aligns with SDG 13, which calls for urgent action to combat climate change and its impacts. Besides, the incorporation of social sustainability is also observed in SGS, where the company is committed to achieving diverse and equal opportunities among different genders in its operations and supply chain. For instance, SGS ensures that women hold at least one-third of its leadership positions. This aligns with SDG 5, which calls for achieving gender equality and empowering all women and girls.

The technical visit served as a platform for knowledge exchange between SGS professionals and participants from Institut Kimia Malaysia and local universities. Through presentations and Q&A sessions, attendees gained a practical understanding of laboratory management systems, risk-based auditing, and regulatory harmonization across global markets. SGS representatives emphasized that maintaining credibility in today's complex industrial ecosystem requires continuous improvement, ethical leadership, and data integrity, qualities that define the company's century-old reputation.

The future collaboration between SGS and IKM aims to strengthen professional ties and create impactful opportunities across education, research, and industry. Both organizations will work together to develop career and internship programs that equip aspiring chemists and researchers with practical experience and industry exposure. SGS will also collaborate with IKM as a co-organizer of the International Conference and actively participate in MACRO 2026, an HRDC-claimable event, to foster knowledge sharing and professional development. In addition, a series of webinars and seminars will be jointly conducted to promote SGS's capabilities and services to the wider scientific community. SGS plans to introduce a special package for sample analysis, exclusively for IKM members, to

encourage research collaborations and innovative projects. To further enhance visibility, SGS will advertise through Berita IKM, reaching a targeted audience of professionals and academics in the chemical sciences sector. This partnership is envisioned to foster mutual growth, strengthen industry—academia linkages, and advance Malaysia's scientific and analytical capabilities.





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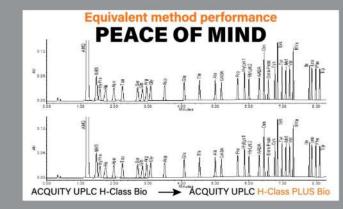
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BERITA IKM December 2025

### Issue No. 161

## IKM Pahang Branch Career Talk: A Multifaceted Sharing for Future-Ready Chemists

On October 8, 2025, the IKM Pahang Branch (IKMPB) collaborated with Faculty of Industrial Sciences and Technology, Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) to organize the IKMPB Career Talk for final-year students pursuing a Bachelor of Applied Science in Industrial Chemistry. Held at the library auditorium of UMPSA Gambang Campus, the event attracted over 60 eager participants. This career talk served as a vital platform for exposing students to various career pathways within the industry while enhancing their understanding of the skills necessary for success in today's dynamic job market. By featuring esteemed guest speakers from diverse sectors, the event aimed to bridge the gap between academic knowledge and practical industry requirements, ultimately fostering a more informed and prepared future workforce, particularly in the chemistry sector.

The program showcased four prominent speakers, each bringing unique insights and experiences that enriched the discussion and provided valuable perspectives on the industry landscape:

- ChM. Mr. Mohamad Hanif Bin Omar, Deputy Director of Jabatan Kimia Malaysia Negeri Pahang
- ChM. Ts. Dr. Thomas Wun Wee Long, Managing Director and Environmental Consultant at TW Environmental Sdn. Bhd.
- ChM. Ts. Dr. Shamsul Bin Zakaria, Senior Lecturer at UMPSA
- Mr. Lai Yew Chong, Assistant Manager of Technical Services at KLK Oleochemicals Malaysia

The primary objectives of the career talk included offering career exposure, enhancing skill development, and creating networking opportunities. Throughout their presentations, the speakers emphasized the importance of developing soft skills, such as effective communication, critical thinking, and adaptability to technological changes. As the industry witnesses a significant shift towards digitalization and automation, these

skills have become increasingly vital. Furthermore, the speakers encouraged

students to pursue not only academic qualifications but also practical experiences and to maintain a robust project portfolio, which is essential for standing out in a competitive job market.

One of the key takeaways from the session was the significance of lifelong learning. The speakers underscored that continuous education and skill

enhancement are crucial for remaining competitive in a rapidly evolving professional environment. This perspective motivated students to reflect on their career aspirations and consider how they could strategically prepare for the challenges ahead. Feedback from attendees indicated that the IKMPB Career Talk had a positive impact, providing insightful and relevant information. Students expressed that the session motivated them to enhance their professionalism and spurred reflections on their future career paths. This engagement highlights the importance of such programs in fostering a proactive approach to career planning among students.

