WCCE12
APCChE 2025

12th World Congress of Chemical Engineering

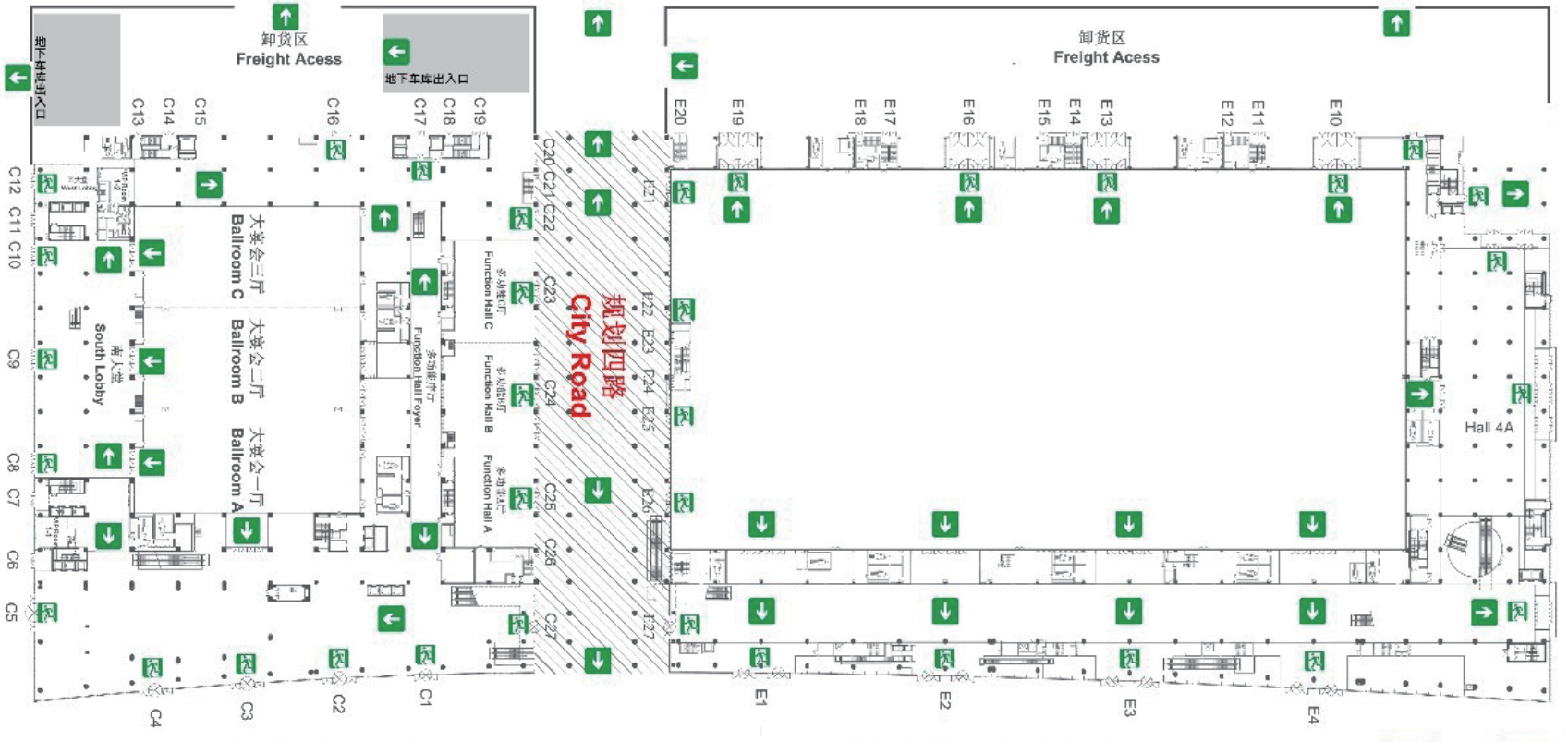
21st Asian Pacific Confederation of Chemical Engineering Congress 2025

HANDBOOK

July 14–18, 2025

China National Convention Center · Beijing, China

EMERGENCY EVACUATION



WCCE12
APCChE 2025

PARADIGM SHIFTING IN CHEMICAL ENGINEERING FOR GLOBAL CHALLENGES

Scan the QR Code to Check
the Latest Agenda & Poster List

Photo Live

WCCE 12 & APCChE 2025
Official Website

Registration QR Code

Exhibition Guide
(WeChat Mini Program)

WELCOME

Dai Houliang

Member of Chinese Academy of Engineering
President of the Council of CIESC
Chairman of WCCE 12 & APCChE 2025

Dear friends,

Greetings to you all! The 12th World Congress of Chemical Engineering and the 21st Asian Pacific Confederation of Chemical Engineering Congress (WCCE 12 & APCChE 2025) will be held in Beijing, China from July 14 to 18, 2025. On behalf of the organizing committee, I would like to sincerely invite you to join us in this grand event, hosted by the Chemical Industry and Engineering Society of China (CIESC) and organized by China National Petroleum Corporation (CNPC), China Petrochemical Corporation (SINOPEC) and Beijing University of Chemical Technology (BUCT).

The chemical industry, a basic industry of strategic importance, covers various areas such as infrastructure, real estate, agriculture, automobiles, clothing and healthcare and is closely related to the wellbeing of humanity. Since the 20th century, the industry has witnessed vigorous and rapid growth with the continuous innovation and breakthroughs in technologies and processes, making significant contributions to economic and social progress. At present, a new round of technological revolution and industrial transformation is gaining momentum, with technologies such as big data, artificial intelligence, digital twins, and materials genome engineering deeply integrated with chemical technologies. Renewable and sustainable energies, new materials, and biomanufacturing are developing side by side with chemical engineering, which is entering a new period of transformation. Meanwhile, prominent global development issues such as resource shortage and environmental pollution are calling for faster transition and upgrading of the traditional chemical engineering industry as well as green and low-carbon development.

Themed with “Paradigm Shifting in Chemical Engineering for Global Challenges”, WCCE 12 & APCChE 2025 will delve into global governance issues such as climate change, energy revolution, poverty alleviation, and quality of life, offering a premier platform for academic exchanges, innovation showcase, and collaboration among industries, universities and research institutes. Participants will engage in extensive discussions on frontier topics in the chemical engineering industry, including sci-tech innovation, personnel training and emerging fields. Latest achievements of the industry will also be showcased during the event including low-carbon technologies, innovation incubation, intelligent manufacturing, advanced materials and high-end equipment.

As the capital of China, Beijing is a three-thousand-year-old cultural city with magnificent views of the Great Wall and imperial palaces, profound cultural heritage and irresistible delicacies. We look forward to meeting you here in the beautiful summer of July. Together, we will celebrate the memorable moments of the chemical engineering industry and write a new chapter for its high-quality development.

I wish WCCE 12 & APCChE 2025 a great success.

Chairman

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CONFERENCE INTRODUCTION

Currently, global economic development is facing global challenges such as regional competition, climate change, energy revolution, human health, and poverty alleviation. With the vigorous rise of a new round of technological revolution and industrial transformation, the chemical industry is also entering a transformation period, facing challenges such as traditional industry restructuring, green and low-carbon development, innovation paradigm shift, and stimulation of new growth points. As one of the most critical chains of technological innovation, the chemical industry urgently needs to explore new development opportunities, cultivate a new generation of innovation-minded talents, stimulate the "new quality productive forces" and new growth drivers of chemical innovation, and shape a bright new future for the chemical industry, in response to the urgent need for global sustainable solutions.

In July 2025, as a long-standing and academically leading "Olympic level" event in global chemical industry, the 12th World Congress of Chemical Engineering (WCCE 12), a quadrennial congress, will be held in China for the first time. Concurrently, the 21st Asian Pacific Confederation of Chemical Engineering Congress (APCChE 2025) and the 2025 Annual Meeting of the CIESC will also take place.

With the theme of "Paradigm Shifting in Chemical Engineering for Global Challenges", WCCE 12 & APCChE 2025 will keep abreast of the new fields of science and technology in the world to address the disruptive challenges facing the development of the chemical industry. The congress will revolve around four challenging topics: Education and Training, Foundational Industry Reengineering, Strategic and Emerging Industries, and Future Chemical Engineering and Smart Innovation. Consisting of more than 900 thought-provoking cutting-edge presentations and exciting exchanges and seminars with over 40 innovative sessions, the congress will bring together the world's top scientists to share cutting-edge technologies and groundbreaking research findings, deeply exploring how the traditional chemical industry adapts to new demands for transformation and upgrading, how to cultivate emerging and future industries, how to promote the development of new quality productive forces with innovative development paradigms, and how to foster a new generation of chemical engineers who can adapt to industrial changes. More than 5,000 representatives from over 60 countries and regions, including top scientists from the academic, technological, and industrial fields in the global chemical sector, Nobel laureates, leaders of multinational corporations and international organizations, officials from relevant authorities and relevant authorities, and well-known figures from Industry-University-Research (IUR) areas at home and abroad will attend the congress. They will share cutting-edge technologies and groundbreaking achievements, and jointly promote the prosperity and development of global chemical technologies.

The congress is not only an important stage for global academic exchange and IUR integration, but also a window to showcase innovative achievements and investment opportunities - the International Chemical Innovation Expo 2025 (IChEIE 2025) will be held concurrently. With themed exhibitions in various forms, focusing on high-end electronic chemicals, functional new materials, new energy, artificial intelligence, green and low-carbon development, and other fields, IChEIE 2025 will effectively promote technological innovation and the development of new quality productive forces, and provide new investment opportunities for corporate community and business professionals.

The congress will serve as a vibrant stage and hub for academic excellence, scientific and technological innovation, industrial integration and investment development in the global chemical industry. Let us embrace it with enthusiasms and actively engage in shaping a bright future for the chemical industry and promoting the building of a sustainable, opener and more integrated world.

60+
Participating Countries and Regions

5,000+
Attendees

1,000+
Overseas Attendees

11,000 m²
Exhibition Area

40+
Innovation-themed Events

900+
Cutting-edge Reports

CONFERENCE THEME

PARADIGM SHIFTING IN CHEMICAL ENGINEERING FOR GLOBAL CHALLENGES

WCCE12
APCChE 2025

- Stimulating innovative thinking to explore new quality productive forces and new growth frontiers in chemical innovation
- Nurturing a new generation of innovators equipped for future and emerging industrial needs
- Advancing global chemical prosperity and development to forge a new era for the chemical industry
- Leading the transformation of traditional industries, inspiring paradigm shifts in innovation, and catalyzing new growth drivers
- Staying attuned to the pulse of global scientific advancement to embrace the profound transformation of the new technological revolution and industrial evolution
- Tackling global challenges such as climate change, energy revolution, human health, and poverty alleviation

ORGANIZATIONAL STRUCTURE

With the Authorization of

World Chemical Engineering Council (WCEC)

Asian Pacific Confederation of Chemical Engineering (APCChE)

Guided by

China Association for Science and Technology (CAST)

Chinese Academy of Sciences (CAS)

Chinese Academy of Engineering (CAE)

Hosted by

The Chemical Industry and Engineering Society of China (CIESC)

Organized by

China National Petroleum Corporation (CNPC)

China Petrochemical Corporation (SINOPEC)

Beijing University of Chemical Technology（BUCT）

Co-organized by

China National Offshore Oil Corporation (CNOOC)

China Energy Investment Corporation (CHN ENERGY)

WCCE 12 & APCChE 2025

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The Society of Chemical Engineers, Japan (SCEJ)

Special Supporters

World Green Design Organization (WGDO)

