大连理工大学
DALIAN UNIVERSITY OF TECHNOLOGY

7th 2026 ISPCEM

International Symposium on Plasmas for Catalysis and Energy Materials

Symposium Handbook

July 24–27, 2026

Dalian, China



Official Website

Live Photo Stream

— Organized by —

School of Chemistry, Dalian University of Technology

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01 Welcome Message

On behalf of the Organizing Committee, it is our great pleasure to welcome you to the 7th International Symposium on Plasmas for Catalysis and Energy Materials (ISPCEM 2026), being held in Dalian, China, from July 24 to 27, 2026.

Building on the success of the previous six symposia held in Tianjin, China (2012, 2014, 2016, and 2018), Liverpool, UK (2022), and Eindhoven, the Netherlands (2024), ISPCEM has developed into an important international forum for discussing the latest advances in plasma-assisted catalysis and energy materials.

This year, ISPCEM will be held in Dalian for the first time. As a vibrant coastal city in northeast China, Dalian is renowned for its beautiful seascapes, pleasant summer climate, and strong scientific and technological community. The symposium is hosted by Dalian University of Technology (DUT), a national key university founded in 1949 to support the development of the industrial system of New China. As one of China's Project 985 and Double First-Class universities, DUT has a distinguished tradition of excellence in science and engineering. We hope that both the city and the university will provide an inspiring setting for academic exchange, intellectual discovery, and future collaboration.

ISPCEM 2026 brings together scientists, engineers, and industrial partners from around the world to share cutting-edge research, exchange ideas, and explore opportunities for collaboration in plasma science and technology, with particular emphasis on catalysis, energy conversion, and environmental applications.

We sincerely appreciate the contributions of all speakers, participants, sponsors, committee members, and volunteers who have made this symposium possible. We wish you a productive and enjoyable symposium and hope that your time in Dalian will be both academically rewarding and personally memorable.

Chuan Shi

Prof. Chuan Shi

General Chair, ISPCEM 2026

Dalian University of Technology, China

大连理工大学 DALIAN UNIVERSITY OF TECHNOLOGY

02 Symposium Organization

Organizing Committee

Honorary Chairs:	Changjun Liu	Tianjin University, China
	Xin Tu	University of Liverpool, UK
General Chairs:	Chuan Shi	Dalian University of Technology, China
	Yanhui Yi	Dalian University of Technology, China
Session Chairs:	Yunxiang Pan	Shanghai Jiao Tong University, China
	Lanbo Di	Dalian University, China

Local Organizing Committee

Secretaries General:	Bingbing Chen	Dalian University of Technology, China
	Zhaoshun Zhang	Qufu Normal University, China
Executive Secretaries:	Yanan Diao	Dalian University of Technology, China
	Zhihui Wang	Dalian University of Technology, China
	Qi Zhao	Liaoning Normal University, China

International Scientific Committee

• Annemie Bogaerts	University of Antwerp, Belgium
• Sylvain Coulombe	McGill University, Canada
• Adriana Creatore	Eindhoven University of Technology, the Netherlands
• David Go	University of Notre Dame, USA
• Changjun Liu	Tianjin University, China
• Lina Liu	Nankai University, China
• Oi Lun Helena Li	Pusan National University, Korea
• Davide Mariotti	Ulster University, UK
• Tony Murphy	CSIRO, Australia
• Tomohiro Nozaki	Institute of Science Tokyo, Japan
• Tim Nitsche	Fraunhofer UMSICHT, Germany
• Gottlieb Oehrlein	University of Maryland, USA
• Chuan Shi	Dalian University of Technology, China
• Mohan Sankaran	University of Illinois Urbana-Champaign, USA
• Xin Tu	University of Liverpool, UK
• Shaojun Xu	University of Manchester, UK
• Aimin Zhu	Dalian University of Technology, China

Dalian University of Technology



Dalian University of Technology (DUT) is the first new-type formal university founded by the Communist Party of China on the eve of the founding of the People's Republic of China to support the construction of the country's industrial system. It is a key national university directly under the Ministry of Education, and a key institution under China's national "211 Project" and "985 Project". In September 2017, with the approval of the State Council, DUT was selected into the list of Class A universities under the national Double First-Class Initiative. In February 2022, it was included in the second round of the national Double First-Class University construction list. It has formed a multi-disciplinary system that focuses on science and engineering and coordinates the disciplines of economics, management, humanities, law, philosophy, and arts.

