

# NUS ChemCONNECTIONs

Newsletter of NUS Chemistry



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## Editorial Notes

The year 2026 has seen breakthroughs in science and technology, from the innovation of direct lithium extraction from brine to everything-to-grid energy. Here in NUS Chemistry, we too have had a busy and heartfelt series of events.

We waved goodbye to Madam Wong Lai Kwai, who has served the department for 40 years. We welcomed many guests for our biannual Singapore National Crystal Growing Challenge, the Malaysian Science Teacher Camp, the NUS Summer Science Institute, and the NUS Chemistry Camp. We held the Homecoming Lunch for the chemistry alumni class of 2025 and the graduating class of 2026, and sent off our students and faculty members to China to network with industry professionals during the summer as part of the BC4 programme.

The Department of Chemistry always aims to foster strong bonds between students, alumni, and faculty members. We hope that these stories bring you closer to the Department too. The editorial board wishes you the best of health and please enjoy the read.

## Happy retirement to Madam Wong Lai Kwai

On 23 July 2026, Madam Wong Lai Kwai retired from the Department after an extraordinary 40 years of dedicated service and invaluable contributions. Throughout her career, she played a vital role in supporting the Department's teaching and research activities through her professionalism, commitment, and unwavering willingness to help others.

Prior to her retirement, Madam Wong served as the Laboratory Technologist in charge of the Mass Spectroscopy Laboratory, where her expertise and dedication were greatly valued by colleagues, staff, and students alike.

We are deeply grateful for her many years of passionate service and significant contributions to the Department. We extend our sincere appreciation to Madam Wong and wish her a happy, healthy, and fulfilling retirement.



**NUS**  
National University  
of Singapore

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We welcome contributions from our alumni. If you are interested in writing for the newsletter, please contact the Editor at [chmcws@nus.edu.sg](mailto:chmcws@nus.edu.sg).

## Homecoming Lunch Gathering Class of 2026 and Class of 2025

Congratulations to our students Class of 2026! The Department of Chemistry hosted Homecoming Class of 2026 and Class of 2025 Lunch Gathering on 25 July 2026. The event brought together 46 graduates, along with their friends and faculty members, for a warm and memorable occasion filled with joy and camaraderie.

The gathering provided a wonderful opportunity for graduates to reflect on their academic journeys, share experiences, and celebrate this significant milestone with their peers and mentors. A series of fun and interactive games organised by our students from the Chemical Sciences Society and NUS ACS Student Chapter brought excitement, laughter, friendly competition, and lasting memories to the afternoon. The gathering served the purpose of more than just celebrations. It also served as an occasion to acknowledge the dedication and perseverance of the graduating class, as well as the unwavering support of their families, friends, and educators throughout their time at NUS Chemistry.

As our graduates embark on the next chapter of their journeys, we extend our heartfelt congratulations and best wishes for continued success and fulfilment in their future endeavours.



## 17<sup>th</sup> Singapore National Crystal Growing Challenge

The 17<sup>th</sup> Singapore National Crystal Growing Challenge was held at the NUS Department of Chemistry on 30 May 2026. This year's challenge attracted 66 teams from 33 schools in Singapore.

For the Junior Category, students presented a single crystal of copper(II) sulfate pentahydrate grown in the weeks leading up to the day of the event, while participants in the Open Category showcased a single crystal evaluated by its longest dimension. The participants' impressive crystals, housed in creative dioramas, were displayed at the NUS Chemistry teaching laboratories for judging.

As part of the educational programme, participants attended a special lecture titled "Crystals in Our Daily Lives" delivered by guest speaker Mr Tay Kunming, Gemologist and Director of Far East Gems and Jewellery and the Far East Gemological Institute. The session offered valuable insights into the significance and applications of crystals beyond the laboratory, enriching the students' learning experience.

The event concluded with an appreciation ceremony honouring the guest speaker and judges for their valuable contributions and support. This was followed by the awards presentation, during which Mr Tay Kunming presented the prizes to the winning teams in the Junior Category, and Professor Lu Yixin presented the prizes to the winning teams in the Open Category.



## Malaysian Teacher Science Camp 2026

The Department of Chemistry, in collaboration with the Departments of Biological Sciences and Physics, organised the Malaysian Teachers Science Camp 2026 from 3 to 5 June 2026. The 3-day immersive programme welcomed 28 chemistry teachers from independent high schools across Malaysia.

Participants attended thematic lectures delivered by faculty members, gaining valuable insights into current developments in science education and research. Afternoons were devoted to hands-on laboratory sessions and a learning journey to the CMMAC facilities, providing educators with direct exposure to innovative teaching approaches and advanced research practices.