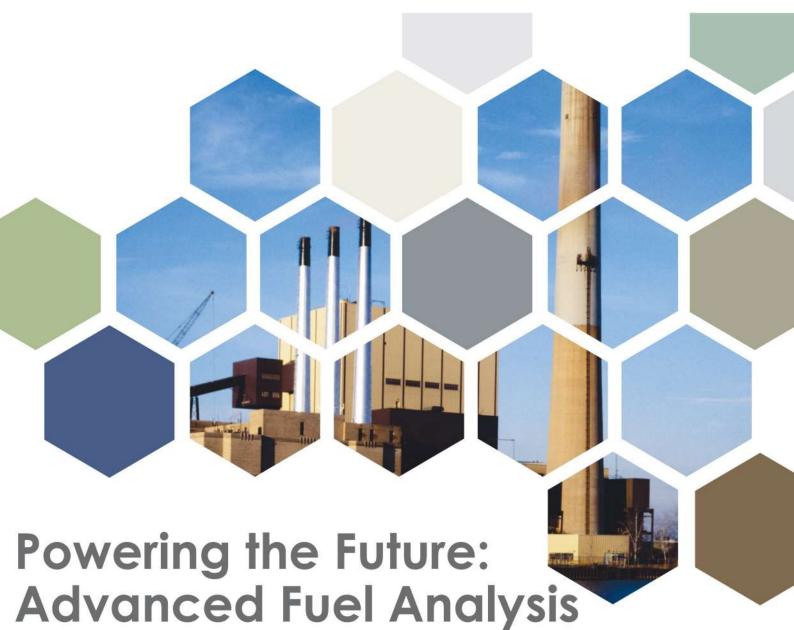
The event was successfully coordinated by Ts. ChM Dr. Yuen Mei Lian, with the support of Deputy Dean (Student and Alumni Affairs) Ts. Dr. Muhammad Hafiz bin Mazwir and Head of Program (Industrial Chemistry) ChM. Dr. Nazikussabah binti Zaharudin.

Report by:

Ts. ChM Dr. Yuen Mei Lian Prof. ChM Dr. Chong Kwok Feng













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**BERITA IKM** 

### **Fostering a Sustainable Future:** The Karnival Kimia Malaysia (K2M) Pahang 2025

The Dewan Astaka at Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Gambang Campus recently became a vibrant hub for scientific exploration as it hosted the inaugural Karnival Kimia Malaysia (K2M) Pahang 2025. This landmark event represented a significant strategic collaboration between three key entities: the Institut Kimia Malaysia Pahang Branch (IKMPB), UMPSA's Faculty of Industrial Sciences and Technology (FSTI), and the Jabatan Kimia Malaysia (JKM) Negeri Pahang. Officiated by the President of the Institut Kimia Malaysia (IKM), Datuk ChM Dr. Soon Ting Kueh, the K2M was designed with the dual purpose of exposing students to the vast world of chemistry while simultaneously igniting a spirit of curiosity and creativity among the younger generation.

A central pillar of the event was the strengthening of institutional ties between IKM and UMPSA to promote chemistry as a profession as well as to increase public awareness and appreciation regarding the field of chemistry. This was highlighted by the exchange of a Memorandum of Understanding (MoU) between IKM and UMPSA, establishing a framework for strategic collaboration in the field of chemistry. The significance of this partnership was articulated by Datuk ChM Dr. Soon Ting Kueh, who expressed optimism that the MoU would serve as a catalyst for impactful collaboration. He emphasized that by utilizing basic materials found in daily life as a starting point for investigation, this collaboration could drive progress in science and the chemical industry, ultimately contributing significantly to national and global development.

Anchored by the theme 'Chemistry for Sustainability,' K2M Pahang 2025 sought to transcend traditional academic boundaries by integrating education with innovation and broad community engagement. The hosting of the event at UMPSA underscored the university's evolving role not merely as an ivory tower for producing quality graduates, but as an active driver of community involvement in supporting science for universal

sustainability. The organizers employed interactive approaches to empower chemistry education, utilizing fun competitions and hands-on exhibitions to facilitate direct knowledge transfer to students.

The success of this outreach model was evidenced by the enthusiastic participation of nearly 600 attendees. The diverse group comprised UMPSA undergraduates from industrial chemistry and science diploma programs, alongside tertiary students from Politeknik Sultan Haji Ahmad Shah (POLISAS). Furthermore, pupils from a wide array of secondary schools across the Kuantan district actively participated, including Sekolah Sukan Malaysia Pahang, SMK Gudang Rasau, SMK Pava Besar. SMK Gambang, SM Seri Panching, SMK Pandan, and SMK Tengku Panglima Perang Tengku Muhammad.