Nestled between mountains and the sea, the university boasts excellent educational facilities. It has developed a school-running layout featuring one university, two cities (Dalian and Panjin) and four campuses (the main Lingshui Campus, 129 Campus, Development Zone Campus in Dalian, and Panjin Campus). The total land area covers 3.5681 million square meters, with a building area of approximately 2.0759 million square meters. The university has around 3,000 full-time teachers, including 15 academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, 12 members of the Discipline Appraisal Groups of the Academic Degrees Committee of the State Council, 142 national high-level leading talents, 236 national outstanding young talents, 13 National Distinguished Teachers, 129 Undergraduate Distinguished Teachers of Liaoning Provincial Institutions of Higher Education, and 11 Distinguished Teachers under the Liaoning Revitalization Talent Program. It also has more than 1,500 doctoral supervisors and over 2,600 master's supervisors.

Taking fostering virtue through education as its fundamental mission, the university has established a first-class discipline framework featuring top-tier engineering, high-quality science, refined liberal arts and emerging medicine, and attaches equal importance to undergraduate and postgraduate education. It offers 77 undergraduate programs for enrollment, among which 23 are national-level specialty programs. It hosts 39 first-level discipline master's programs, 31 first-level discipline doctoral programs and 27 postdoctoral research stations. Fifteen of its subject areas rank among the top 1% globally, and four disciplines — engineering, chemistry, materials science and computer science — rank among the world's top 0.1%.

The university boasts a portfolio of high-level scientific research platforms, including four State Key Laboratories: the State Key Laboratory of Coastal and Offshore Engineering, the State Key Laboratory of Fine Chemicals, the State Key Laboratory of Structural Analysis, Optimization and CAE Software for Industrial Equipment, and the State Key Laboratory of High-performance Precision Manufacturing. It also runs one Belt and Road Joint Laboratory, one National Engineering Research Center, one National University Science and Technology Park, one National Technology Transfer Center, one National Technology Center, one National Research Base for Intellectual Property Strategy Implementation, one National Intellectual Property Training Base (Liaoning), and six National-Local Joint Engineering Research Centers (Engineering Laboratories).

Since 2001, the university has won 66 national science and technology achievement awards in total, 36 of which were conferred with the university as the first completing institution. It has led efforts to claim 246 first-class provincial and ministerial science and technology awards, and 20 first-class provincial and ministerial awards for humanities and social sciences. Since 2012, as the first completing institution, the university has obtained 3 Gold Awards, 3 Silver Awards and 15 Excellence Awards of the China Patent Award.





School of Chemistry, Dalian University of Technology



The School (Department) of Chemistry of Dalian University of Technology has a long history and distinctive characteristics. Established in 1949 and initiated with the discipline of chemical engineering, it has remained steadfast in basic theoretical research while continuously refocusing on industrial demand. It has conducted a number of noteworthy studies in catalytic chemistry, synthesis of inorganic functional materials, sustainable organic synthesis methodologies, etc. The department cultivates professionals possessing both scientific acumen and engineering proficiency.

There are 100 staff members, including 96 full-time teachers, 27 professors (researchers), 46 associate professors (associate researchers), one lecturer, and 15 full-time in-station postdoctoral fellows. The department has one national-level research and innovation team and three national-level teaching teams. The school boasts many distinguished scholars, including two recipients of national-level talent titles, two national-level distinguished teachers, one national-level advanced worker, one national-level youth talent, and five provincial-level distinguished teachers. Additionally, one earned the country's Distinguished Young Scholar Science Fund Project, two were awarded the State Council Special Grant, three endorsed the National Ten Thousand Talents Plan recipients, and ten received the BaoGang Education Award recipients.