The Federation of Engineering Institutions of Asia and the Pacific (FEIAP)

Central Asian Association for Accreditation of Education (CAAAE)

European Federation of Chemical Engineering (EFCE)

VDI – The Association of German Engineers

American Institute of Chemical Engineers (AIChE)

Institution of Chemical Engineers (IChemE)

Society for Chemical Engineering and Biotechnology, DECHEMA e.V. (DECHEMA)

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Philippine Institute of Chemical Engineers (PIChE)

Thai Institute of Chemical Engineering and Applied Chemistry (TIChE)

Iranian Association of Chemical Engineering (IAChE)

The Institution of Engineers, Malaysia (IEM)

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Zhao Jinsong	Zhu Weihong	Zou Caineng	

SCHEDULE OVERVIEW

Up to July 7, 2025

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Supporting Events

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<tr><td rowspan="2">Parallel Sessions
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<tr><td colspan="2">Closing Ceremony
16:40-17:30</td></tr>
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<tr><th>July 16 Wednesday</th><th>July 17 Thursday</th></tr>
<tr><td colspan="2">International Chemical Engineering Innovation EXPO 2025 (IChEIE 2025)</td></tr>
<tr><td colspan="2">Poster Presentations</td></tr>
</table>

SCHEDULE: KEY EVENTS

Location: China National Convention Center
(No. 7, Tianchen East Road, Chaoyang District, Beijing)

Time	Agenda	Location
July 13, 2025 Sunday		
09:00-20:00	**On-site Registration**	Main Lobby, 1F
July 14, 2025 Monday		
09:00-09:45	**Opening Ceremony**	Plenary Hall A, 4F
09:50-17:20	**Plenary Lecture**	
17:20-17:50	**Awards Ceremony**	
18:00-20:00	**Beijing Night Gala Dinner**	Ballroom A, B and C, 1F
July 15, 2025 Tuesday		
08:00-20:00	**Parallel Sessions (17 Sessions)**	Refer to Parallel Sessions Handbook
July 16, 2025 Wednesday		
08:00-18:00	**Parallel Sessions (17 Sessions)**	Refer to Parallel Sessions Handbook
July 17, 2025 Thursday		
08:00-12:00	**Parallel Sessions (3 Sessions)**	Refer to Parallel Sessions Handbook
08:30-12:30	**SDGs Special Event**	309B, 3F
14:00-16:30	**Plenary Lecture**	Function Hall A,B, 1F
16:40-17:30	**Closing Ceremony**	
July 18, 2025 Friday		
09:00-17:00	**Post-conference Tour**	

SCHEDULE: PARALLEL SESSIONS

July 15 08:00-20:00 Parallel Sessions Schedule			
Four Main Sections	**No.**	**Parallel Session**	**Venue**
Education and Training	02	Chemical Education and the Cultivation of Outstanding Engineers	306A
Foundational Industry Reengineering	05	Chemical Engineering Thermodynamics and Big Data	307AB
	06	Green Catalysis and Chemical Reaction Engineering	309B
	07	Flow Chemistry and Microreaction Technology	302AB
	08	Advanced Separation Technology & Engineering	311B
	11	Biochemical and Biomanufacturing	306B
	12	Process Industry Innovation and Process Systems Engineering Reengineering	310
	32	Engineering Thermochemistry and Low Carbon Chemical Engineering	309A
	34	High-end Chemical New Material Innovation and Digital Intelligence Empowerment	301AB
Strategic and Emerging Industries	14	Advancements in High-Performance and Intelligent Chemical New Materials	311A
	17	Efficient Manufacturing Engineering of Functional Electronic Chemicals	405
	19	Biomass Materials & Chemicals	308
	21	Chemical Engineering Process for Water, Gas Treatment and Environment Protection	303B
Future Chemical Engineering and Smart Innovation	24	Single Atom Catalysis and Theoretical Chemistry	305
	25	Hydrogen Energy and Hydrogen Energy Industry Chain	402AB
	26	Electrochemical Engineering, Energy Internet, and Energy Storage	303A
	30	Green Energy and Environmental Engineering	401

Up to July 7, 2025

SCHEDULE: PARALLEL SESSIONS

July 16 08:00-18:00 Parallel Sessions Schedule			
Four Main Sections	**No.**	**Parallel Session**	**Venue**
Education and Training	01	Engineering Ethics Education and Sustainable Chemical Industry	306B
	03	International Symposium of Chemical Engineering Departments/Schools from Global Universities	303B
	04	Chemical Engineering Innovation and Entrepreneurship	405
Foundational Industry Reengineering	09	Inherent Safety and Process Intensification of Chemical Processes	311B
	10	Energy Transition Towards a Net-zero Future	302AB
	13	Intelligent Manufacturing Technology and Equipment for the Chemical Industry	301AB
	31	Clean and Efficient Conversion and Utilization of Coal	310
Strategic and Emerging Industries	15	Green Agriculture: A New Paradigm of Seed, Fertilizer and Pesticide Innovation	311A
	16	Biopharmaceutical and Health Engineering	402AB
	18	Waste Resource Conversion and Circular Economy	309A
	20	Preparation Theory and Application of Carbonaceous New Materials	307AB
Future Chemical Engineering and Smart Innovation	22	Carbon Neutrality and Sustainable Development of the Chemical Industry	305
	23	Mesoscience and Artificial Intelligence in Chemical Engineering	401
	27	Innovation and Practice of Industrial Software in Process Manufacturing	303A
	28	Advanced Chemical Materials and Future Chemical Industry	309B
	29	Future Energy and Novel Chemical Process	308
	33	International Symposium of Artificial Intelligence for Chemical Product and Process Innovation	306A

Up to July 7, 2025

SCHEDULE: PARALLEL SESSIONS

July 17 08:00-12:00 Parallel Sessions Schedule			
Four Main Sections	**No.**	**Parallel Session**	**Venue**
Foundational Industry Reengineering	05	Chemical Engineering Thermodynamics and Big Data	307AB
	08	Advanced Separation Technology & Engineering	311B
Future Chemical Engineering and Smart Innovation	33	International Symposium of Artificial Intelligence for Chemical Product and Process Innovation	306A

SUPPORTING EVENTS

Date	Agenda	Location
July 14-17	**International Chemical Engineering Innovation Expo 2025 (IChEIE 2025)**	Exhibition Hall E1-E2, 1F
July 14-17	**Poster Presentations**	Conference Area, 3F
July 13 14:00	**WCEC Executive Meeting (Closed-door)**	403, 4F
July 15 14:00	**APCChE Board Meeting (Closed-door)**	403, 4F

DINING ARRANGEMENTS

Date	Dining	Location
July 14 12:00-14:00	**Lunch**	Hall 5, B1
July 14 18:00-20:00	**Beijing Night Gala Dinner**	Ballroom A, B and C, 1F
July 15 12:00-14:00	**Lunch**	Hall 5, B1
July 16 12:00-14:00	**Lunch**	Hall 5, B1
July 17 12:00-14:00	**Lunch**	Hall 5, B1

Up to July 7, 2025

OPENING CEREMONY & PLENARY LECTURE

Location: Plenary Hall A, 4F

July 14 AM	Opening Ceremony & Plenary Lecture
09:00–09:50	**Opening Ceremony**
09:50–10:30	**The Art of Building Small: From Molecular Switches to Motors**
	Ben L. Feringa Nobel Laureate Professor at University of Groningen
10:30–11:00	**Single-Atom Catalysis and Catalytic Reaction Engineering**
	Zhang Tao Member of the Chinese Academy of Sciences Former Vice President of the Chinese Academy of Sciences Professor at Dalian Institute of Chemical Physics, Chinese Academy of Sciences
11:00–11:30	**Biomaterials and Chemical Engineering: From the Discovery of the First Angiogenesis Inhibitors to the Development of Controlled Drug Delivery Systems and the Foundation of Tissue Engineering (Pre-recorded Video Presentation)**
	Robert Langer Institute Professor at Massachusetts Institute of Technology
11:30–12:00	**Regenerative Closed-Loop Society**
	Hiroshi Komiyama Chairman of Mitsubishi Research Institute, Inc. The 28th President at the University of Tokyo
July 14 PM	**Plenary Lecture**
14:00–14:30	**The International Role of AIChE in Eliminating Energy Poverty**
	Joseph D. Smith President of the American Institute of Chemical Engineers (AIChE) Professor at Missouri University of Science and Technology Founder and Chief Technology Officer, Elevated Analytics, LLC
14:30–15:00	**Engineering the Energy Transition: Challenges and Opportunities**
	Raffaella Ocone President of the Institution of Chemical Engineers (IChemE) Fellow of the Royal Academy of Engineering International Fellow of the Canadian Academy of Engineering Professor at Heriot-Watt University

July 14 PM	Plenary Lecture
15:00–15:30	**Engineering Science Boosting the Design of Pharmaceutical Formulations** Gabriele Sadowski Leibniz Prize Winner Member of German Academy of Science and Engineering Director of the Research Center Chemical Sciences and Sustainability at the University Alliance Ruhr
15:30–15:50	**Coffee Break**
15:50–16:10	**Accelerating Innovation and Development in Chemical Industry Through Intelligent Transformation** Li Junpeng President Chemical & Building Material BU, Huawei
16:10–16:30	**TotalEnergies Low-Carbon Transition Strategy and Innovation** Yu Yongjian TotalEnergies China Country Chair and Managing Director
16:30–16:50	**Partnership & Innovation: Powering Progress Together** Aw Kah Peng Chairman of Shell Companies in Singapore & Senior Vice President, Global Chemical Ventures
16:50–17:20	**Mixed Up and Sorted Out-Membranes for Molecular Separations in Chemical Processes** Andrew Livingston Fellow of the Royal Society Fellow of the Royal Academy of Engineering Vice-Principal of Queen Mary University of London
17:20–17:50	**Awards Ceremony**

Up to July 7, 2025

PLENARY LECTURE & CLOSING CEREMONY

Location: Function Hall A,B, 1F

July 17 PM	Plenary Lecture
14:00-14:30	**Strategies and Measures for the Development of Biomanufacturing in Petroleum Refining and Chemical Industry**
	Cao Xianghong Member of the Chinese Academy of Engineering Senior Member of Sinopec Science and Technology Committee
14:30-15:00	**Mechanochemistry – A Versatile Tool in Chemistry and Chemical Engineering**
	Ferdi Schüth Member of German Academy of Science and Engineering Director and Scientific Member at the Max Planck Institute for Coal Research
15:00-15:30	**Transforming Waste into Sustainable Materials and Products: Rethinking Circular Economies and Remanufacturing through SMaRT Innovation**
	Veena Sahajwalla Fellow of the Australian Academy of Science Fellow of the Australian Academy of Technological Sciences & Engineering Professor at the University of New South Wales
15:30-16:00	**Beyond Technology: Expanding Role of Chemical Engineers in Carbon-Neutral Transition**
	Masahiko Matsukata Former President of the Society of Chemical Engineers, Japan Former Vice President of the Japan Petroleum Institute Professor at Waseda University
16:00-16:30	**Biomanufacturing Changes the Future**
	Tan Tianwei Member of the Chinese Academy of Engineering President of China Renewable Energy Society President of Beijing University of Chemical Technology

July 17 PM Closing Ceremony	
16:40–16:45	**Conference Recap Video Playback**
16:45–17:00	**Proclamation of Beijing Initiative: "Embracing Paradigm Shift, Creating a Green Future through Intelligent Manufacturing"**
17:00–17:10	**Closing Remarks**
17:10–17:20	**Flag Handover Ceremony of APCChE Congress**
17:20–17:30	**Flag Handover Ceremony of WCCE**

