



INTERNATIONAL UNION OF
PURE AND APPLIED CHEMISTRY



Institut Kimia Malaysia

WORLD CHEMISTRY LEADERSHIP MEETING 2021

MALAYSIA PROGRAMME
18 AUGUST 2021 9.00 AM KUALA LUMPUR

The Future of Chemistry in Asia Pacific & the Role of Artificial Intelligence

Welcome to WCLM Malaysia 2021



On behalf of Institut Kimia Malaysia (IKM), I would like to welcome you to the **World Chemistry Leadership Meeting (WCLM) Malaysia 2021**. **WCLM Malaysia 2021** is being organized as part of the IUPAC WCLM 2021 in Montreal, Canada. The theme of **WCLM Malaysia 2021** is “**The Future of Chemistry in Asia Pacific and the Role of Artificial Intelligence**”.

WCLM Malaysia 2021 will comprise a Panel Presentation of four Invited Lectures on 1) Chemistry for Economic Development, 2) Chemistry for Environmental Protection, 3)

Chemistry for Societal Harmonisation and 4) Chemistry for Sustainable Development, followed by a Panel Discussion on “**The Future of Chemistry in Asia Pacific**”, and two Keynote Lectures on “**The Role of Artificial Intelligence**”. The topics are chosen to showcase the importance of chemistry in socio-economic and sustainable development in Asia Pacific and the role of Artificial Intelligence in the future development of chemistry. Asia Pacific is going to be a major economic and political region in the world in the near future and chemistry will be playing a key role in this transformation.

On behalf of IKM, I would like to record our sincere appreciation to Prof David Winkler and Prof Luhua Lai for delivering the Keynote Lectures on “The Role of Artificial Intelligence”, and Prof Mayumi Nishida, Prof Dato’ Mazlin Mokhtar, Prof Mei-hung Chiu and Prof Chulhee Kim for presenting the Invited Lectures.

I am sure that you will enjoy and benefit from the deliberations at **WCLM Malaysia 2021**. This event reflects on Malaysia’s capability to host the IUPAC 53rd General Assembly (53GA) and 50th World Chemistry Congress (50WCC) in Kuala Lumpur, Malaysia in 2025.

Do enjoy streaming **WCLM Malaysia 2021** in this global COVID-19 pandemic time.

Datuk ChM Dr Soon Ting Kueh
President, Institut Kimia Malaysia



WORLD CHEMISTRY LEADERSHIP MEETING 2021 (MALAYSIA PROGRAMME)
Wednesday, 18 August 2021, 9.00 – 12.00 noon Kuala Lumpur

MALAYSIA TIME

PROGRAMME DETAILS

9.00 am

Welcome

ChM Dr Malarvili Ramalingam

9.05 am

Opening Address

Datuk ChM Dr Soon Ting Kueh
President, Institut Kimia Malaysia

9.15 am

IUPAC Address

Professor Dr Christopher K Ober
Chair, IUPAC WCLM 2021

9.20 am

Video on **"IUPAC 2025 - We Welcome You to Enchanting Malaysia"**
The Future of Chemistry in Asia Pacific

9.30 am

Chemistry for Economic Development

Professor Dr Mayumi Nishida
Institute for Catalysis, Hokkaido University, Japan

9.45 am

Chemistry for Environmental Protection

Dato' Professor ChM Dr Mazlin Mokhtar
LESTARI, Universiti Kebangsaan Malaysia, Malaysia

10.00 am

Chemistry for Societal Harmonization

Professor Dr Mei-Hung Chiu
Graduate Institute of Science Education, National Taiwan Normal University, Taiwan

10.15 am

Chemistry for Sustainable Development

Professor Dr Chulhee Kim
Department of Polymer Science and Engineering, Inha University, South Korea
Chairperson: Professor ChM Ts Dr Melissa Chan Chin Han