The discipline of chemistry has always adhered to the cultivation of elite and innovative talents, which consists of two professional directions: Applied Chemistry of Science and the Zhang Dayu Chemical Elite Class, aiming at cultivating talents in the fields of engineering application and scientific research respectively.

The inorganic chemistry, organic chemistry, physical chemistry, analytical chemistry, general chemistry, and corresponding experimental courses under the department are all national-level courses. Around these courses, corresponding national-level excellent resource-sharing courses and national-level excellent video courses have been built. The discipline has also established a national-level experimental teaching center and a national-level basic-course teaching base. After the "13th Five-Year Plan" construction, graduates have grown up to be the pillars of the country and play a key role in their respective positions.

The discipline of chemistry concentrates on academics, aiming to innovate, serve the country, and pursue excellence. It has also been guided by the scientific concept of development, focusing on the frontiers of the discipline to carry out scientific innovation and meeting the needs of the country's economic, social development, and national defense construction to carry out technological innovation. With the goal of discipline development, we cooperate with the Dalian Institute of Chemical Physics, Chinese Academy of Sciences to establish the Zhang Dayu Molecular Science Research Center. Based on the advantages and characteristics of our university and the actual reform and development, we take advantage of the combination of the university-institute collaboration to promote the comprehensive reform of the chemistry discipline in the "trinity" of talent training, discipline construction, and scientific research. At present, the discipline has become an important support for the construction of basic chemistry majors and high-level disciplines, as well as a solid platform for high-level, in-depth, and substantive international cooperation and exchange. Our research has established several distinctive directions, covering all major fields of modern chemistry, such as nanomaterials, life analytical chemistry, chemical biology, activation and transformation of small molecules, and photoelectric conversion materials. A series of eminent research outcomes have been sequentially published in distinguished international journals and acknowledged by global peers.

In social service, state-of-the-art technologies have been deployed in corporations, yielding substantial societal benefits and contributing significantly to economic development and technological advancement of the nation and Northeast region in this domain. A demonstration device for mobilized emergency treatment of medical wastewater and hospital sewage contaminated by the novel coronavirus has been trialed in relevant hospitals in Dalian City.

In international cooperation and exchange, we rely on international exchange programs involving foreign faculty, overseas short-term talents, and exchange students, national government-sponsored research, and visiting scholars. Several pragmatic cooperation research platforms and projects are relentlessly advancing, engaging in widespread scientific research collaborations with institutions such as the University of California, Riverside, the University of California, San Diego, the State University of New York, the University of Alabama, the University of Tokyo, King Abdullah University of Science and Technology in Saudi Arabia, which has effectively enhanced our global academic reputation and comprehensive competitiveness, thereby demonstrating the interactions and supportive role of chemical science with other disciplines in research.

03 Symposium Notice

Venue Arrangement

Symposium Venue

Furama Hotel Dalian (Address: No. 60 Renmin Road, Zhongshan District, Dalian, Liaoning Province, P. R. China)