Up to July 7, 2025

PLENARY SPEAKER

Ben L. Feringa

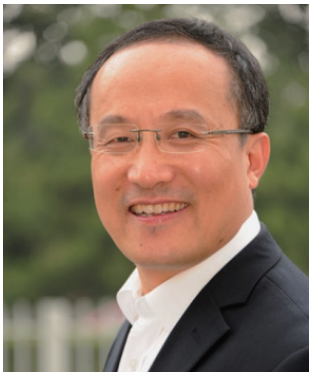
Nobel Laureate
Professor at University of Groningen

Short Bio: Ben L. Feringa obtained his PhD degree at the University of Groningen in the Netherlands under the guidance of Professor Hans Wynberg. After working as a research scientist at Shell in the Netherlands and at the Shell Biosciences Centre in the UK, he was appointed lecturer and in 1988 full professor at the University of Groningen and named the Jacobus H. van't Hoff Distinguished Professor of Molecular Sciences in 2004. He was elected Foreign Honory member of the American Academy of Arts and Sciences and is a member of the Royal Netherlands Academy of Sciences. In 2008, he was appointed Academy Professor and was knighted by Her Majesty the Queen of the Netherlands. He is the 2016 Nobel Laureate in Chemistry, together with Sir J. Fraser Stoddart and Jean-Pierre Sauvage, for the design and synthesis of molecular machines. He is a member of the ERC research council. His research interests include stereochemistry, organic synthesis, asymmetric catalysis, photopharmacology, molecular switches and motors, self-assembly and molecular nanosystems. In 2017, together with Prof. He Tian, he launched the Feringa Nobel Prize Scientist Joint Research Center as the co-director in East China University of Science and Technology for international collaboration and young talent cultivation. In 2023, he was granted with the Chinese Government Friendship Award.

The Art of Building Small: From Molecular Switches to Motors

Abstract: Exploring across the current frontiers of chemical sciences, there is a vast uncharted territory to experience the joy of discovery. Far beyond Nature's design, the creative power of synthetic chemistry provides unlimited opportunities to realize our own molecular world as we experience every day with products ranging from drugs to displays that sustain modern society. In their practice of the art of building small, chemists have shown amazing success in the past decades. Moving from molecules to dynamic molecular systems, the fundamental challenge is how to control and exploit motion at the nanoscale. In this presentation the focus is on my journey in the world of molecular switches and motors, the process of discovery and my personal experiences through my scientific career. In particular, I will address how fundamental questions and molecular beauty have guided me on this journey.

PLENARY SPEAKER



Zhang Tao

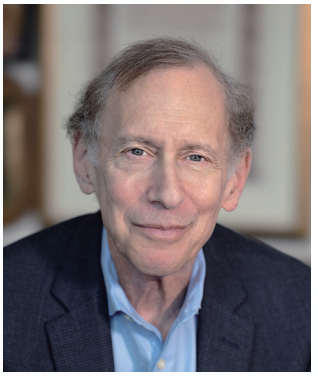
Member of the Chinese Academy of Sciences
Former Vice President of the Chinese Academy of Sciences
Professor at Dalian Institute of Chemical Physics,
Chinese Academy of Sciences

Short Bio: Prof. Zhang Tao received his PhD in 1989 from Dalian Institute of Chemical Physics (DICP), Chinese Academy of Sciences (CAS). After one year postdoc in University of Birmingham, he joined DICP again where he was promoted to a full professor in 1995. He was the director of DICP (2007-2016) and the vice president of CAS (2016-2023). His research interests focus on Single-Atom Catalysis and Catalytic Conversion of Biomass. He discovered a new catalytic process from cellulose to ethylene glycol in 2008 and accomplished a pilot demonstration (1000 ton/year) in 2023. Particularlly, In 2011, he coined the new concept "**Single-Atom Catalysis**", which is now one of the hot frontiers in chemistry. He has won many awards, such as Future Science Prize（2024）, Tang Aoqing Award（2024）, Advance of Catalysis Award of APACS（2023）, ChinaNano Award （2018）, National Invention Prize（2005，2006, and 2008）. He has published more than 600 peer-reviewed papers and 110 patents (H-index 125 and more than 75000 citations). He serves as the Associate Editor of *JACS*, the Editor-in-Chief of Chinese Journal of Catalysis and Co-Chair of the Editorial Advisory Board of *Chemistry – A European Journal. He is also the Editorial Board Members of Applied Catalysis B, Green Chemistry, ACS Sustainable Chemistry & Engineering, ChemPhysChem and Industrial & Engineering Chemistry Research.* He was elected as member of Chinese Academy of Sciences in 2013, fellow of TWAS in 2018, and international fellow of Canadian Engineering Academy in 2020. He is also a council member of the International Association of Catalysis Societies.

Single-Atom Catalysis and Catalytic Reaction Engineering

Abstract: Single-Atom Catalysis has emerged as a new and possibly the most active frontier in heterogeneous catalysis since our team coined this new concept in 2011 (*Nature Chemistry* **2011**, 3, 634-641). With the great potential for maximizing the atom efficiency and the well-defined active sites in a catalytic process, single-atom catalysts (SACs) have received incredibly increased attention. Great advance has been achieved in the past decade in the preparation of highly efficient SACs, the exploration of new reactions, as well as the mechanism understanding of catalysis. In this lecture, I will introduce the fast progress of SACs and mainly focus on the research in my group to address some of the fundamental issues about single-atom catalysis, including the nature of the active sites in SACs, the essential role of coordination structure of single atoms, as well as the dynamics of SACs during reactions. Moreover, the significant opportunities and challenges in this new field of catalysis will be discussed.

PLENARY SPEAKER



Robert Langer

Institute Professor at Massachusetts Institute of Technology

Short Bio: Robert Langer is one of 9 Institute Professors at MIT; being an Institute Professor is MIT's highest honor. His articles have been cited over 446,000 times; his h-index of 331 is the highest of any engineer in history. His patents have been licensed or sublicensed to over 400 companies; he is a cofounder of many companies including Moderna. He holds 44 honorary doctorates and has received over 220 awards, including both the United States National Medals of Science and Technology & Innovation (one of 3 living individuals to have received both honors), and has been elected to the National Academies of Medicine, Engineering, Sciences, and Inventors.

Biomaterials and Chemical Engineering: From the Discovery of the First Angiogenesis Inhibitors to the Development of Controlled Drug Delivery Systems and the Foundation of Tissue Engineering

Abstract: Advanced drug delivery systems are having an enormous impact on human health. We start by discussing our early research on developing the first controlled release systems for macromolecules and the isolation of angiogenesis inhibitors and how these led to numerous new therapies. This early research then led to new drug delivery technologies including nanoparticles and nanotechnology that are now being used for treating cancer, other illnesses and in vaccine delivery including COVID vaccines. In addition, by combining mammalian cells, including stem cells, with synthetic polymers, new approaches for engineering tissues are being developed that may someday help in various diseases. Examples in the areas of cartilage, skin, blood vessels, hearing loss and spinal cord repair are discussed.

PLENARY SPEAKER

Hiroshi Komiyama

Chairman of Mitsubishi Research Institute, Inc.
The 28th President at the University of Tokyo

Short Bio: Hiroshi Komiyama, a prominent academic, scientist and engineer and a leading authority in global sustainability, became Chairman of Mitsubishi Research Institute, Inc. in April 2009, after completing his four-year presidency (the 28th President) at the University of Tokyo.

He obtained a PhD in chemical engineering at the University of Tokyo. His major fields of research include environmental engineering, advanced materials science and knowledge sharing. In addition to his position, he is also an advisor to the Japanese Government on subjects ranging from education to aging. Since the STS forum (Science and Technology in Society forum) was founded in 2003, he has been actively involved in its activities and became its chairman in 2021. In 2010 he founded the 'Platinum Society Network' to achieve a sustainable society that solves environmental, aging, educational and economic issues.

He leads Japan and the world with his strong influence, extraordinary leadership and enthusiasm to achieve global sustainability. His major English books are “Vision 2050” (Springer, 2008), “Beyond the Limits to Growth” (Springer, 2013), and “New Vision 2050” (Springer, 2017). “Vision 2050” and “New Vision 2050” were also translated in Chinese language.

He received Ordine Della Stella Della Solidarieta Italiana in 2007, Ministry of International Affairs and Communications for INFO-Communications Promotion Month in 2014, the Prime Minister's Commendations for Contributors to Promote the country as a "Maritime Nation" in 2016, MBR Knowledge Award in 2017 and others.

Regenerative Closed-Loop Society

Abstract: A society in which all materials—such as metals and plastics—are continuously reused through complete recycling systems; the energy required for these processes is fully supplied by renewable energy sources; and consumable resources like wood and paper are replenished through sustainably managed, annually renewable biomass. This system ensures both material and energy circularity, allowing the society to operate without depleting natural capital or generating irreversible waste.

PLENARY SPEAKER

Joseph D. Smith

President of the American Institute of Chemical Engineers (AIChE)
Professor at Missouri University of Science and Technology
Founder and Chief Technology Officer, Elevated Analytics, LLC

Short Bio: Joseph D. Smith earned a PhD in chemical engineering at Brigham Young University. American Western University Fellow at Los Alamos National Laboratory. Served at Tennessee Technological University, University of Michigan, and University of Illinois Urbana-Champaign. Founding Wayne and Gayle Laufer Endowed Energy Chair at Missouri University of Science and Technology. Led Energy Research and Development Center and founded Small Nuclear Modular Reactor Research and Development Consortium.

Published 80+ papers and holds 12 patents. Published "Computational Fluid Dynamics for the Chemical and Petrochemical Process Industries" and contributed chapters to 5 books *(Encyclopedia of Renewable Energy Engineering, Densification impact on raw, chemically, and thermally pre-treated biomass: Physical properties and biofuels production, John Zink Combustion Handbook, Industrial Burner Handbook, Perry's Chemical Engineering Handbook).*

More than 30 years' experience in chemical and petrochemical industries – Dow Chemical Company Research Scientist; Cabot Corporation, Corporate Director, Process Development; John Zink Company, Director, Flare Technology; Idaho National Laboratory, Group Leader; Expert witness for Gas Flares and Hydrocarbon Processing; Founded and led three startup companies.

The International Role of AIChE in Eliminating Energy Poverty

Abstract: Access to affordable, clean, and secure energy is key to future peace and prosperity! Solving Energy Poverty requires urgent attention to develop comprehensive solutions. New hybrid energy systems with microgrid distribution supported by realistic energy policy can help address this issue. Other challenges include limited financial resources, socio-political factors and geographical limitations hinder efforts to eradicate energy poverty. Finding effective solutions is difficult due to the complex interactions between these factors. Collaboration between governments, international organizations, private sectors, and local communities is crucial to making significant strides towards fostering a more equitable and energy-secure world. Eradication of energy poverty requires a concerted effort to improve access to reliable, clean and secure electricity for the most vulnerable populations. AIChE supports collaboration between global thought leaders to address global challenges related to energy poverty. Society will greatly benefit as we collaborate to increase energy supply, eliminate energy poverty, and reduce environmental impact.

PLENARY SPEAKER

Raffaella Ocone

President of the Institution of Chemical Engineers (IChemE)
Fellow of the Royal Academy of Engineering
International Fellow of the Canadian Academy of Engineering
Professor at Heriot-Watt University

Short Bio: Raffaella Ocone (OBE, FREng, FRSE) is Professor of Chemical Engineering at Heriot-Watt University, UK, and Guest Professor of Multiphase Multiscale Systems at Ruhr University Bochum, Germany. She is currently the President of the Institution of Chemical Engineers (IChemE).