The event's high profile and collaborative nature were further underscored by the presence of key leadership from the partnering institutions. Joining the officiator were Professor Ts. Dr. Kamal Jusoh, UMPSA Assistant Vice-Chancellor (Strategic and Corporate), representing UMPSA Vice-Chancellor Professor Dr. Yatimah Alias. Also in attendance to support the event were Professor ChM Dr. Chong Kwok Feng (Chairman of IKM Pahang Branch), ChM Wan Ahmad Ashadi Wan Mohd Kamil (Director of the Jabatan Kimia Malaysia Negeri Pahang), Professor Madya Dr. Aizi Nor Mazila Ramli (Dean of FSTI), and the K2M 2025 Program Director, Ts ChM Dr. Ahmad Zamani Ab. Halim.

The spirit of innovation was particularly evident in the poster competition centered on "Chemistry for Sustainability." In the contested school category, SMK Gudang Rasau emerged victorious, claiming the 1st prize with their ingenious invention titled HECOES. The winning team comprised students Faris Irfan bin Khirwandy, Wan Muhammad Arif bin Wan Hafizal, and Wan Ahmad Hafiz bin Wan Ahmad Fairuz. Meanwhile, in the Undergraduate category, the top honor was awarded to Nurh Kharissa Haqiemah binti Roslan and Nur Lailatul Najwa binti



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Mohd Razi for their compelling invention, "Biochar and Soil Carbon Sequestration".

In conclusion, the K2M Pahang 2025 successfully established a precedent for collaborative scientific education in the region. By bringing together academic, governmental, and professional bodies, and engaging hundreds of young minds through interactive learning, the event made significant strides in promoting the essential role of chemistry in building a sustainable future.

Report prepared by:

ChM Dr. Tay Joo Hui

Prof. Dr. ChM Chong Kwok Feng

**BERITA IKM** 

### IKM/DOBC Webinar: Leveraging Generative AI in Scientific Research, Services & Education

ChM Dr. Mazlin Mohideen

The Division of Organic & Biomolecular Chemistry (DOBC) of the Malaysian Institute of Chemistry (IKM) successfully organized the IKM/DOBC Webinar: Leveraging Generative AI in Scientific Research, Services & Education on 25 November 2025, from 3:00 PM to 4:00 PM. The session featured Prof. ChM Dr. Sharifuddin Md Zain from Universiti Malaya as the invited speaker and was moderated by Datin ChM Dr. Zuriati Zakaria. The Webinar attracted approximately 65 participants, consisting of chemists, academicians, laboratory professionals, and students from various institutions. The objective of the session was to enhance Al literacy among IKM members by introducing the fundamentals of Artificial Intelligence, Machine Learning, Deep Learning, and Large Language Models, as well as discussing their growing relevance in chemical research, laboratory services, and education.

During the session, the speaker provided a clear explanation of how Generative AI and Large Language Models operate, highlighting their strengths in pattern recognition, language generation, data interpretation, and workflow automation. He also addressed the limitations of GenAl, particularly the risks of hallucinations, fabricated references, and overreliance on black-box systems without proper verification. The presentation emphasized that Al literacy is now essential for chemists, especially those working in ISO/IEC 17025-accredited environments, where Al tools must be used responsibly, documented appropriately, and never replace validated analytical methods. Case studies were shared to illustrate both correct and incorrect uses of AI in laboratories, including examples related to chromatography, method validation, chemometrics, and OOT/ OOS investigations.

The speaker also discussed the role of Al in academia, where GenAl can support lecturers in generating teaching materials, providing feedback, designing assessments, and enhancing student engagement through reflective and behavioural nudges. He emphasized that while Al can enhance teaching and learning, human judgment, ethical oversight, and critical thinking remain essential. In the research context, the session highlighted how GenAl can assist in literature review, hypothesis generation, spectral interpretation, exploratory data analysis, and the drafting of protocols or scientific writing, provided outputs are constantly verified and cross-checked with primary sources.

Overall, the Webinar received positive feedback from participants who actively engaged in the Q&A session, seeking clarification on practical Al applications in laboratories, research, and classroom settings. The event successfully increased awareness of responsible Al adoption and sparked interest in more advanced follow-up workshops. In conclusion, the session achieved its intended objective of strengthening the digital readiness of IKM members and promoting informed, ethical, and structured integration of Generative AI into scientific research, laboratory operations, and chemical education.