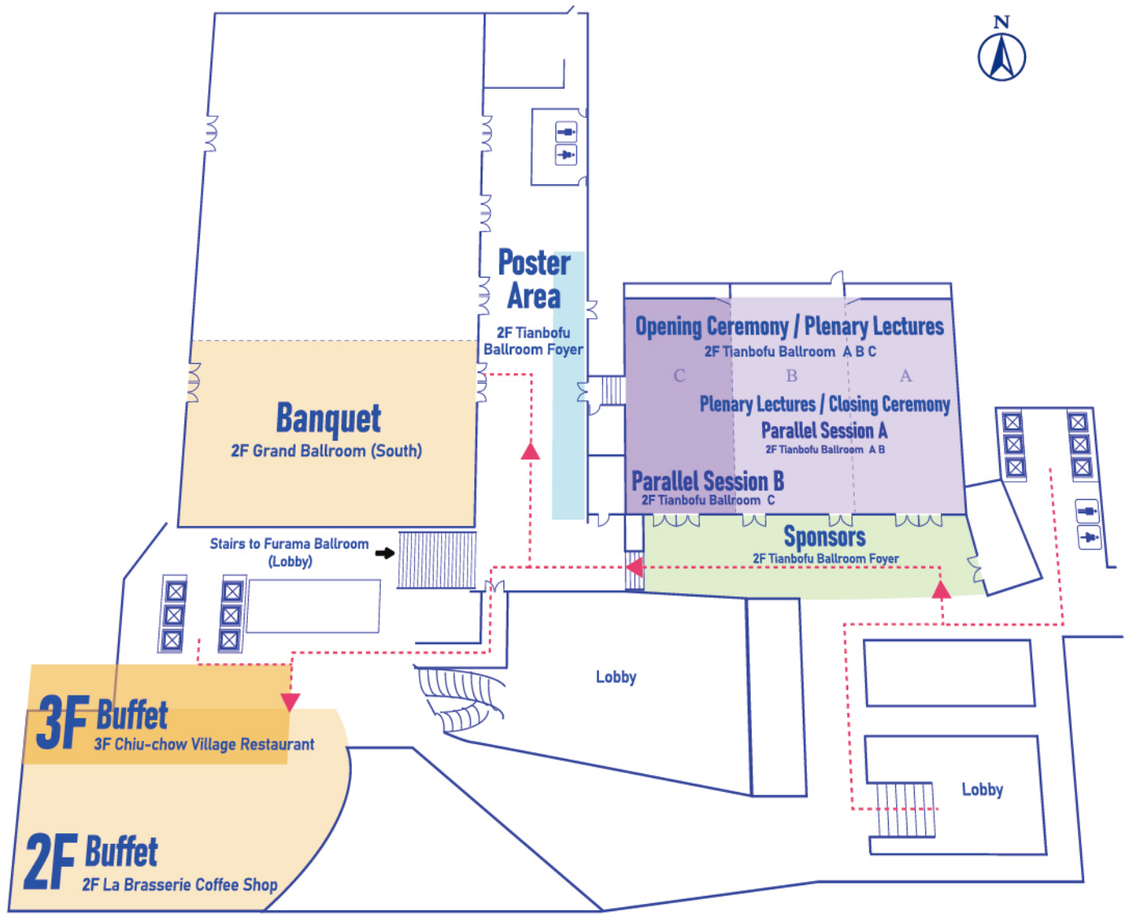




Venue Distribution

Venue	Location
Opening Ceremony / Plenary Lectures	2F Tianbofu Ballroom ABC
Closing Ceremony / Plenary Lectures	2F Tianbofu Ballroom AB
Parallel Session A	
Parallel Session B	2F Tianbofu Ballroom C
Poster Presentations	2F Tianbofu Ballroom Foyer

Venue Distribution Map



Transportation

Dalian Zhoushuizi International Airport——Furama Hotel Dalian (13 km)

- **By Taxi / Private Car:** In front of the Zhoushuizi International Airport terminal, there is a taxi station which provides 24-hour service. The taxi fare from the airport to the Furama Hotel is about 30 RMB (approx. $5). The "NOTE" below will be helpful when taking a taxi to the hotel or the symposium venue.
- **By Subway:** Attendees can take Metro Line 2 at the Airport Station and get off at Zhongshan Square Station, then walk 850 meters to reach Furama Hotel Dalian.

Dalian Railway Station——Furama Hotel Dalian (3 km)

- **By Bus:** Attendees can walk 250 meters to the bus stop at Dalian Railway Station, take bus No.30 to Renmin Road stop, and then walk 90 meters to Furama Hotel Dalian.
- **By Taxi / Private Car:** Dalian Railway Station is about 10 minutes' drive to Furama Hotel Dalian. The taxi fare from the Dalian Railway Station to the hotel is about 15 RMB (approx. $2).

Dalian North Railway Station——Furama Hotel Dalian (18 km)

- **By Subway:** Attendees can take Metro Line 2 at the Dalian North Railway Station and get off at Zhongshan Square Station, then walk 850 meters to Furama Hotel Dalian.
- **By Taxi / Private Car:** Dalian North Railway Station is about 35 minutes' drive to Furama Hotel Dalian. The taxi fare from the Dalian North Railway Station to the hotel is about 40 - 50 RMB (approx. $7).