In 2017, Raffaella became the first "Caroline Herschel Visiting Professor" in Engineering at Ruhr University in recognition of her contributions to ethics in engineering. That same year, she was appointed Cavaliere of the Order of the Star of Italian Solidarity by the President of Italy. In 2019, Raffaella was named one of the Top 100 Most Influential Women in Engineering, a distinction given by Inclusive Boards in partnership with the Financial Times.

Raffaella's expertise focuses on complex reactive systems. Her current research, at the PETRONAS Centre of Excellence in Subsurface Engineering and Energy Transition (PACESET) at Heriot-Watt University, aims to advance thermochemical methods for producing hydrogen from biomass and other waste materials.

A strong advocate for engineering ethics and responsible technologies, Raffaella has taken a leading role in the teaching of these subjects, particularly in the context of energy transition. She chaired the Engineering Professor Council (EPC)-RAEng group and she is a member of the Engineering Council (EC)-RAEng Ethics Reference Group.

Engineering the Energy Transition: Challenges and Opportunities

Abstract: Climate change is a global challenge that demands global solutions. Chemical engineering plays a crucial role in the energy transition. Scaling up low-carbon technologies; accelerating carbon capture, storage, and utilisation; and integrating renewable energy into current systems are some examples of how chemical engineering contributes to sustainable solutions.

To highlight the role of Chemical Engineering in energy transition and energy security, technologies, such as production of low-carbon hydrogen and carbon capture and storage, as critical platforms for accelerating the journey to net zero, are discussed.

In her role of President of IChemE, the speaker discusses the interconnected nature of the future developments of the discipline highlighting the importance of integrating ethical decision-making and responsible technology development into engineering practices. Additionally, the development of educational programmes that equip future engineers with the skills and values necessary to tackle these complex challenges is discussed.

PLENARY SPEAKER

Gabriele Sadowski

Leibniz Prize Winner
Member of German Academy of Science and Engineering
Director of the Research Center Chemical Sciences and Sustainability at the University Alliance Ruhr

Short Bio: Gabriele Sadowski received her PhD in physical chemistry and became Associate Professor at TU Berlin in 1992. She has been Full Professor for Thermodynamics at TU Dortmund University since 2001. She is also spokesperson for the Center for Advanced Liquid Phase Engineering Dortmund (funded with 70 million euros in 2020) and, from 2024, also Director of the Chemistry and Sustainability Research Center at the University Alliance Ruhr. She is a member of the German Academy of Science and Engineering *(acatech)* and 2022 was appointed to the German Council of Science and Humanities, which advises the German government on science policy issues. Her research focuses on investigating the thermodynamic properties of complex systems, with a particular focus on pharmaceutical molecules. Her group developed the thermodynamic model PC-SAFT. She is the co-author of more than 350 scientific papers and more than 500 conference contributions in the field of chemical, biochemical and pharmaceutical engineering. She has received numerous awards for her work, including the Leibniz Prize from the German Research Foundation (2011) and the Michael Michelsen Prize from the European Federation of Chemical Engineering (2021).

Engineering Science Boosting the Design of Pharmaceutical Formulations

Abstract: The talk will show how chemical engineering principles can significantly contribute to the design of pharmaceutical formulations. This includes both small molecules and biopharmaceuticals. Few key experiments in combination with thermodynamic modelling and AI methods allow to quickly identify the most suitable excipients that increase the stability and solubility of a given drug molecule. Thermodynamic modelling nowadays even allows predicting the long-term stability of formulations depending on the storage conditions, such as temperature and relative humidity. Using the same principles, the talk will also explain why tablets sometimes do not completely dissolve even though the solubility limit has not yet been reached.

The knowledge-enabled design of formulations avoids thousands of experiments and remarkably shortens the time to the patient. It will make drug molecules accessible that cannot effectively be used in a medicine so far.

PLENARY SPEAKER

Li Junpeng

President of the Chemical & Building Materials BU, Huawei

Short Bio: Graduated from Xi'an Jiaotong University, Mr. Li Junpeng currently serves as Vice President of the Oil & Gas and Mining Corps, Director of the Marketing & Solutions Department, and General Manager of the Chemical and Building Materials Industry. With 19 years of experience in the ICT industry, including nearly a decade in international markets, he has held several key positions such as Vice President of Products and Solutions for the Systems Department of a U.S.-based multinational operator, Vice President of Solutions and Marketing for the Americas Region, President of Product Line Marketing Operations, and Vice President of Global Marketing for Enterprise Business.

Accelerating Innovation and Development in Chemical Industry through Intelligent Transformation

Abstract: The presentation introduces Huawei's industry-intelligent architecture, developed in collaboration with partners and clients. By leveraging the strengths of all parties, Huawei aims to jointly create intelligent solutions tailored to the chemical industry. These solutions help the industry build new quality productivity, enhancing safety and efficiency. In addition to the joint solutions, the presentation will also share practical case studies of their application.

PLENARY SPEAKER

Yu Yongjian

TotalEnergies China Country Chair and Managing Director

Short Bio: Mr. Yu Yongjian, born in 1967, holds a degree in polymer chemical engineering from Sichuan University and is a senior engineer. He began his career in 1989 at SINOPEC Guangzhou Petrochemical Base, where he held various technical and managerial roles. In 2000, he joined CNOOC as Deputy General Manager of a petrochemical site in Foshan, overseeing industrial operations. He joined TotalEnergies in 2003 and has since held key leadership roles in its petrochemical business. In 2014, he was appointed Vice President of Polystyrene China, managing both commercial and industrial activities. From 2019 to 2022, he served as Site Manager at TotalEnergies' Carville facility in Louisiana, USA—home to the world's largest styrene monomer and polystyrene plants. Mr. YU currently serves as Chairman of TotalEnergies China Investment Co., based in Beijing.

TotalEnergies Low-Carbon Transition Strategy and Innovation

Abstract: TotalEnergies, a century-old energy company, is committed to achieving net-zero emissions by 2050 together with society. By mid-century, we envision our energy mix to consist of 50% electricity, 25% low-carbon fuels (including biofuels, green hydrogen, and bio-gas), and 25% oil and gas.

The Company's sustainable development strategy is firmly rooted in low-carbon oil and gas development, as well as integrated power. Innovation drives this transition, with the OneTech organization uniting our R&D, technical, and digital teams to strengthen global project execution. TotalEnergies invests over $1 billion annually in innovation, with more than 60% dedicated to low-carbon and environmental technologies. Our key focus areas include renewable energy modeling, carbon reduction and capture, biofuel technologies, and digital transformation. Additionally, TotalEnergies is making significant strides in plastic recycling and the development of biodegradable materials. Through our commitment to innovation and global partnerships, we aspire to become a leading multi-energy company.

PLENARY SPEAKER

Aw Kah Peng

Chairman of Shell Companies in Singapore &
Senior Vice President, Global Chemical Ventures

Short Bio: Aw Kah Peng has been the Chairman of Shell Companies in Singapore since January 2019 and took on an additional role of Senior Vice President of Global Chemical Ventures in 2024. Since joining Shell in 2012, she has held various global and regional roles in strategy (for lubricants & fuels) and in chemicals, leveraging her industry knowledge and commercial acumen.

Prior to joining Shell, Kah Peng had a successful 22-year career in the Singapore public service which includes Economic Development Board and as CEO of the Singapore Tourism Board. She made significant contributions such as developing Jurong Island and the LNG terminal. She has held various board positions and is involved in initiatives supporting young entrepreneurs and the arts. Under her leadership, Shell Singapore is driving growth and transformation across multiple business lines, reinforcing its position as a leading integrated energy business and a customer-focused energy marketer and trader. Its portfolio has evolved to include businesses that are driving the energy transition, from mobility solutions and EV charging infrastructure to sustainable aviation fuel and advanced chemical ventures.

Kah Peng is a strong advocate for collaboration and innovation, working closely with industry partners and policymakers to shape the future of energy in Singapore and beyond, underscoring Shell's commitment to powering progress together. She is a fellow of MIT's Sloan School of Management and a strong supporter of the arts in Singapore. Outside work, she enjoys running and cooking.

Partnership & Innovation : Powering Progress Together

Abstract: Shell's partnership in China spans more than a century, from delivering kerosene in the 1890s to providing the advanced chemicals that enable clean energy, lightweight mobility, and everyday essentials today. It's a story defined by innovation and long-term commitment. What started as trade has grown into a deep, strategic partnership, grounded in shared progress, mutual trust, innovation, and resilience. We take a region-first approach, tailoring strategies to local needs, policies, and market dynamics. In China, our joint venture with CNOOC, CSPC (CNOOC and Shell Petrochemical Company Limited), is one of the country's largest and most advanced petrochemical complexes. Globally, Shell drives decarbonisation through innovation in pyrolysis oil, CCS, hydrogen, and cracker electrification etc. As the world shifts to a low-carbon future, Shell will continue to be a decarbonisation partner. The power of partnerships will be key to building a more sustainable future.

PLENARY SPEAKER

Andrew Livingston

Fellow of the Royal Society
Fellow of the Royal Academy of Engineering
Vice-Principal of Queen Mary University of London

Short Bio: Andrew Livingston (AGL) (FREng, FRS, CEng, FIChemE) is Professor of Chemical Engineering and Vice Principal Research and Innovation at Queen Mary University of London, UK. Research expertise in creating membranes for precise molecular separations in organic systems and the application of these membranes in chemical and pharmaceutical processes. Graduated Chemical Engineering from University of Canterbury (NZ), worked 3 years in industry, then studied for PhD in Chem Eng from Cambridge UK. Following PhD spent 30 years at Imperial College Dept Chemical Engineering including HoD 2008-2016; obtained MSc in Economics at LSE in 1993. Academic lead then interim director of Rosalind Franklin Institute, 2017-2019. European Research Council Advanced Grant holder 2017-2023. 300 plus publications including Science and Nature, 40 plus patent applications filed. His research has been licensed, and used by startups. He founded Membrane Extraction Technology Ltd to commercialise organic solvent nanofiltration membranes, with successful exit on acquisition by Evonik Industries. Then founded Exactmer Ltd to commercialise exact polymer synthesis, including oligonucleotides, peptides, and ExactPEG using the Nanostar Sieving platform. AGL has won numerous awards; elected Fellow of the Royal Academy of Engineering in 2006 and Fellow of the Royal Society in 2022.

Mixed Up and Sorted Out – Membranes for Molecular Separations in Chemical Processes

Abstract: 40-70% of capital and operating costs in chemical and pharmaceutical industries are dedicated to separations; and a substantial fraction of this cost is related to processing of organic liquids. Membrane technology has the potential to provide game changing alternatives to conventional concentration and purification technologies, but the membranes must offer resilience in organic environments, display attractive selectivities, and have good permeance.

I will highlight our research into advanced membranes for Organic Solvent Nanofiltration (OSN), aimed at making membranes thin, selective and useful. We have created ultra-thin polymer films through exquisite control of interfacial polymerisation at nanoscale. We have used these as a platform for developing a range of molecular architectures with defined and manipulatable microporosity that can be used to control selectivity performance. Finally we have challenged these membranes against demanding molecular separations, including applications from class-based separations in crude oil refining to purification and synthesis of polymeric pharmaceuticals.