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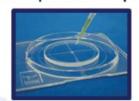
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### **PLENARY SPEAKERS**





Prof Dr Cyrille Boyer University of New South Wales, Australia



**Prof Dr Elizabeth Gillies** Western University, Canada



**Prof Dr Jian Ping Gong** Hokkaido University, Japan



**Prof Dr Rachel O'Reilly** University of Birmingham, United Kingdom



**Prof Dr Jin Huang** Southwest University, China



**Prof Dr Makoto Ouchi** Kyoto University, Japan



**Prof Dr Moon Jeong Park**Pohang University of Science and Technology, South Korea

### **KEYNOTE SPEAKERS**

### macro2026.org



**Prof Dr Atsushi Sudo** Kindai University, Japan



**Prof Dr Ayse Zehra Aroguz** Biruni University, Turkiye



Prof Dr Bumjoon Kim Korea Advanced Institute of Science & Technology, South Korea



Prof Dr Dong June Ahn Korea University, South Korea



Prof Dr Ishak Ahmad Universiti Kebangsaan Malaysia, Malaysia



**Prof Dr Kohzo Ito** Tokyo University, Japan



Prof Dr Peter Cormack University of Strathclyde, United Kingdom



Prof Dr Suwabun Chirachanchai Chulalongkorn University, Thailand



**Prof Dr Xi Zhang** Tsinghua University, China



Prof Dr Zi-Chen Li Peking University, China





**BERITA IKM** 

### **IKM Pahang Branch Breakfast Walk 1.0:** A Morning of Health, Nature, and Chemistry

Issue No. 161

The IKM Pahang Branch (IKMPB) successfully organized its first ever Breakfast Walk 1.0 on Sunday, 28 September 2025, at the scenic Pantai Batu Penyu, Kuantan. The outdoor programme brought together 53 participants, consisting of IKM members and their families, in a refreshing morning activity designed to promote health and wellness, strengthen camaraderie among members, and foster family bonding through nature appreciation and scientific knowledge sharing.

The event commenced at 8.00 a.m. with participant registration, followed by opening remarks by Program Coordinator ChM Ts. Dr. Noor Saadiah who warmly welcomed all attendees. A lively warm-up session was led by ChM Ng Boon Hong, which helped to energize the participants and set a positive tone for the day. The participants then embarked on a 10 -minute forest walk, taking a route surrounded by lush greenery that provided a tranquil atmosphere for reflection and rejuvenation. The soothing environment of the forest offered a peaceful escape from the daily routine, promoting both physical wellness and mental relaxation, while encouraging a deeper appreciation of nature's beauty. Upon reaching the seaside, participants gathered for a group photo session near the iconic turtle-shaped rock, the landmark that gives Pantai Batu Penyu its distinctive name. The beach is well known among locals for its unique rock formations resembling a turtle, serene coastal scenery, and family-friendly environment, making it an ideal



venue for community and family-oriented events. The highlight of the morning was the knowledge-sharing session by Prof. ChM Dr. Chong Kwok Feng, Chairman of IKM Pahang Branch, who delivered an engaging talk on capsaicin - the natural compound responsible for the spiciness in chillies. Prof. Chong captivated the audience with his explanation of the chemistry behind this well-known sensation, illustrating how simple, everyday experiences can be connected to fascinating scientific concepts. His sharing sparked curiosity and enthusiasm among participants of all ages, effectively bridging the gap between science and daily life.

The official programme concluded around 10.30 a.m., after which participants and their families continued with their own leisure activities, such as exploring the beach area, engaging in light water play, or simply relaxing and spending quality time together. Overall, the IKMPB Breakfast Walk 1.0 was a resounding success. The event not only promoted a healthy and active lifestyle but also strengthened bonds among IKM members and their families. It served as a valuable platform for participants to connect, communicate, and learn in an

informal, nature-filled environment. Moreover, the inclusion of a chemistryrelated sharing session exemplified the branch's commitment to promoting scientific awareness beyond laboratory walls. The encouraging feedback and cheerful atmosphere have inspired plans for future editions, including Breakfast Walk 2.0 and family-oriented activities, reaffirming IKMPB's dedication to nurturing wellness, unity, and lifelong learning within the chemistry community and beyond.

Prepared by: ChM Maryam Aisyah Abdullah



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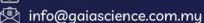
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Federation of Asian Chemical Societies (FACS)

### Institut Kimia Malaysia (IKM)

Institut Kimia Malaysia (IKM) is a professional scientific organisation with strong support from our members, the government, the chemical industry, academia, and the corporate and service sectors. With decades of experience and expertise, IKM is proud to host the 21st Asian Chemical Congress (21ACC) and the 23rd General Assembly of FACS (23GA-FACS) in 2027. This prestigious event also marks a significant milestone the celebration of IKM's 60th anniversary.