NOTE

Please drive me to Furama Hotel, thank you!
请送我到大连富丽华大酒店，谢谢。
Address: No.60 Renmin Road, Zhongshan District, Dalian
地址：大连市中山区人民路 60 号

Daily Meals

Date	Time	Meals	Dining Area	Location
July 24, 2026	18:00 - 21:00	Buffet Dinner	La Brasserie Coffee Shop	2F West Wing
			Chiu-chow Village	3F West Wing
July 25, 2026	12:00 - 13:30	Buffet Lunch	La Brasserie Coffee Shop	2F West Wing
			Chiu-chow Village	3F West Wing
	18:00	Banquet	Furama Grand Ballroom	2F West Wing
July 26, 2026	12:00 - 13:30	Buffet Lunch	La Brasserie Coffee Shop	2F West Wing
			Chiu-chow Village	3F West Wing
	18:00 - 20:30	Buffet Dinner	Chiu-chow Village	3F West Wing
July 27, 2026	12:00 - 13:30	Buffet Lunch	La Brasserie Coffee Shop	2F West Wing
			Chiu-chow Village	3F West Wing

Refreshments: Coffee, tea, soft drinks, fruit and snacks will be provided at the Symposium Venue during daily coffee breaks.
If you have any special needs, please feel free to contact us.

Live Photo Stream

Please scan the QR code to view the photos from this Symposium.

In Case You Need Assistance

If you have encountered any problems and need help, please feel free to contact our symposium volunteers. They wear symposium badges with "**Volunteer**" on them, as well as yellow belts.

Contact Information

If you have any questions, please feel free to contact us.

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04 Symposium Schedule

Program Overview

Date	Time	Program	Location
July 24, 2026	All day	Registration	1F Furama Hotel Lobby
July 25, 2026	Morning	Opening Ceremony	2F Tianbofu Ballroom ABC
		Plenary Lectures	
	Afternoon	Parallel Sessions	Parallel Session A - 2F Tianbofu Ballroom AB Parallel Session B - 2F Tianbofu Ballroom C
July 26, 2026	Morning	Parallel Sessions	
	Afternoon	Parallel Sessions	
		Plenary Lectures	2F Tianbofu Ballroom AB
July 27, 2026	Morning	Parallel Sessions	Parallel Session A - 2F Tianbofu Ballroom AB Parallel Session B - 2F Tianbofu Ballroom C
		Closing Ceremony	2F Tianbofu Ballroom AB

Please scan the QR code to view detailed program and abstract book of ISPCEM 2026.

Detailed program

Abstract book

Guidelines for Presenters

Time Allocated for Presentation

Type of Report	Allotted Time
Plenary Lecture	40 min
Keynote Lecture	25 min
Invited Lecture	15 min
Oral Lecture	10 min
Fast Oral Presentation	6 min
Poster Presentation	Free communication

Compatibility of PPT presentation file

Format for presentation: PDF files or 16:9 ratio PowerPoint for Windows. For presenters using Mac devices, please select fonts from the Windows Office Compatible sub-menu to ensure full compatibility and error-free display on Windows-based symposium devices.

To avoid setup rushes of the presentation and time delays, all presenters are strongly recommended to verify the compatibility of presentation files in advance.

1. Please bring a copy of presentation file on USB flash device to load it onto the on-site symposium computer at least 2 hours before scheduled presentation time. For morning session speakers, file upload on the previous day is highly recommended. On-site staff will offer assistance to ensure proper display of all fonts, audio, and video materials.
2. Presenters, who fail to submit presentation files in advance, please ensure to upload the file on the symposium computer no later than 30 minutes prior to the session start time. To ensure efficient session operation, the use of personal laptops is discouraged.
3. If you need to use your personal laptop for presentation, please contact the on-site technical staff well in advance to complete equipment debugging and setup.

All uploaded presentation files will be permanently deleted after the conclusion of the symposium for file security and privacy protection.

Poster Session

Posters must be prepared in English and be in the format **90 cm (width) x 120 cm (height)**, please post the posters according to the numbering, and tapes will be provided. Please mount your poster on the corresponding board marked with your poster number (check your poster number in the ISPCEM2026 symposium manual).