PLENARY SPEAKER

Cao Xianghong

Member of the Chinese Academy of Engineering
Senior Member of Sinopec Science and Technology Committee

Short Bio: Prof. Cao Xianghong, expert in petrochemicals, Senior Member of Sinopec Science and Technology Committee. He once served as Vice President of Sinopec Group, Board Director and Senior Vice President of Sinopec Corp., Chief Technology Officer of Sinopec Group, Director General of Sinopec Science and Technology Committee, Chairman of the Chemical Industry and Engineering Society of China, and Director General of China's National Standardization Technical Committee for Petroleum Products and Lubricants. Mr. Cao has been engaged in technological development and management in petrochemicals, and organized and implemented more than 30 significant technical breakthroughs and technical transformations for refinery and petrochemical plants, making great contributions to China's advances in refining and petrochemical technology. He has won one Special Prize, one First Prize, one Second Prize and two Third Prizes of National Science and Technology Progress Award, as well as 10 provincial and ministerial science and technology progress awards.

Mr. Cao was elected member of Chinese Academy of Engineering (CAE) in 1999, and international member of the US National Academy of Engineering (NAE) in 2009.

Strategies and Measures for the Development of Biomanufacturing in Petroleum Refining and Chemical Industry

Abstract: In response to the era's demands for green raw materials, low-carbon processes, and sustainable industries, it is emphasized that the development of biomanufacturing is an important strategy for the transformation of the petroleum refining and chemical industry. The advantages and challenges of developing biomanufacturing in the refining and chemical industry are analyzed. To address the challenges of collecting and storing agricultural and forestry waste, strategies for constructing a stable and reliable raw material supply chain are proposed. Regarding the diversity of products and technical routes in biomanufacturing, selection principles and recommendations are presented. To comply with the requirements for achieving carbon neutrality, a direction for developing biomanufacturing products using carbon dioxide as a carbon source is suggested. Additionally, key topics for technology development are proposed to address the existing technological shortcomings in biomanufacturing.

PLENARY SPEAKER

Ferdi Schüth

Member of German Academy of Science and Engineering
Director and Scientific Member at the Max Planck Institute for Coal Research

Short Bio: Born in 1960 in Warstein, married, father of two daughters. He studied Chemistry and Law at the Westfälische Wilhelms-Universität (Münster). He received his doctorate in Chemistry in 1988 and passed the First State Exam in Law in 1989. After 5 years as scientific assistant at the Johannes-Gutenberg-Universität (Mainz) he became Professor in Chemistry in 1995. From 1995 till 1998 he worked as Professor for Inorganic Chemistry at the Johann-Wolfgang-Goethe-Universität (Frankfurt). Since 1998 he has been the Director of the Max-Planck-Institut für Kohlenforschung (Mülheim an der Ruhr) and from 2014 till 2020 Vice-President of the Max-Planck-Society.

Ferdi Schüth received several awards, e.g. of the Stifterverband der Deutschen Wissenschaft, Gottfried-Wilhelm-Leibniz-Award, Wöhler-Award, Hamburger Wissenschaft-Award and Friedrich-von-Weizsäcker-Award. He is editor of "Chemistry of Materials", member of numerous editorial boards and committees, e.g. member of the Scientific Council of the German government, till 2022 Chairman of the selection committee of the German Future Award, Professor h.c. at the Dalian University (China) and the University of Munich (Germany) and founder of the hte AG (BASF is main shareholder). His research field comprises energy, biomass conversion, crystallization processes, synthesis of catalyst materials, catalysis, zeolites, ordered mesoporous materials and hydrogen storage materials. Ferdi Schüth has about 700 publications, 70 plenary lectures, 400 contributions to conferences and approx. 50 patents or patent applications.

Mechanochemistry – A Versatile Tool in Chemistry and Chemical Engineering

Abstract: Mechanochemistry is a topic of high current interest and has been used to carry out many different reactions. It is also an interesting method for the synthesis of a wide variety of materials materials. It can be implemented in different ways, for instance by using ball milling or extrusion.

In the presentation, examples will be given for mechanochemical reactions in ball mills, such as catalyzed ammonia synthesis from nitrogen and hydrogen at room temperature and atmospheric pressure. Ball milling is also suitable for the degradation of different polymers, partly even back to monomers. Also the synthesis of materials with unusual properties will be covered. For instance, ball milling is suitable for the production of corundum with high specific surface area exceeding 100 m^2/g. Also various supported catalysts can be produced, including bimetallic systems, which have a miscibility gap at room temperature and are thus not accessible by other means.

Scaling up ball milling processes is often a problem. For carbides to be used in electrochemical applications and high surface area corundum, we have scaled up the production to the several kg scale, so that pilot batches of materials can be produced and tested in target applications. Finally, ball mills can be considered as catalytic CSTRs, which provides a simple means for procuring kinetic information.

PLENARY SPEAKER

Veena Sahajwalla

Fellow of the Australian Academy of Science
Fellow of the Australian Academy of Technological Sciences & Engineering
Professor at the University of New South Wales

Short Bio: Professor Veena Sahajwalla is the director of the SMaRT Centre (Sustainable Materials Research & Technology at the University of NSW). She is an internationally recognised materials scientist, engineer, and inventor revolutionising recycling science. Well known for her contributions in building a waste-free economy, innovating microfactories and inventing 'green steel', an alternative to using coal in the steel production industry. For many years Veena was a judge on the ABC TV show The New Inventors and more recently she was featured in the ABC's Australian Story and named the 2022 NSW Australian of the Year. She was named the 2022 Australian Museum Eureka Prizes winner for the Celestino Eureka Prize for Promoting Understanding of Science and the Australian Academy of Technology and Engineering (ATSE) Clunies Ross Innovation Award. In 2023, Professor Veena was awarded the Engineering Australia Chemical College Chemical Engineer Achievement Award and the Good Design 2023 Women in Design Award. In 2025, Professor Veena was awarded the 'Officer of the Order of Australia' (AO) for distinguished service to science, sustainable materials research and technology and waste management on Australia Day.

Transforming Waste into Sustainable Materials and Products: Rethinking Circular Economies and Remanufacturing through SMaRT Innovation

Abstract: Waste presents untapped potential to be transformed into high-value materials through innovative technologies. Conventional recycling often overlooks complex end-of-life products containing valuable metals, polymers, ceramics, and textiles. The SMaRT Centre at UNSW addresses this gap using MICROfactories™ technologies and microrecycling science to convert diverse waste streams—such as plastics, glass, textiles, and e-waste—into sustainable, high-performance outputs like Green Ceramics™ and e-waste plastic filaments.

Key innovations include Polymer Injection Technology (PIT), enabling in-situ hydrogen and carbon recovery from waste polymers during steelmaking, reducing reliance on coke and coal. SMaRT also produces advanced nanomaterials and metal alloys via selective thermal transformation for various industrial applications.

These technologies support circular manufacturing and demonstrate that waste can serve as renewable input for creating low-carbon, resilient supply chains. SMaRT's vision is to scale these innovations globally, embedding them into industry to redefine waste and enable a sustainable, circular economy for remanufacturing.

PLENARY SPEAKER

Masahiko Matsukata

Former President of the Society of Chemical Engineers, Japan
Former Vice President of the Japan Petroleum Institute
Professor at Waseda University

Short Bio: Masahiko Matsukata received his B.Sc. (1984), M.Sc. (1986), and Ph.D. (1989) in Applied Chemistry from Waseda University. He began his academic career as an Assistant Professor at Seikei University in 1989, then held positions at Osaka University. Since 2001, he has been Professor in the Department of Applied Chemistry at Waseda University.

His research focuses on zeolite synthesis, membrane separation, and catalytic processes for sustainable chemical technologies. He has published extensively and received multiple honors, including Young Researcher Awards from the Society of Chemical Engineers, Japan (1995), the Society of Petroleum Engineers of Japan (1996), and the Catalysis Society of Japan (1998). Other honors include the Progress Award from the Japan Institute of Energy (2001), the Nanotechnology Grand Prize (2014), and the Japan Petroleum Institute Award (2024). Prof. Matsukata has actively contributed to academic communities, serving as a board member and committee chair in several professional societies. He is a former President of the Society of Chemical Engineers, Japan, and has played key roles in organizing international conferences on zeolites and green & sustainable chemistry(GSC).

Beyond Technology: Expanding Role of Chemical Engineers in Carbon-Neutral Transition

Abstract: In response to the global shift towards carbon neutrality, the circular economy, and Nature Positive initiatives, the scope of chemical engineering must expand. Although our core strengths in reaction engineering, separation processes, and systems optimisation remain essential, the transition to renewable energy societies requires a broader, cross-disciplinary approach. The sustainable sourcing of carbon—limited to biomass, waste plastics, and CO_2—requires urgent innovation across the entire supply chain, not just in conversion technologies. Achieving carbon neutrality requires more than materials technology, lifecycle thinking, circular resource flows, and socio-technical integration are equally critical. This talk, therefore, calls for a new approach to chemical engineering, one that goes beyond simply applying our expertise to actively reshaping it to meet the complex challenges of a decarbonised future.

PLENARY SPEAKER

Tan Tianwei

Member of the Chinese Academy of Engineering
President of China Renewable Energy Society
President of Beijing University of Chemical Technology

Short Bio: Tianwei Tan is a full professor and an Academician of Chinese Academy of Engineering. He serves as the President of Beijing University of Chemical Technology (BUCT) as well as the President of China Renewable Energy Society and the Vice President for the Chemical Industry and Engineering Society of China (CIESC). Prof. Tan's research focuses on Biochemical Engineering and Industrial Biotechnology. He has co-authored over 500 peer-reviewed articles in journals including *Nature Catalysis, PNAS, Biotechnology Advances*, and he holds over 40 granted patents. Prof. Tan received two times the second prize of National Award for Technological Invention, four times the first prize of Science and Technology Progress Award from Provincial Governments and Ministries, the Prize for Scientific and Technological Progress of Ho Leung Ho Lee Foundation in 2006, YABEC award in 2008, and the Tan Jiazhen Life Science Innovation Award in 2009.

Biomanufacturing Changes the Future

Abstract: As a disruptive paradigm of deep integration of biotechnology and advanced manufacturing, biomanufacturing has become the commanding height of a new round of global scientific and technological revolution and industrial transformation. By reconstructing the underlying logic of material production, it promotes the leap of manufacturing industry to green, intelligent and sustainable development. It is the core engine for cultivating new quality productivity and reshaping the global competitive landscape. As an important part of the biotechnology industry, biomanufacturing is the basic platform for the industrialization of bio-based products, and is also the application of basic scientific innovations such as synthetic biology in specific processes. In the future, biomanufacturing-related technologies will penetrate into the development of multiple industries including energy, materials, medicine, food, and environmental protection, and will also play an extremely important role in the transformation and upgrading of China's traditional industries. At present, the global biomanufacturing industry is at a critical stage of technological breakthroughs and commercial application development. The development of advanced biomanufacturing technology is of great strategic significance for promoting economic and environmental coordination and sustainable development. This report analyzes the development status and strategic needs of the global biomanufacturing industry, and puts forward relevant suggestions on the key directions of future biomanufacturing development based on the problems existing at this stage.

WCCE12
APCChE 2025

12TH WORLD CONGRESS OF CHEMICAL ENGINEERING
21ST ASIAN PACIFIC CONFEDERATION OF CHEMICAL ENGINEERING CONGRESS

INTERNATIONAL CHEMICAL ENGINEERING INNOVATION EXPO 2025

2025.7.14-17 | China National Convention Center · Beijing, China

The New-Generation Olympic-Scale Exhibition for the Global Chemical Engineering Industry

- Showcasing the most cutting-edge technologies in the global chemical engineering industry
- Presenting the most advanced chemical products worldwide
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With the Authorization of WCEC World Chemical Engineering Council; APCChE

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China National Chemical Information Center (CNCIC)
Beijing Hongbo Times International Exhibition Co., Ltd.