### Malaysia – truly Asia

Malaysia is a captivating tourist destination that truly reflects the richness of Asian culture, values, arts, architecture, and a wide variety of culinary delights. We are also proud of our million-year-old tropical rainforests, home to one of the world's largest varieties of flora and fauna. Malaysians are well known for their warm hospitality, making every visitor feel genuinely welcome.



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### Strategic Location and Ease of Accessibility

Malaysia is strategically located in the heart of Southeast Asia, with Kuala Lumpur easily accessible from around the globe. More than 60 international airlines fly directly to Malaysia, connecting 135 major cities across 35 countries — including Australia, the UK, and the USA. This makes Malaysia convenient and well-connected destination for travellers worldwide.

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In addition to Malay as the national language, Chinese and English are widely spoken throughout Malaysia. English is commonly used as a medium of instruction in education, including universities and research. It is also the primary language in telecommunications, the internet, business, and trade, making communication seamless for international visitors and professionals.

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Malaysia boasts some of the finest convention and exhibition infrastructure in the world, complemented by a wide range of accommodation options — from budget-friendly stays to luxurious hotels — to suit every preference and budget. Among the country's top venues, the Kuala Lumpur Convention Centre (KLCC) stands out with its state-ofthe-art fa<mark>cilities, offering expansive spaces, including grand ballrooms, con</mark>ference halls, and a plenary theatre. With a total area capable of accommodating thousands of participants, KLCC is a premier choice for hosting impactful, largescale events and international conferences.

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Theme 4: Chemistry and Society

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Theme 6: Young Scientists Programme



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# 6th Malaysian Chemistry Carnival (K2M) 2025 Perak: Driving Innovation and Strengthening STEM Education

The 6th Malaysian Chemistry Carnival (K2M) 2025 at the Perak state level was successfully held on 12 November 2025 at Universiti Teknologi PETRONAS (UTP). Organized by the Malaysian Institute of Chemistry (IKM) Perak Branch in collaboration with UTP and the Perak State Education Department (JPN), the event carried the theme 'Harnessing Innovation: Shaping the Future of Technology with Chemistry'. This annual program aims to raise awareness of the role of chemistry in everyday life, strengthen STEM education, and foster innovation among students and educators. The carnival was officiated by distinguished guests from IKM, UTP, and JPN, alongside representatives from academia and industry, making it a significant platform for knowledge sharing and collaboration.

#### **Purpose and Theme**

The theme for K2M 2025, 'Harnessing Innovation: Shaping the Future of Technology with Chemistry', reflects the aspiration to position chemistry as a catalyst for sustainable technological advancement. Through competitions, exhibitions, and interactive sessions, the carnival provided opportunities for participants to explore innovative ideas aligned with the United Nations Sustainable Development Goals (SDGs), including Good Health and Well-being, Affordable and Clean Energy, and Climate Action.

#### **Activities and Participation**

The event featured a wide range of activities, including the Student Chemistry Innovation Competition, the 3-Minute Pitching Competition for teachers, and STEM Career Exhibitions. More than 250 participants from 18 institutions, including primary and secondary schools, vocational colleges, matriculation centers, and universities,

took part in these activities. The competitions encouraged students to apply theoretical knowledge to real-world challenges, promoting creativity, critical thinking, and problem-solving skills. Teachers showcased innovative teaching practices through pitching sessions, while exhibitions highlighted chemistry's role in health, energy, materials, and sustainability.

#### **Achievements and Winners**

The carnival celebrated outstanding achievements across various categories. In the primary school category, SK Marian Convent won the Gold Award with their project 'Chairbin Pro Max'. For upper secondary schools, SMK Kampung Bahagia secured the Gold Award with 'Torch Ginger Ink Pad'. In the pre-university category, Universiti Teknologi PETRONAS emerged as the Gold winner with 'SMART UTP'. These projects demonstrated creativity and relevance to real-world issues, showcasing the participants' commitment to innovation and sustainability.

#### **Closing Remarks and Future Outlook**

Despite challenges such as time constraints and limited sponsorship, K2M 2025 was successfully executed. Moving forward, the organizers aim to adopt digital platforms for event management, expand sponsorship networks, and increase engagement from primary schools. IKM and UTP remain committed to strengthening industry-academia collaboration, enhancing program quality, and providing opportunities for students to lead and innovate. With a strong focus on sustainability and global impact, K2M will continue to inspire future innovators and contribute to Malaysia's vision for a knowledge- driven society.