Set-up Time: Before 12:00 on Saturday, July 25, 2026

Removal Time: After 12:00 on Monday, July 27, 2026

Location: 2F Tianbofu Ballroom Foyer

Please make sure your posters are set up and removed during designated times. Posters that are not removed after the designated removal period will be deemed abandoned.

Awards

The symposium will evaluate outstanding oral presentations delivered in the Young Scholars Session. Two awards will be conferred: the **Outstanding Presentation Award for Young Scholars** and the **Best Oral Presentation Award for Graduate Students**. Recipients will receive honorary certificates and monetary prizes.

Symposium Detailed Program

Plenary Lectures & Opening and Closing Ceremonies

2F Tianbofu Ballroom ABC

Saturday, July 25, 2026

Time	Type	Title	Speaker	Affiliation
08:30 - 09:00		Opening Ceremony		
Chair: Chunshan Song				
09:00 - 09:40	PL-01	Green Fuels and Ammonia through Plasma-Assisted Processes	Gabriele Centi	University of Messina
09:40 - 10:20	PL-02	Plasmas for the Fabrication and Modification of Catalysts and Energy Materials	Changjun Liu	Tianjin University
10:20 -10:35		Coffee Break		
Chair: Xiaolei Fan				
10:35- 11:15	PL-03	Multifunctional Roles of Nonthermal Plasma in CO_2 Methanation	Tomohiro Nozaki	Institute of Science Tokyo
11:15 - 11:55	PL-04	Plasma Electrification for Power-to-X: Enabling Sustainable Fuels and Chemicals	Xin Tu	University of Liverpool
11:55 -13:30		Buffet Lunch		

2F Tianbofu Ballroom AB

Sunday, July 26, 2026

Time	Type	Title	Speaker	Affiliation
Chair: Mahendra Sunkara				
15:40 - 16:20	PL-05	Plasma Catalysis: What is Needed to Improve Synergy?	Annemie Bogaerts	University of Antwerp
16:20 - 17:00	PL-06	Tailoring Low-Temperature Plasma-Driven CO_2 Dissociation for Carbon Valorization	Tao Shao	Wuhan University
Chair: Evgeny Rebrov				
17:00 - 17:40	PL-07	Utilisation of Hybrid Plasma-Catalysis for Net Zero Applications	Christopher Hardacre	The University of Manchester
17:40 - 18:20	PL-08	A Magnetic Field Influence on Structure of Volumetric and Surface Gas Discharges	Yuri Akishev	TRINITI
18:20 - 20:00		Buffet Dinner		

Monday, July 27, 2026

Time	Type	Title	Speaker	Affiliation
11:20 - 12:00		Closing Ceremony		
12:00 - 13:30		Buffet Lunch		

Parallel Sessions

Parallel Session A (2F Tianbofu Ballroom AB)

Saturday, July 25, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Zongyuan Wang | Hao Zhang				
13:30 - 13:55	KA-01	Synergetic Plasma Catalysis to Enhance CO_2 and SO_2 Conversion for a New Supply Chain of Chemicals and Fuels	Chunshan Song	The Chinese University of Hong Kong
13:55 - 14:10	IA-01	Plasma-Assisted Room-Temperature Chemical Looping Dry Reforming of Methane	Yu Miao	East China University of Science and Technology
14:10 - 14:25	IA-02	Gliding Arc Plasma for Energy-Efficient, High-Throughput CO_2 Conversion	Hao Zhang	Zhejiang University
14:25 - 14:50	KA-02	Green and Selective Oxidation of Methane	Wenting Wu	China University of Petroleum (East China)
14:50 - 15:05	IA-03	Direct O_2-Free CO Production from CO_2 via Carbon Fiber-Enhanced Low-Voltage Plasma	Xiangen Zhao	The Hong Kong Polytechnic University
15:05 - 15:20	IA-04	Engineering High-Performance Electrocatalysts by the DBD and RF Plasma for the Electrocatalytic Water Splitting	Guangliang Chen	Huzhou Normal University
15:20 - 15:30	OA-01	Fabrication of Strong-Interaction Interfacial Structures on Catalysts via Non-Thermal Plasma	Binran Zhao	Northwest University
15:30 - 15:45	Coffee Break			