10.30 am

Panel discussion

Moderator: Datuk ChM Dr Soon Ting Kueh

Keynote Lectures on The Role of Artificial Intelligence

11.00 am

The Role of Artificial Intelligence in Chemistry in the Future

Professor Dr David Winkler
School of Biochemistry and Genetics, La Trobe University, Australia
Chairperson: Datin ChM Dr Zuriati Zakaria

11.30 am

Artificial Intelligence and de novo Drug Design

Professor Dr Luhua Lai
College of Chemistry and Molecular Engineering, Peking University, China
Chairperson: ChM Mahayani Md. Saad

12.00 noon

Closing Address

Datuk ChM Dr Soon Ting Kueh

MAYUMI NISHIDA

Hokkaido University, Institute for Catalysis, Research and Development Division and National Institute of Advanced Industrial Science and Technology (AIST), Interdisciplinary Research Center for Catalytic Chemistry, Japan

Prof. Nishida has been a professor of Hokkaido University since 2014 and a cross-appointment fellow of AIST since 2015. She started her career in academia in 1979 after graduating from Tsukuba University. During working for 20 years in academia, she received Ph.D. from Hokkaido University in 1992 and changed her career to industry in 1998. She had been involved in new technology/business development related to metallocene catalysts at Koei Chemical Company, Ltd., which is a subsidiary of SUMITOMO CHEMICAL COMPANY, LIMITED, for 15 years and came back to academia in 2014 as a professor of Hokkaido university. Her mission is to work for industry-academia collaboration. She was appointed as an outside director (audit & supervisory committee members) of RAIZNEXT Corporation in 2020.



MAZLIN MOKHTAR

Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, Malaysia

Mazlin Bin Mokhtar, BSc (Tasmania), PhD (Queensland) is a Professor of Environmental Chemistry at Universiti Kebangsaan Malaysia (UKM, The National University of Malaysia). He is currently a Director of the Institute for Environment and Development (LESTARI) at UKM since August 2005 - 15 January 2014; and again since 1 March

2019-28 February 2022. He was appointed by the Honorable Minister of Natural Resources and Environment Malaysia as Chairman of the Malaysian Environmental Quality Council from 2015-2018. In 2018 the Honorable Minister of MESTECC (Ministry of Energy, Science & Technology, Environment, and Climate Change) appointed Prof Mazlin as Chairman of Evaluation Committee of Lynas rare earth operations in Malaysia. In 2019 Prof Mazlin was appointed by the Honorable Minister of KATS as Deputy Chairman of a special Committee to develop SOP for Bauxite Mining and Exportation. He was a member of the National Steering Committee of the UNDP GEF Small Grants Programme 2000-2018 (longest serving member); esteemed Nomination Committee Member of the prestigious Merdeka Awards Malaysia (Environment Category) of 2015-2017 & 2020-2022; Advisory Committee of the National River Care Fund, Member of WWF Malaysia's Board of Trustees 2014-2018; and currently Chairman of Sub Sector on Advocacy, Awareness, Capacity Building & Public Participatory Platforms (AACB+PPP) of the National Water Sector Transformation 2040 Study sponsored by the Economic Planning Unit (EPU) of Prime Minister's Department & Academy of Sciences Malaysia (ASM). Professor Mazlin was awarded Winner of the coveted national environmental award Anugerah Langkawi 2017/2018. His Royal Highness The Sultan of Kedah Darul Aman had bestowed upon Prof Mazlin the Darjah Setia DiRaja Kedah DSDK on 14 January 2014 which carried the title Dato'; and earlier His Royal Highness The Sultan of Perak had bestowed upon him the Pingat Paduka Mahkota Perak PMP in 2002 based upon his excellent services to country and society for sustainability of one, and many.