Chemistry Malaysia BERITA IKM December 2025 Issue No. 161 MRSM BAGAN DATUK SESI PENYAMPAIAN TOKEN PENGHARGAAN

# 51st IUPAC World Polymer Congress (MACRO 2026): 1st Site Recce in Kuching, Sarawak

Soon Ting Kueh, Rusli Daik, Phang Sook Wai

The 51st IUPAC World Polymer Congress (MACRO 2026) will be held in the vibrant city of Kuching, Sarawak, from **28 July to 31 July 2026**. A site recce was conducted in Kuching from 19 to 23 November 2025, led by the MACRO 2026 team: President of IKM, Datuk ChM Dr. Soon Ting Kueh, accompanied by Prof. ChM Dr. Rusli Daik (MACRO 2026 NOC Chair), Prof. ChM Dr. Phang Sook Wai (MACRO 2026 NOC Co-Chair), and PCO representatives Ms. Victoria Foo and Ms. Nurul Safariana Syafigah.

The main objectives of the site recce were:

- Venue Arrangements: To hold detailed discussions and finalize venue logistics with the Borneo Convention Centre Kuching (BCCK).
- Sponsor Engagement: To conduct formal meetings with identified potential sponsors for the Congress.

On 19 November 2025, the MACRO 2026 team attended a dinner meeting with ChM Dr. John Chan, Executive Director of Chemsain, Sarawak, to discuss the progress of MACRO 2026 in Kuching. The planned courtesy visit to YB Datuk Amar Prof. Sim Kui Hian, Deputy Premier and Minister for Public Health and Housing, scheduled for 20 November 2025, was cancelled due to the passing of his mother on 17 November 2025. Datuk ChM Dr. Soon sought assistance from ChM Dr. John to arrange for condolence flowers to be sent to the funeral.

On 20 November 2025, the day began with a site inspection at the MACRO 2026 venue. The MACRO 2026 NOC team then held a meeting with the BCCK team to review and discuss the MACRO 2026 Agreement, particularly the budget related to venue logistics for the conference. In addition to representatives from the IKM headquarters, ChM Dr. Cindy Tan from the IKM Sarawak Branch also joined the meeting.

Following the discussion, the team proceeded to an early lunch with Mr. Donny Tan, Senior Business Development Manager of Business Events (BE) Sarawak, at the BCCK

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Rainforest Restaurant, prior to continuing sponsorship discussions. Subsequently, the MACRO 2026 NOC team and the PCO team continued their discussions at the lounge of the Waterfront Hotel. During this session, both the sponsorship package and the collaborative package for MACRO 2026 were finalized. The MACRO 2026 NOC team also met with the Waterfront Hotel management regarding its appointment as the Host Hotel for MACRO 2026, during which the hotel agreed to provide special room rates for the organizing committee and participants.

In addition, the MACRO 2026 NOC team nearly finalized arrangements for the IUPAC Polymer Division meeting rooms, selecting the Waterfront Hotel due to its reasonable pricing, spacious rooms, and excellent facilities. The proposed meeting dates are 24 -27 July 2026.

On 21 November 2025, the MACRO 2026 team continued its meeting with the PCO at the Waterfront Hotel lounge at 10:00 a.m. The discussion focused on the virement of the MyCEB and BE Sarawak sponsorship budgets from 2025 to 2026, as well as logistics planning for MACRO 2026.

The day concluded with a warm dinner hosted by the IKM Sarawak Branch at the New City Restaurant & Ballroom, Theatre Hotel Kuching. During the dinner, Prof. Rusli and Prof. Phang held a discussion with Prof. Tay and Dr. Cindy on matters related to the venue, logistics, and potential speaker from Kuching for the Melisa Chan Educational Workshop, scheduled for 28 July 2026 in Kuching, held in honour of Prof. Melisa's significant contributions to both IUPAC and IKM.

On 22 November 2025, the team conducted a site inspection and discussion at the Pullman Hotel to assess its ballroom as a potential venue for the MACRO 2026 Congress Gala Dinner. This was followed by another meeting between the MACRO 2026 NOC team and the PCO at the Waterfront Hotel to review the detailed MACRO 2026 budget.

In conclusion, the Site Recce in Kuching, Sarawak, was highly productive, resulting in the finalization of key components such as the conference venue, the IUPAC Polymer Division meeting venue, the gala dinner venue, sponsorship packages, logistics arrangements, Melissa Chan Educational Workshop, and other essential preparations.