• INTERNATIONAL CHEMICAL ENGINEERING INNOVATION EXPO 2025 WCCE 12 & APCChE 2025

IMPORTANT ACTIVITIES DURING THE EXHIBITION

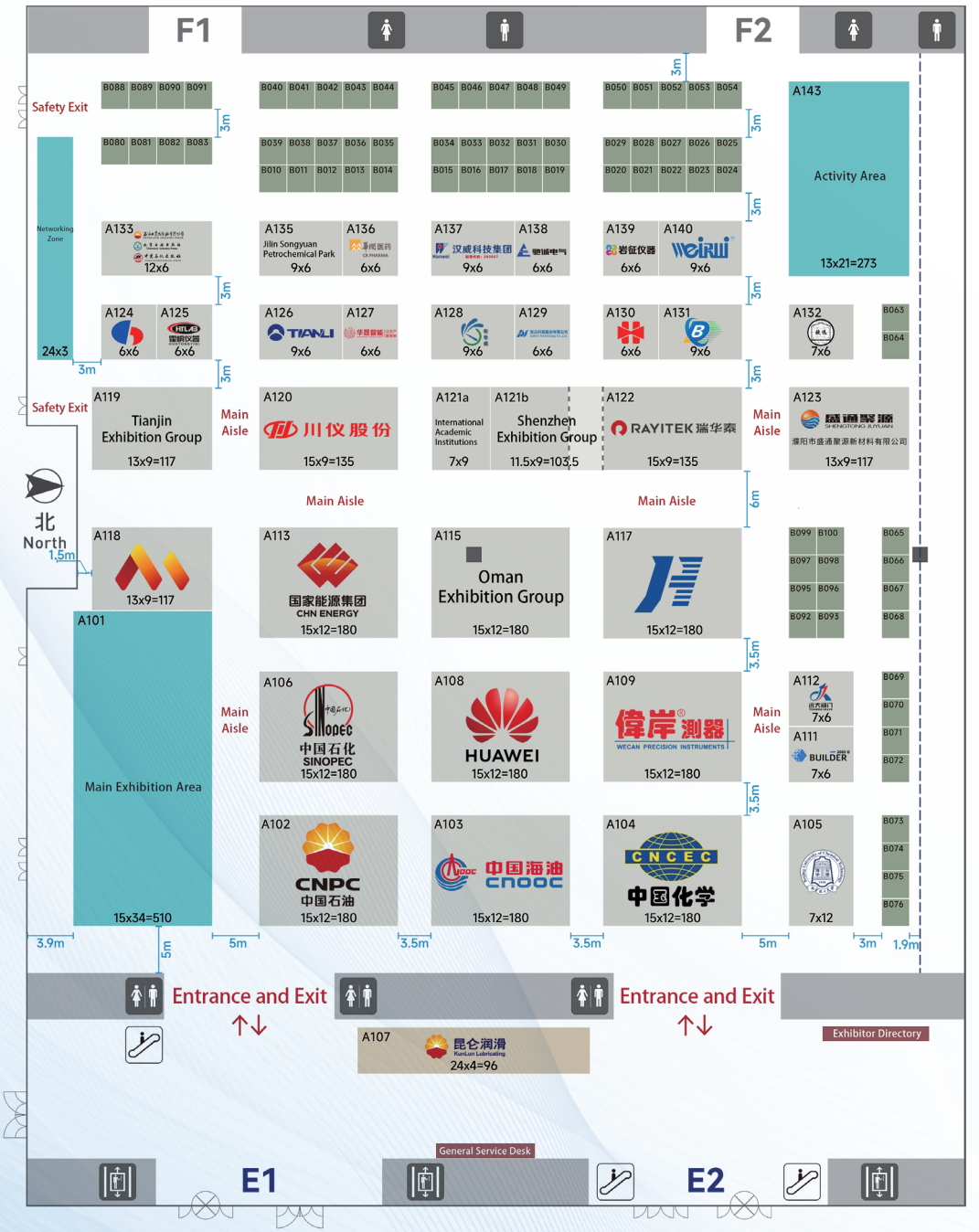
Location: Exhibition Hall E1-E2, 1F

Date	Time	Activity	Location
July 14	08:00-08:30	Opening Ceremony & Exhibition	All Exhibition Areas
	10:30-12:00	Shenzhen High-Performance Materials Industry Promotion Conference	Room 202AB
	14:30-16:30	Annual Information Release for the Chemical Engineering Industry	Main Exhibition Area
	15:00-16:30	Popular Science Lecture by Scientists	Activity Area
	09:00-17:00	Joint Exhibition of Chemical Engineering Publications	Booth A113, Exhibition Area
July 15	09:30-10:05 15:00-15:45	New Book Launch	Main Exhibition Area
	09:00-17:00	New Product and Technology Launch	Activity Area
	09:00-17:00	Joint Exhibition of Chemical Engineering Publications	Booth A113, Exhibition Area
July 16	09:00-17:00	Open Day Activities for Chemical Engineering Enterprises (Parks)	Main Exhibition Area
	09:00-17:00	Joint Exhibition of Chemical Engineering Publications	Booth A113, Exhibition Area
July 17	10:00-11:00	Awards Ceremony	Main Exhibition Area
	09:00-17:00	Joint Exhibition of Chemical Engineering Publications	Booth A113, Exhibition Area

Up to July 7, 2025

EXHIBITION FLOOR PLAN

International Chemical Engineering Innovation Expo 2025 (IChEIE 2025)



EXHIBITOR DIRECTORY

Booth No.	Exhibitor Name
A102	CHINA NATIONAL PETROLEUM CORPORATION
A103	CHINA NATIONAL OFFSHORE OIL CORPORATION
A104	CHINA NATIONAL CHEMICAL ENGINEERING GROUP CO., LTD.
A105	BEIJING UNIVERSITY OF CHEMICAL TECHNOLOGY
A106	CHINA PETROCHEMICAL CORPORATION
A107	PETROCHINA LUBRICANT COMPANY
A108	HUAWEI TECHNOLOGIES CO., LTD.
A109	CHONGQING WECAN PRECISION INSTRUMENTS CO., LTD.
A111	BEIJING BUILDER ELECTRONIC TECHNOLOGY CO., LTD.
A112	YUANDA VALVE GROUP CO., LTD.
A113	CHINA ENERGY INVESTMENT CORPORATION CO., LTD.
A115	RAS AL HAMRA LLC
A115	TECHNICAL SUPPLIES INTERNATIONAL CO LLC
A117	JUHUA GROUP CORPORATION
A118	KUNLUNGPT
A119	TEDA NANGANG INDUSTRIAL ZONE
A119	TIANJIN BOHAI CHEMICAL INDUSTRY GROUP CO.,LTD.
A119	TIANJIN DAGU CHEMICAL CO., LTD.
A119	TIANJIN 729 SPORTS EQUIPMENT CO., LTD.
A119	TIANJIN SHUANG'AN LABOR PROTECTION RUBBER CO., LTD.
A119	AUSELL NEW MATERIALS (TIANJIN) CO., LTD.
A119	TIANJIN KANGZEWEI TECHNOLOGY CO.,LTD.
A119	TIANJIN PASSION ADVANCED MATERIAL TECHNOLOGY CO.,LTD.
A119	TIANJIN KDD TECHNOLOGY CO., LTD.
A120	CHONGQING CHUANYI AUTOMATION CO.,LTD.
A121a	CHINESE MECHANICAL ENGINEERING SOCIETY
A121a	VDI-THE ASSOCIATION OF GERMAN ENGINEERS
A121a	WCCE 2029, PRAGUE
A121a	COLLEGE OF CHEMISTRY AND CHEMICAL ENGINEERING, NINGXIA UNIVERSITY
A121a	DECHEMA
A121b	SHENZHEN MODERN MATERIAL ASSOCIATION
A121b	BTR NEW MATERIAL GROUP CO., LTD.
A121b	SHENZHEN VITAL NEW MATERIAL COMPANY LIMITED
A121b	HASHEN TECHNOLOGY CO., LTD.
A121b	SHENZHEN YUTIAN NEW MATERIALS TECHNOLOGY CO., LTD.

Booth No.	Exhibitor Name
A121b	BYD NEW MATERIAL CO., LTD.
A121b	THE SHENZHEN RED EARTH NEW MATERIALS FUND
A121b	SHENZHEN HIGH-END ELECTRONIC CHEMICALS INDUSTRIAL PARK INVESTMENT AND OPERATION CO., LTD.
A121b	SHENZHEN YANYI NEW MATERIALS CO., LTD.
A121b	SHENZHEN WOTE ADVANCED MATERIALS CO.,LTD.
A122	RAYITEK HI-TECH FILM COMPANY, LTD., SHENZHEN
A123	PUYANG SHENGTONG JUYUAN NEW MATERIALS CO., LTD.
A124	SUZHOU INDUSTRIAL PARK TAIZHI MEASUREMENT AND CONTROL TECHNOLOGY CO., LTD.
A125	SHANGHAI HUOTONG EXPERIMENTAL INSTRUMENT CO., LTD.
A126	SHANGDONG TIANLI ENERGY CO., LTD.
A127	QINGDAO HUASHINE INTELLIGENT TECHNOLOGY CO., LTD.
A128	OU SHISHENG (BEIJING) TECHNOLOGY CO., LTD.
A129	SAFIRST TECHNOLOGY CO., LTD.
A130	ZHEJIANG XINGNU INTELLIGENT CONTROL TECHNOLOGY CO., LTD.
A131	WESTERN BAODE TECHNOLOGY CO., LTD.
A132	JIANGSU JIEYUAN CONTAINER CO., LTD.
A133	PETROLEUM INDUSTRY PRESS
A133	CHEMICAL INDUSTRY PRESS CO.,LTD.
A133	CHINA PETROCHEMICAL PRESS
A135	SONGYUAN PETROCHEMICAL INDUSTRIAL PARK
A135	JILIN XINGTAI CHEMICAL CO.,LTD.
A136	CHINA RESOURCES PHARMACEUTICAL GROUP LIMITED
A136	CHINA RESOURCES BOYA BIO-PHARMACEUTLCAL GROUP CO.LTD.
A136	SICHUAN NIGALE BIOTECHNOLOGY CO., LTD.
A136	CHINA RESOURCES CHEMICAL INNOVATIVE MATERIALS CO., LTD.
A137	HANWEI ELECTRONICS GROUP CORPORATION
A138	HENAN CHICHENG ELECTRIC CO., LTD.
A139	SHANGHAI YANZHENG EXPERIMENTAL INSTRUMENT CO., LTD.
A140	SHANDONG WEIRI SCIENTIFIC AND EDUCATIONAL INSTRUMENTS CO., LTD.
B010	ZHEJIANG AOXIN INSTRUMENT CO., LTD.
B011	HEFEI IN-SITU TECHNOLOGY CO., LTD.
B012	BEIJING KAIMEINUO TECHNOLOGY CO., LTD.
B013	APRIA SYSTEMS S.L.
B014	KUNSHAN RVT PROCESS EQUIPMENT CO., LTD.