Parallel Session A (2F Tianbofu Ballroom AB)

Saturday, July 25, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Wenting Wu | Guangliang Chen				
15:45 - 16:10	KA-03	Multi-modal Strategies for Tuning Plasma Processing and Synthesis of Electrodes for Energy Conversion Devices	Rajdeep Singh Rawat	Nanyang Technological University
16:10 - 16:25	IA-05	Plasma-Induced Assembly for Electrocatalyst Synthesis	Zongyuan Wang	Shihezi University
16:25 - 16:40	IA-06	Applications of Plasma Technology in Carbon-based Materials and PFAS Remediation	Keliang Wang	Southwest Jiaotong University
16:40 - 17:05	KA-04	Plasma Catalysis: An Emerging Approach for Renewable Carbon Resource Utilization	Lina Liu	Nankai University
17:05 - 17:20	IA-07	Redesigning Hydrogen-Involving Catalytic Processes	Rui Huang	Dalian Institute of Chemical Physics, CAS
17:20 - 17:35	IA-08	Room-Temperature Interface Engineering for Selective Carbon Dioxide Hydrogenation	Peng Liu	Shanghai Institute of Technology
17:35 - 17:45	OA-02	Enhanced Water Purification and Splitting on Interface of Composite Materials Fabricated by Dielectric Barrier Discharge Plasma	Jiabao Sun	Shanghai Jiao Tong University
18:00 - 20:30	Banquet			

Parallel Session A (2F Tianbofu Ballroom AB)

Sunday, July 26, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Huanhao Chen | Jinglin Liu				
08:30-08:45	IA-09	Performance of Ammonia Synthesis by Metal Oxide via Plasma Coupled Chemical Looping Method	Baiqiang Zhang	Zhengzhou University of Light Industry
08:45-09:00	IA-10	Plasma-Enabled Ammonia Synthesis: Direct N_2 Conversion and Mg-Based Chemical Looping	Nan Jiang	Dalian University of Technology
09:00-09:25	KA-05	Plasma-Based Solutions for Sustainable Resource Recovery and Energy Conversion	Guoxing Chen	National Institute of Clean-and-Low-Carbon Energy
09:25-09:40	IA-11	A Novel Approach for Exploring Nitrogen Activation in Plasma: Collisional-Radiative Modeling of Nitrogen Molecule	Jinglin Liu	Dalian Maritime University
09:40-09:55	IA-12	Plasma Electrocatalysis for Sustainable C/N Conversion	Renwu Zhou	Xi'an Jiaotong University
09:55-10:20	KA-06	Synergistic Effects of UV-Light and Plasma in CO_2 Splitting over a TiO_2 Photocatalyst	Evgeny Rebrov	University of Warwick
10:20-10:30	OA-03	The Critical Role of Water in Tailoring Plasma Chemistry: From CO_2 Splitting to Biogas Conversion	Pengxian Ye	The Chinese University of Hong Kong
10:30-10:40	OA-04	Plasma-Catalytic Enhancement of CO_2 Dissociation by Spark Discharge	Yuxuan Xu	Wuhan University
10:40-10:55	Coffee Break			

Parallel Session A (2F Tianbofu Ballroom AB)

Sunday, July 26, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Baiqiang Zhang				
10:55-11:10	IA-13	Plasma-Induced Odor Removal: From Fundamental Research to Industrial Application	Xuming Zhang	Zhejiang Sci-Tech University
11:10-11:25	IA-14	Membrane-Based Reactive Separation Process Intensification for H_2 Production	Huanhao Chen	Nanjing Tech University
11:25-11:40	IA-15	Measurement of Rate Constants of Hydrated Electrons for Reduction Processes at the Plasma-Water Interface	Yoshinobu Inagaki	Hokkaido University
11:40-11:50	OA-05	Ammonia Synthesis via Cascaded Gliding Arc Discharge and Co/Cu Bimetallic Oxide Electrocatalysis	Hao Yuan	Dalian University of Technology
11:50-12:00	OA-06	Plasma-Catalytic Upcycling of Polyolefins into Value-Added Liquid Products	Yanan Diao	Dalian University of Technology
12:00-13:30	Buffet Lunch			