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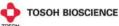


















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**BERITA IKM** 

## **Exploring STRIDE: Technical and Strategic Project Alignment** "Sustainability Meets Defence Innovation"

Issue No. 161

Lee Hwei Voon, Lee Kian Mun, Phang Sook Wai, Yang Farina, Juan Joon Ching

A strategic visit to the Science & Technology Research Institute for Defence (STRIDE) was conducted by the Division of Green & Sustainable Chemistry (DGSC) on 23 October 2025 to strengthen collaboration between IKM and the national defence R&D ecosystem. The session held from 9:30am to 12:00pm at the STRIDE Main Complex in Kajang, aimed to enhance knowledge exchange and identify opportunities for project alignment in green and sustainable technologies.

STRIDE is a department under the Ministry of Defence that advances Malaysia's defence capabilities through research, development, validation, and testing. Its core expertise covers ten domains: Electronics & Communication Technology; Automotive & Mechanical Technology; Weapons, Ammunition, Ballistics, Explosives, and Design (SABER) Technology; Maritime Technology; Performance Technology; Chemical & Biological Defence Technology; Rocket & Missile Technology; Robotics & Artificial Intelligence Technology; Cyber Technology; and Aerospace Technology.

The IKM delegation included ChM Dr Yang Farina Abdul Aziz, DCP(R) Dato' ChM Dr Yew Chong Hooi, Prof ChM Dr Phang Sook Wai, Assoc Prof ChM Dr Lee Hwei Voon, and Assoc Prof ChM Dr Norizah Abdul Rahman. The visit began with welcome remarks by STRIDE's Deputy Director General, ChM Dr Mahdi bin Che Isa, followed by a briefing on STRIDE's mandate and capabilities. Prof Dr Yang Farina introduced IKM's mission and its role in national scientific advancement.

A project presentation session featured three speakers: Prof Phang on Conducting Polymers and Their Superior Applications: Assoc Prof Dr Lee on Nanocellulose Biopolymers for Sustainable Defence Materials; and Assoc Prof Dr Norizah on Electrospun Nanofiber Membranes for Ballistic and Chemical Protection. Each presentation highlighted relevant research strengths and their potential contributions to defence-focused sustainability. STRIDE researchers shared key areas of focus, including textile material technology, automotive and mechanical testing for





tactical vehicles, chemical and biological decontamination guidelines, and national analytical standards for CWCrelated analysis. The discussion highlighted potential collaboration in research co-development, analytical services, technical consultation, internships, and conference participation. Both parties acknowledged strong synergy, particularly under the Chemical & Biological Defence Technology theme. The IKM delegation also introduced MACRO 2026, inviting STRIDE to participate through presentations, exhibitions, and partnership activities. STRIDE was further encouraged to share future research outputs through Berita IKM and the Malaysian Journal of Chemistry.

The session concluded positively, with both parties agreeing to pursue a Memorandum of Understanding (MoU). Tokens of appreciation were exchanged as a symbol of continued cooperation. This engagement marks an important step in integrating sustainable chemistry with defence innovation, paving the way for impactful joint initiatives supporting Malaysia's technological strength and sustainability goals.





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#### SURAT MAKLUMAN MQA BIL. 19/2025

#### PROSES PENILAIAN AKREDITASI SEMENTARA DAN AKREDITASI PENUH PROGRAM SARJANA MUDA BIDANG KIMIA DI BAWAH INSTITUT KIMIA MALAYSIA

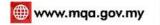
Dengan hormatnya saya merujuk kepada perkara di atas.