MEI-HUNG CHIU

National Taiwan Normal University, Graduate Institute of Science Education, Taiwan

Dr. Mei-Hung Chiu is a Distinguished Professor at the Graduate Institute of Science Education, National Taiwan Normal University. Dr. Chiu was the Chair of Committee on Chemistry Education (2012-15) and is an elected member of the Bureau and Executive Committee of IUPAC since 2016. She published over 100 articles on conceptual understanding

of scientific phenomenon, modeling-based competence, facial recognition system and augmented reality in science education, in international and national well-known journals. Dr. Chiu was a recipient of the Distinguished Contribution to Chemical Education Award from the Federation of Asian Chemical Societies in 2009, the Distinguished Contribution to Science Education Award from Eastern-Asian Science Education Association in 2016, and the Distinguished Woman in Chemistry or Chemical Engineering from IUPAC in 2021. She was elected as the President of the National Association for Research in Science Teaching (2016-2017) based in the USA, the first president from a non-English speaking country.

CHULHEE KIM

**Department of Polymer Science and Engineering,
Inha University, South Korea**

Chulhee Kim is a Professor of Polymer Science and Engineering at Inha University. He obtained a BS in Chemistry from Seoul National University, and an MS from Korea Advanced Institute of Science and Technology (KAIST). After working at the Korea Institute of Science and Technology (KIST), he obtained a PhD at The Pennsylvania State University. After two years working at AT&T Bell Labs, Murray Hill, in 1992 he returned to the KIST as a senior researcher. From 1993 he started his academic career at Inha University. He was the recipient of the Samsung Academic Award from the Polymer Society of Korea in 2009. He served as the Editor-in-Chief for Macromolecular Research in 2011-2013. He also served as the President of Polymer Society of Korea in 2018. He currently is a member of Korean Academy of Science and Technology.





DAVID WINKLER

School of Biochemistry and Genetics, La Trobe Institute for Molecular Science, La Trobe University, Bundoora, Australia

Dave is a Professor of Biochemistry & Genetics at La Trobe Institute for Molecular Science at La Trobe University, a visiting Professor in Pharmacy at the University of Nottingham, and a Fellow at CSIRO Data61. He previously spent >30 years at CSIRO researching the application of

computational chemistry, AI, and machine learning methods to the design of drugs, agrochemicals, nanomaterials and biomaterials. He has authored over 250 refereed journal articles and book chapters, has an H index of 50, and is an inventor on 25 patents. He has won several prestigious awards including the CSIRO Medal for Business Excellence, RACI's Adrien Albert award for contributions to medicinal chemistry, and ACS Herman Skolnik award for excellence in cheminformatics. He is ranked 227th out of 81,000 medicinal chemists, and 999th out of 520,000 chemists worldwide (Mendeley 2019). He is past President of the Federation of Asian Chemical Societies (FACS) and the Asian Federation for Medicinal Chemistry (AFMC)

LUHUA LAI

College of Chemistry and Molecular Engineering, Peking University, China

Prof. Luhua Lai is a professor in the College of Chemistry and Molecular Engineering, Peking University. She serves as associated editor for PLoS Computational Biology (2005-2013), Journal of Medicinal Chemistry, and Quantitative Biology. Professor Lai's group works on deciphering the basic laws governing protein sequence, structure and function relationship. They develop computational methods and programs, and use them to study biomolecules and systems of interest together with experimental approaches. The current research areas of Professor Lai's group include: (I) Systems based drug design with focus on metabolism and control. (II) Structural based drug design, method development and applications. Some of the programs they developed, like the de novo drug design program LigBuilder are widely used worldwide. (III) AI in cheminformatics and drug discovery. (IV) Functional protein design.



IUPAC World Chemistry Leadership Meeting (WCLM) Malaysia 2021 Committee

Datuk ChM Dr Soon Ting Kueh
Datin ChM Dr Zuriati Zakaria
Prof ChM Ts Dr Melissa Chan Chin Han
ChM Dr Malarvili Ramalingam
Assoc Prof ChM Dr Juan Joon Ching
ChM Chang Hon Fong
ChM Dr Lee Siang Yin
Assoc Prof ChM Dr New Siu Yee
ChM Marhayani Binti Md. Saad
ChM Dr Aqeel Saravanan



IUPAC 2025



Institut Kimia Malaysia

KUALA LUMPUR • MALAYSIA

We welcome you to enchanting Malaysia