EXHIBITOR DIRECTORY

Booth No.	Exhibitor Name
B015	CHANGZHOU LIJUN DRY ENGINEERING CO., LTD.
B016	INSTITUTION OF CHEMICAL ENGINEERS
B017 B018	XTALPI HOLDINGS LIMITED
B019	MEZOLEN INSTRU (CHANGZHOU) CO., LTD.
B020	MDPI
B021	HANG ZHOU FINELOK TECHNOLOGY CO., LTD.
B022	ZHEJIANG CHINA PLASTICS ONLINE CO., LTD.
B023	BECKMAN COULTER LIFE SCIENCES
B024	ANHUI SENRISE TECHNOLOGY CO., LTD.
B025	ZSTO(SHANGHAI) TECHNOLOGIES CO., LTD.
B026 B027	JILIN XINGYUN CHEMICAL CO.,LTD OF JILIN CHEMICAL GROUP CORP.
B028	XINJIANG HENGILUN CHEMICAL CO., LTD.
B029	CHINA MERCHANTS BANK | PALMY LIFE APP
B030	KEAI COMMUNICATIONS CO., LTD.
B031	SHANGHAI YOUHAO TECHNOLOGY CO., LTD.
B032	HANGZHOU JINGJIN TECHNOLOGY CO., LTD.
B033	ZHONGKE CHEMISTRY DINGYUAN RESEARCH INSTITUTE CO., LTD.
B034	JIANGXI AYRTTER MASS TRANSFER TECHNOLOGY CO., LTD.
B035	BEIJING MORE ENGINEERING CO., LTD.
B036 B037 B038	LABPARK(BEIJING)SCIENCE&TECHNOLOGY CO., LTD.
B039	KUNSHAN DUPLEXX ENGINEERING TECHNOLOGY CO., LTD.
B040	SINOPEC (DALIAN) RESEARCH INSTITUTE OF PETROLEUM AND PETROCHEMICALS CO., LTD.
B041	PETROCHINA SHANGHAI ADVANCED MATERIALS RESEARCH INSTITUTE CO., LTD.
B042	PETROCHINA SHENZHEN NEW ENERGY RESEARCH INSTITUTE CO., LTD.
B043	PETROLEUM-BASED CARBON MATERIALS LABORATORY
B044	SUPCON TECHNOLOGY CO., LTD.
B045	SINO BIO-EG (ZHENGZHOU) NEW ENERGY TECHNOLOGY LLC
B046	NATIONAL TECHNOLOGY INNOVATION CENTER FOR SMART PROCESS MANUFACTURING
B047	COLLEGE OF BIOTECHNOLOGY AND PHARMACEUTICAL ENGINEERING, NANJIN TECH UNIVERSITY
B048	NANJING TECH UNIVERSITY COLLEGE OF CHEMICAL ENGINEERING
B049	CHINA UNIVERSITY OF PETROLEUM-BEIJING
B050	A2 PHOTONICS SENSORS

Booth No.	Exhibitor Name
B051	ZHEJIANG GREATION NEW MATERIALS CO., LTD.
B052	HUNAN CHANGLIAN NEW MATERIAL TECHNOLOGY CO., LTD.
B053	HUNAN JUREN CHEMICAL HITECHNOLOGY CO., LTD.
B054	BEIJING STARFLOW CONTROL CO., LTD.
B063	SHANGHAI DODGEN CHEMICAL TECHNOLOGY CO., LTD.
B064	SMITHBIO (ANHUI) ENGINEERING TECHNOLOGY EQUIPMENT CO., LTD.
B065 B066	CHENGDU RINGT TECHNOLOGY CO., LTD.
B067 B068	LIAONING YUFENG CHEMICAL CO., LTD.
B069	DQSH MECHANICS
B070 B071	LONGZHONG INFORMATION TECHNOLOGY CO., LTD.
B072	BEIJING XIANGHU SCIENCE AND TECHNOLOGY DEVELOPMENT CO., LTD.
B073	ANHUI JINDA INSTRUMENT CO., LTD.
B074 B075 B076	SHANGHAI ZEMAG SCIENCE AND TECHNOLOGY GROUP CO., LTD.
B080	TIX TECHNOLOGY GROUP
B081	ACT MEASUREMENT&CONTROL TECHNOLOGY (JIANGSU)CO., LTD.
B082	JIANGSU JIULONG VALVE MANUFCATURE CO., LTD.
B083	NIKYANG ENTERPRISE LIMITED
B088	CHINA ENGINEERING SCIENCE PRESS
B089	ACTA PETROLEI SINICA
B090	CHINACPC MAGAZINE
B091	GUANGZHOU TECHNOLOGY FINANCE GROUP CO., LTD.
B092	COLLEGE OF CHEMICAL & BIOLOGICAL ENGINEERING, ZHEJIANG UNIVERSITY
B093	KROHNE MEASUREMENT INSTRUMENTS (SHANGHAI) CO., LTD.
B095	ALLISWELL (QINGDAO) IOT TECH. CO.,LTD.
B096 B098 B100	STATE KEY LABORATORY OF HEAVY OIL PROCESSING, CHINA UNIVERSITY OF PETROLEUM-BEIJING
B097	JIANGSU ENTERPRISE PROFILE OF JIANGSU JINWANG INTELLIGENT SCI-TECH CO., LTD.
B099	JINAN BEN'AN TECHNOLOGY DEVELOPMENT CO., LTD.

CONFERENCE SERVICE INFORMATION

Transportation Route

Conference address: No. 7 Tianchen East Road, Chaoyang District, Beijing, China National Convention Center (CNCC)

The CNCC is adjacent to the Olympic Park Station for both Line 15 and Line 8.

Transportation Advice

01 Beijing Capital International Airport: Take the Airport Express to Sanyuanqiao Station. Transfer to Line 10 to Beitucheng Station, then to Line 8 to Olympic Park Station. Exit E and walk about 7 minutes to the CNCC.

02 Beijing Daxing International Airport: Take the Daxing Airport Express to Caoqiao Station. Transfer to Line 10 to Beitucheng Station, then to Line 8 to Olympic Park Station. Exit E and walk about 7 minutes to the CNCC.

03 Beijing Railway Station: Take Line 2 to Gulou Dajie Station. Transfer to Line 8 to Olympic Park Station. Exit E and walk about 7 minutes to the CNCC.

04 Beijing West Railway Station: Take Line 7 to Zhushikou Station. Transfer to Line 8 to Olympic Park Station. Exit E and walk about 7 minutes to the CNCC.

05 Beijing South Railway Station: Take Line 14 to Yongdingmenwai Station. Transfer to Line 8 to Olympic Park Station. Exit E and walk about 7 minutes to the CNCC.

CONFERENCE SERVICE INFORMATION

Dates

July 14–18, 2025

Meeting Venue

No. 7 Tianchen East Road, Chaoyang District, Beijing, China National Convention Center

On-site Registration

Registration Time	Registration Location
July 13, 09:00–20:00	Main Lobby, 1st Floor
July 14, 08:00–20:00	
July 15, 08:00–18:00	
July 16, 08:00–18:00	
July 17, 08:00–12:00	

Registration Procedure

Register → Make Payment → Sign In → Collect Materials

If You Have Completed Online Registration

- Paid Before the Event: Please go directly to the check-in desk, present your check-in code / ID card / phone number for verification, then collect your badge and conference materials.
- Not Paid Before the Event: Please pay online or at the finance counter first, then present your check-in code / ID card / phone number for verification, and collect your badge and conference materials.

If You Have Not Completed Online Registration

- Please scan the QR code with your phone to register and pay online or pay at the finance counter first, then present your check-in code/ ID card / phone number for verification, and collect your badge and conference materials.

Notes

Please ensure you have completed registration on the official conference website. At check-in, please collect the corresponding badge and conference materials according to your registration category. The registration desk will be open all through the conference, and staff will be available to assist you. If you have any questions during the conference, please feel free to contact on-site volunteers or staff, who will be happy to assist you.

CONFERENCE SERVICE INFORMATION

Dining Arrangements

Date	Dining	Location
July 14 12:00-14:00	**Lunch**	Hall 5, B1
July 14 18:00-20:00	**Beijing Night Gala Dinner**	Ballroom A, B and C, 1F
July 15 12:00-14:00	**Lunch**	Hall 5, B1
July 16 12:00-14:00	**Lunch**	Hall 5, B1
July 17 12:00-14:00	**Lunch**	Hall 5, B1

Shuttle Bus Schedule

Departure Hotel	Hotel-CNCC	CNCC-Hotel	Hotel Stopover Location	Conference Center Stopover Location
	Departure	Return		
V-Continent Beijing Parkview Wuzhou Hotel	07:30-09:00 (Depart when full)	18:00-19:00 (Depart when full)	Beijing Continental Grand Hotel Parking Lot	Tianchen East Road,C Zone Entrance
Beijing Continental Grand Hotel	07:30-09:00 (Depart when full)	18:00-19:00 (Depart when full)		
Celebrity International Grand Hotel	07:30-09:00 (Depart when full)	18:00-19:00 (Depart when full)	Northwest side service road at the intersection of Huizhong Road and Anli Road	
Beijing Beichen Asian Games Village Hotel Building A	07:30-09:00 (Depart when full)	18:00-19:00 (Depart when full)	Entrance of Building A, Beichen Asian Games Village Hotel, Beijing	

Internet Service

Free Wi-Fi is available for attendees inside the National Convention Center. The Wi-Fi network name is cncc_free. To connect, please enter your mainland China mobile phone number to receive a verification code for login. **Please note that your account and password are for personal use only.**

Health Service

Health service hours during the conference: July 13 - 17, 08:00-18:00

Location: Room 215, 2nd floor of the conference area

Contact person: Han Ke +86 18231582001

Note: For conference related inquiries during the conference, please go to the registration area on the first floor.