- Dimaklumkan bahawa Jawatankuasa Teknikal Bersama (Joint Technical Committee, JTC) antara Agensi Kelayakan Malaysia (Malaysian Qualifications Agency, MQA) dengan Institut Kimia Malaysia (IKM) telah ditubuhkan secara rasmi pada 15 Mei 2024. Penubuhan ini adalah selaras dengan Seksyen 51 Akta Agensi Kelayakan Malaysia 2007 [Akta 679], yang memperuntukkan bahawa JTC berfungsi, termasuk tetapi tidak terhad kepada meneliti dan memberi syor penilaian bagi permohonan akreditasi program pengajian bidang Kimia dan program berkaitan Kimia pada Tahap 6, Kerangka Kelayakan Malaysia (Malaysian Qualifications Framework, MQF) yang menjurus kepada profesion kimia.
- 3. Selaras dengan peruntukan di bawah Akta Agensi Kelayakan Malaysia 2007 [Akta 679], proses penilaian program di bawah bidang Kimia dan program berkaitan Kimia menjurus kepada profesion kimia yang sebelum ini dilaksanakan oleh MQA dipertanggungjawabkan kepada IKM berdasarkan ketetapan berikut:
  - 3.1 Penilaian Akreditasi Sementara seperti yang diperuntukkan di bawah seksyen 43 Akta 679 dan Akreditasi Penuh seperti yang diperuntukkan di bawah subseksyen 50(1) Akta 679 bagi program baharu di bawah penilaian IKM yang diterima daripada Pemberi Pendidikan Tinggi (PPT) termasuk PPT berstatus Swaakreditasi berkuat kuasa pada 01 Januari 2026. Bagi tujuan Akreditasi Sementara, kerjasama antara MQA dan IKM akan diselaraskan melalui JTC sebagai mekanisma pentadbiran sahaja.
  - 3.2 Bagi program yang telah mendapat Akreditasi Penuh MQA termasuk daripada PPT berstatus Swaakreditasi, PPT perlu mengemukakan permohonan untuk penilaian Akreditasi semula oleh IKM. Tempoh transisi penghantaran permohonan Akreditasi secara berperingkat yang dipersetujui adalah lima (5) tahun dari tarikh surat ini agar pihak PPT









dapat membuat perancangan sewajarnya. Walau bagaimanapun, pihak PPT adalah disarankan untuk mengemukakan permohonan Akreditasi semula di bawah penilaian IKM dengan kadar segera tanpa perlu menunggu sehingga tamat tempoh peralihan. Langkah ini bertujuan untuk memudahkan perancangan proses penilaian semula oleh pihak IKM, serta mengelakkan sebarang kelewatan proses penilaian sekiranya semua permohonan dikemukakan pada saat-saat akhir tempoh tersebut.

- 4. Carta Alir Proses Penilaian Akreditasi Sementara dan Penilaian Akreditasi Penuh serta Pembaharuan Akreditasi Penuh adalah seperti dalam **Lampiran A**.
- 5. Sehubungan itu, PPT yang menawarkan program bidang Kimia dan program berkaitan Kimia di peringkat Sarjana Muda (Tahap 6, MQF) yang menjurus kepada profesion kimia adalah tertakluk kepada penggunaan Standard Program: Kimia yang disediakan oleh IKM (<a href="www.ikm.org.my">www.ikm.org.my</a>) dalam penyediaan dokumen permohonan Akreditasi Sementara dan Akreditasi Penuh kepada MQA.
- 6. Selain itu, PPT yang melaksanakan penambahbaikan kurikulum selaras dengan keperluan Standard Program: Kimia perlu membuat permohonan kepada IKM dan disalinkan kepada pihak MQA dan Jabatan Pendidikan Tinggi, Kementerian Pendidikan Tinggi (JPT, KPT). IKM akan mengemukakan surat keputusan penilaian terus kepada PPT dan salinan kepada MQA dan JPT, KPT.
- 7. PPT adalah dimohon untuk mengemukakan permohonan Akreditasi Sementara, Akreditasi Penuh dan Pembaharuan Akreditasi Penuh bagi program Sarjana Muda bidang Kimia dan program berkaitan Kimia kepada MQA menggunakan borang, fi perkhidmatan MQA dan format dokumen penilaian seperti di **Lampiran B**. MQA akan mengemukakan permohonan PPT kepada pihak IKM bagi tujuan penilaian selaras dengan peruntukan di bawah subseksyen 38(1) dan subseksyen 50(1) Akta 679.
- 8. PPT dimohon mengambil perhatian yang sewajarnya agar urusan penilaian akreditasi bagi program Sarjana Muda bidang Kimia dan program berkaitan Kimia dapat dilaksanakan dengan lancar dan teratur.

Sekian, terima kasih.

"PENDIDIKAN TINGGI BERKUALITI GLOBAL"

"MALAYSIA MADANI"

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

DATO' PROF. DR. MOHAMMAD SHATAR BIN SABRAN (DIMP, DPMP)

More information available at IKM websitehttps://ikm.org.my/accreditation/accreditation-ikm-mqa-jtc/



#### IKM MEMBERSHIP UPGRADING

**Upgrading to MMIC** 

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Hazirah Syahirah Binti Zakria, ChM *M*/7226/9595/22/25

Mohamad Hafiz bin Mohd Rizwan, ChM *M*/7230/9744/22/25

Mohd Ridhuan Bin Daud, ChM *M*/7234/8739/20/25

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