The camp equipped educators with new knowledge, practical skills, and resources designed to enhance teaching and learning in their respective schools. Through fostering professional exchange and strengthening regional educational ties, the programme is poised to create a positive and lasting impact on science education beyond the classroom.



## Exploring Biology and Chemistry, Culture and Commerce in China

From 16 to 25 May 2026, 13 Chemistry, 12 Life Science, and 1 Physics students, accompanied by Professors Cynthia He, Jason Yeo, and Ang Wee Han, travelled to Shanghai and Suzhou, China as part of the Exploring Biology and Chemistry, Culture, and Commerce in China (BC4) programme. Notably, two Chemistry students received financial support from the Chemistry Alumni Fund, enabling them to take part in this enriching overseas learning experience.

The 10-day programme combined company visits, seminars, and networking sessions, providing participants with valuable insights into China's market economy, developments in the chemical industry, and the growing importance of international internships. Students had the opportunity to engage with industry professionals and gain first-hand exposure to the region's scientific, technological, and commercial landscape.

Beyond academic and professional learning, the programme broadened participants' global perspectives and deepened their appreciation of Chinese culture. For some students, it marked their first overseas trip, made possible through the generosity of the Chemistry alumni community. The experience was both memorable and transformative, leaving students with new knowledge, connections, and inspiration for their future careers.



## NUS Chemistry Camp 2026

The Department of Chemistry hosted the NUS Chemistry Camp 2026 from 2 to 6 June 2026, welcoming 74 students across two tracks, Programme A for upper secondary students and Programme B for pre-university students. Designed to inspire the next generation of scientists, the camp featured a vibrant programme of workshops, guided discussions, hands-on experiments, and an interactive chemistry quiz. Through these activities, participants deepened their understanding of fundamental chemical concepts, explored their real-world applications, and developed practical laboratory and critical-thinking skills.

The camp also included laboratory tours and fireside chats with faculty members and senior students, offering valuable insights into current developments in chemistry and university life. By combining academic enrichment with experiential learning, the camp provided a rewarding experience that sparked curiosity, strengthened scientific literacy, and encouraged participants to pursue their passion in chemistry.



## NUS Science Summer Institute 2026

In collaboration with the Departments of Biological Sciences, Physics, and Mathematics, the Department of Chemistry organised the NUS Science Summer Institute (SSI) from 6 to 17 July 2026. This year, the Chemistry Thematic Track welcomed 52 undergraduate students from universities across the region.

Over the course of the intensive 10-day STEM programme, participants attended plenary and thematic lectures that fostered meaningful discussions and deepened their understanding of contemporary scientific topics. Students also enhanced their practical competencies through a series of hands-on masterclasses conducted in the NUS Chemistry laboratories. The programme culminated in the SSI Symposium, held over the final two days, where participants showcased their research through oral and poster presentations. Beyond academic enrichment, NUS SSI provided a valuable platform for nurturing young talent, fostering regional collaborations, and strengthening participants' sense of belonging to the chemistry community. We would like to express our sincere gratitude to the Far East Organization and Mr Yeo Keng Joon for their generous support through the provision of Study Awards for NUS SSI 2026, which enabled many undergraduate students to benefit from this enriching experience and to the Singapore National Institute of Chemistry for the award support.



## "From Molecules to Models: How Chemistry Taught Me to Think at Every Scale"

*by Ms Miao Jiapei, BSc Hons Class of 2023*

"My relationship with NUS Chemistry began before I even enrolled as an undergraduate student. In 2018, I was part of the Singapore team for the International Chemistry Olympiad, where I earned a silver medal. My Olympiad training took place right here on campus, under Dr Zhang Sheng and Dr Tan Wee Boon. They later became my lecturers in NUS, and sitting in their classes as an undergraduate felt like a natural homecoming.

I graduated from NUS as a chemistry major with a minor in computer science and a specialization in medicinal chemistry. My UROPS projects pushed me into different corners of the discipline, from green chemistry using deep eutectic solvents for lignin extraction in Professor Sam Li Fong Yau's group, to organic synthesis of axially chiral 1,1'-indole-pyrroles in Professor Zhao Yu's group. The moment that redirected my interest to chemical biology came in the amazing module CM4236 Spectroscopy & Imaging in Biophysical Chemistry, taught by Professor Winston Zhao. My Final Year Project in Professor Richard Wong's group was my first real encounter with using computational tools to ask biological questions, where I worked on computer-aided drug design for PTK6 inhibitors.

I am now a third-year PhD student in Chemistry at the California Institute of Technology (Caltech), working on integrating molecular dynamics simulations with protein language models for receptor-binder design. This research lives at the intersection of computational chemistry, structural biology, and machine learning.

The skills we build in NUS Chemistry travel further than we initially thought. NUS Chemistry gave me the curiosity to keep following unexpected threads, and the foundation to see where they lead."