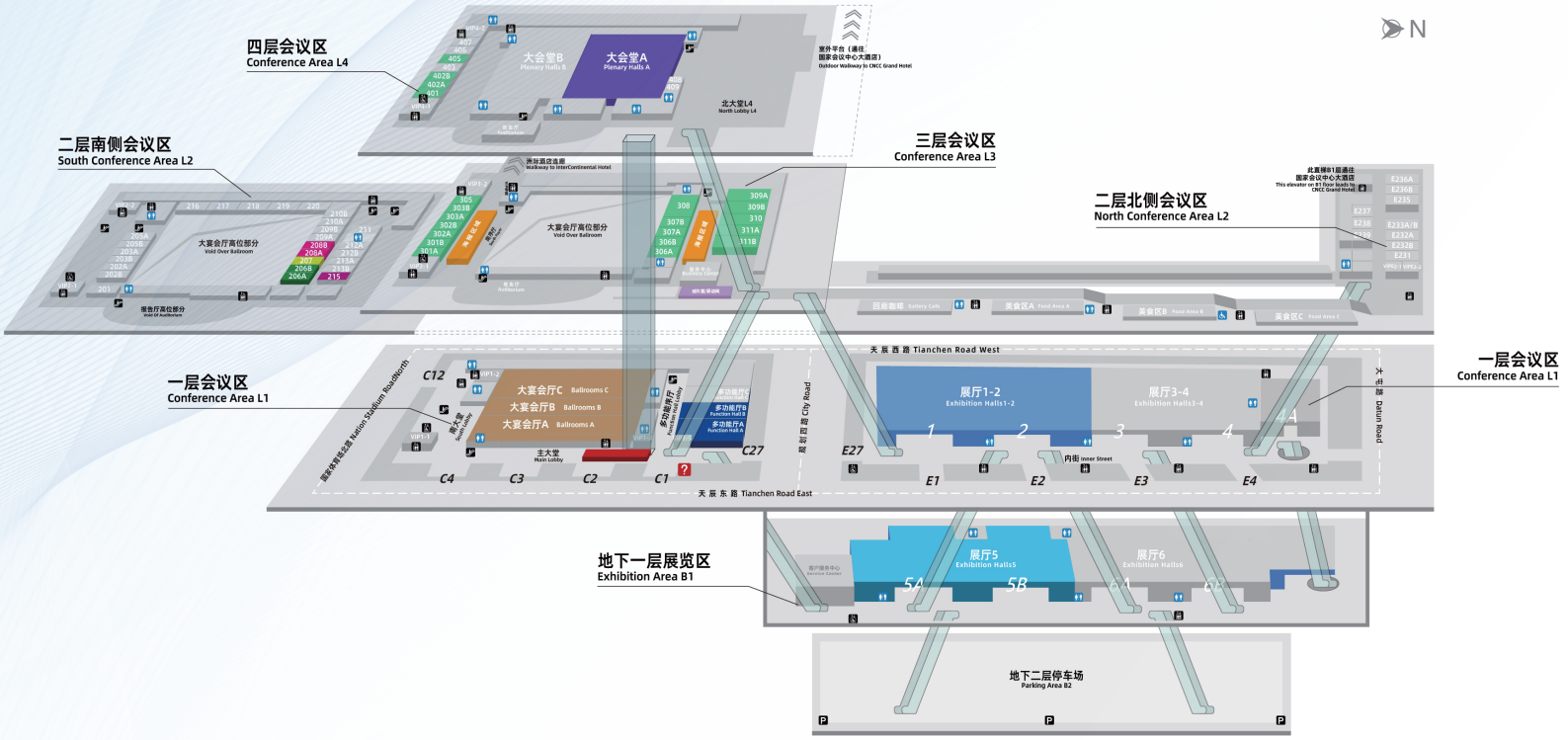
PARALLEL SESSIONS CONTACT INFORMATION

No.	Parallel Session	Contact Person	Tel.	Email
1	Engineering Ethics Education and Sustainable Chemical Industry	Wang Wanying	18649020686	wangwanying@tsinghua.edu.cn
2	Chemical Education and the Cultivation of Outstanding Engineers	Zhang Zhenli Xia Shuqian	13693041697 13752041388	djhdream2015@163.com shuqianxia@tju.edu.cn
3	International Symposium of Chemical Engineering Departments/Schools from Global Universities	Hu Chuangang Tang Junlei	13776401360 18608039391	chuangang.hu@mail.buct.edu.cn tangjunlei@126.com
4	Chemical Engineering Innovation and Entrepreneurship	Ma Liangwei	18621286641	liangweima@ecust.edu.cn
5	Chemical Engineering Thermodynamics and Big Data	Mu Liwen	18502522366	lwmu@njtech.edu.cn
6	Green Catalysis and Chemical Reaction Engineering	Su Junjie	18018562476	sujj.sshy@sinopec.com
7	Flow Chemistry and Microreaction Technology	Wang Kai	13811997208	kaiwang@tsinghua.edu.cn
8	Advanced Separation Technology & Engineering	Yang Qiwei	13868067514	yangqw@zju.edu.cn
9	Inherent Safety and Process Intensification of Chemical Processes	Li Yanbin	18810869015	liyb@mail.buct.edu.cn
10	Energy Transition Towards a Net-zero Future	Han Lu	18910492332	hanlu.ripp@sinopec.com
11	Biochemical and Biomanufacturing	Liu Zihe	18301233614	zihe@mail.buct.edu.cn
12	Process Industry Innovation and Process Systems Engineering Reengineering	He Qingsheng	13939728134	heqingsheng.segr@sinopec.com
13	Intelligent Manufacturing Technology and Equipment for the Chemical Industry	Zhao Xueliang Ren Jiao	13810084662 15001187795	zhaoxl@sinopec.com
14	Advancements in High-Performance and Intelligent Chemical New Materials	Pan Jianming	15952850631	pjm@ujs.edu.cn
15	Green Agriculture -- A New Paradigm of Seed, Fertilizer and Pesticide Innovation	Yang Youjun	13761361907	youjunyang@ecust.edu.cn
16	Biopharmaceutical and Health Engineering	Chen Kequan	13814180652	kqchen@njtech.edu.cn

PARALLEL SESSIONS CONTACT INFORMATION

No.	Parallel Session	Contact Person	Tel.	Email
17	Efficient Manufacturing Engineering of Functional Electronic Chemicals	Li Mingle	13252981106	limingle@szu.edu.cn
18	Waste Resource Conversion and Circular Economy	Li Defu	13880727699	lidefu@scu.edu.cn
19	Biomass Materials & Chemicals	Lin Xuliang	18620894227	xllin@gdut.edu.cn
20	Preparation Theory and Application of Carbonaceous New Materials	Liu Yindong	13701130315	Liuyindong@petrochina.com.cn
21	Chemical Engineering Process for Water, Gas Treatment and Environment Protection	Jiang Xiaobin	15904965752	xbjiang@dlut.edu.cn
22	Carbon Neutrality and Sustainable Development of the Chemical Industry	Xu Ting	13801211396	xuting.syky@sinopec.com
23	Mesoscience and Artificial Intelligence in Chemical Engineering	Guan Xiaoping	18810865282	xpguan@ipe.ac.cn
24	Single Atom Catalysis and Theoretical Chemistry	Li Xuning	15898162291	lixn@dicp.ac.cn
25	Hydrogen Energy and Hydrogen Energy Industry Chain	Wei Zhaoxiang	18138818263	wzx01@petrochina.com.cn
26	Electrochemical Engineering, Energy Internet, and Energy Storage	Yang Xiaowei	13585566895	yangxw@sjtu.edu.cn
27	Innovation and Practice of Industrial Software in Process Manufacturing	Lu Jingyi	13052509676	jylu_cise@ecust.edu.cn
28	Advanced Chemical Materials and Future Chemical Industry	He Lianghao	18801611071	helianghao@petrochina.com.cn
29	Future Energy and Novel Chemical Process	Lan Xingying	18610962527	lanxy@cup.edu.cn
30	Green Energy and Environmental Engineering	He Hongyan	18601334250	hyhe@ipe.ac.cn
31	Clean and Efficient Conversion and Utilization of Coal	Lyu Yijun	18911251308	yijun.lv@chnenergy.com.cn
32	Engineering Thermochemistry and Low Carbon Chemical Engineering	Yuan Xiangzhou	18252006838	yuanxz@seu.edu.cn
33	International Symposium of Artificial Intelligence for Chemical Product and Process Innovation	Cui Xili	15700079801	cuixl@zju.edu.cn
34	High-end Chemical New Material Innovation and Digital Intelligence Empowerment	Zhang Yongkun	18810286593	zhangyk21@cnooc.com.cn

Venue Floor Plan



注册区 Registration Area
开幕式/大会报告会 Opening Ceremony/Plenary Lecture
北京之夜 Beijing Night Gala Dinner
展览区 Exhibition Area
分会场 Parallel Session
媒体间 Media Room
医疗室 Medical Room
闭幕式/大会报告会 Closing Ceremony/Plenary Lecture
工作间 Staff Lounge
海报区 Poster Area
参会代表用餐区 Delegates Dining Area
试片室 Speaker Ready Room
志愿者之家 Volunteer Room

PROFILES OF INSTITUTIONS

WCEC
World Chemical Engineering Council

The World Chemical Engineering Council (WCEC) was established in 2001. Its Executive Committee consists of 16 members, including three regional alliances—the European Federation of Chemical Engineering (EFCE), the Asian Pacific Confederation of Chemical Engineering (APCChE), and the InterAmerican Confederation of Chemical Engineering (IACChE)—as well as 13 national members from the United States, Germany, the United Kingdom, France, Italy, the Netherlands, China, Japan, Canada, South Africa, Brazil, Argentina and Colombia. WCEC is the only global academic organization that unites regional chemical engineering academic alliances across the world, aiming to address global opportunities and challenges in chemical engineering and related disciplines by upholding the highest international standards in science and technology.

Website: wcec-online.org

APCChE
ASIAN PACIFIC CONFEDERATION OF CHEMICAL ENGINEERING

The Asian Pacific Confederation of Chemical Engineering (APCChE) was established in 1975. It is composed of 13 full member organizations: the Chemical Industry and Engineering Society of China (CIESC), Society of Chemical Engineers, Japan (SCEJ), Korean Institute of Chemical Engineers (KIChE), Engineers Australia (EA), Institution of Engineers, Malaysia (IEM), Philippine Institute of Chemical Engineers (PIChE), Thai Institute of Chemical Engineering and Applied Chemistry (TIChE), Indian Institute of Chemical Engineers (IIChE), The Institution of Engineers Indonesia (BKK-PII), Institution of Engineers Singapore (IES), Iranian Association of Chemical Engineering, (IAChE), Institute of Chemical Engineers, Chinese Taipei (TwiChE) and Hong Kong Institution of Engineers (HKIE). APCChE has 4 corresponding member organizations: Institution of Chemical Engineers (IChemE), the American Institute of Chemical Engineers (AIChE), Society for Chemical Engineering and Biotechnology - Germany (DECHEMA), and Canadian Society of Chemical Engineering (CSChE). APCChE is committed to providing a platform for communication and exchange among various non-profit societies, associations, and institutions in the field of chemical engineering across the Asia-Pacific region.

Website: www.apcche.com

中国化工学会 CIESC 中国化工学会
THE CHEMICAL INDUSTRY AND ENGINEERING SOCIETY OF CHINA, CIESC

The Chemical Industry and Engineering Society of China (CIESC) was founded in Beijing on April 23, 1922. As one of China's earliest national non-profit academic organizations, it constitutes a voluntary association of chemical professionals and relevant institutions. CIESC serves as a pivotal bridge linking the state with chemical scientists and engineers, functioning as an integral component of China's national innovation system.

Chemical industry serves as a fundamental, strategic, and essential pillar of China's economy, constituting a vital component of the national economy and forming the cornerstone for better quality of life for the people. Through a century of development since its inception, CIESC has evolved alongside China's chemical industry, standing as a participant, driver, and witness to the nation's century-long progress in chemical manufacturing and technological advancement. By uniting, mobilizing, and guiding generations of chemical professionals, CIESC remains dedicated to advancing China's chemical science and industry, having actively contributed to the nation's remarkable achievements in the chemical sector acknowledged worldwide.

Website: www.ciesc.cn

ABOUT AIChE

AIChE is the world's leading organization for chemical engineering professionals, with more than 60,000 members from more than 110 countries. AIChE has the breadth of resources and expertise you need whether you are in core process industries or emerging areas, such as translational medicine.

The Chem-E-Car Competition®, which involves multiple regional competitions and a final competition at the Annual Student conference, increases awareness of the chemical engineering discipline among the public, industry leaders, educators, and other students.

In 2017, the Chemical Industry and Engineering Society of China (CIESC) and Tianjin University initiated the introduction of the Chem-E-Car Competition®, aiming to create a limitless learning field where students are immersed in the forefront of technological advancements, broadening their horizons and building a formidable bridge connecting theory with practice.

Through the competition, students could gain comprehensive training and application enhancement of knowledge and skills, deeply appreciating the importance of innovative thinking and problem-solving abilities, while also demonstrating strong hands-on skills, teamwork spirit, as well as a profound sense of responsibility and mission characteristic of the contemporary young generation.

AIChE Website: www.aiche.org

China Region Chem-E-Car Competition® Website: www.chemecar.cn

HISTORICAL RECORD OF WCCE CONFERENCES

WCCE 1
1976
July 27-August 01
Amsterdam, Netherlands

WCCE 2
1981
October 04-09
Montreal, Canada

WCCE 3
1986
September 21-25
Tokyo, Japan

WCCE 4
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June 14-18
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2005
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August 23-29
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