Parallel Session A (2F Tianbofu Ballroom AB)

Sunday, July 26, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Nan Jiang | Xuming Zhang				
13:30-13:45	IA-16	Unlocking Unexplored Gas Plasma Chemistries via Coke Oven Gas Deoxygenation Investigations in DBD Reactors	Tim Nitsche	Fraunhofer UMSICHT
13:45-14:00	IA-17	Plasma Bubbles for Green Chemistry: Air, CO_2, CH_4 to High-Value Liquids	Jing Sun	Xi'an Jiaotong University
14:00-14:10	OA-07	Silicotungstic Acid Decorated Carbon Black-Supported Ru by Plasma Preparation for Enhancing Electrocatalytic Hydrogen Evolution	Jingsen Zhang	Dalian University
14:10-14:25	IA-18	Plasma-Catalytic Ammonia Decomposition for Hydrogen Energy	Yanhui Yi	Dalian University of Technology
14:25-14:40	IA-19	Plasma Swing Adsorption for Gas Purification under Mild Conditions	Guang Miao	Great Bay University
14:40-15:05	KA-07	Surface Engineering of Photocatalysts via In-Liquid Plasma Processing	Xintong Zhang	Northeast Normal University
15:05-15:20	IA-20	The Application of Plasma Reaction and Separation Coupling Technology in the Efficient Conversion of CH_4 or N_2	Zean Xie	Shenyang Normal University
15:20-15:40	Coffee Break			

Parallel Session A (2F Tianbofu Ballroom AB)

Monday, July 27, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Guoxing Chen | Binran Zhao | Hao Zhang | Xuming Zhang				
08:30-08:40	OA-08	Carbon-Neutral Production of H_2, C2-C3 Hydrocarbons, and Graphitic Carbon from Methane by a Plasma-Assisted Process	Siglinda Perathoner	Univ Messina, Dept. ChiBioFarAm
08:40-08:50	OA-09	Plasma-Enabled Synthesis of Cobalt Electrocatalysts for Enhanced Hydrazine Oxidation	Qian Liu	Shenzhen Polytechnic University
08:50-09:00	OA-10	Pulsed Plasma for One-Step CH_4-CO_2 Valorization to Platform Chemicals	Yuan Gao	Institute of Electrical Engineering, CAS
09:00-09:06	FA-01	Solution Plasma Synthesis of Highly Dispersed Cu/$ZnZrO_x$ Catalysts for CO-Selective CO_2 Hydrogenation	Shaowei Chen	Institute of Wenzhou, ZhejiangUniversity / Nanjing Tech University
09:06-09:12	FA-02	Machine Learning-Driven Insights into Hydrogen Enhancement and Coke Mitigation in Plasma-Catalytic Plastic Reforming	Haijun Wu	Sichuan University
09:12-09:18	FA-03	Mechanism of Plasma-Induced Active-Site Restructuring for the Co-Synthesis of High-Purity H_2 and High-Quality CNTs	Zhonghan Li	Harbin Institute of Technology
09:18-09:24	FA-04	Enhancing Hydrophilicity of ZrO_2 by Plasma Treatment for Improved CO_2 Hydrogenation over M/ZrO_2 Catalysts (M = Rh, Pt)	Jingyue Liang	Tianjin University
09:24-09:30	FA-05	Electrochemical Reactions at the Plasma/Gel Interface	Wanqi Zhang	University College London
09:30-09:36	FA-06	Process Optimization and Application Research on Low-Temperature Plasma -Fluidized Bed Treatment of Municipal Solid Waste Incineration Fly Ash	Diankun Ye	Zhejiang University of Technology
09:36-09:42	FA-07	Highly Active Ru/k-Al_2O_3 Catalyst by Plasma Decomposition for CO Methanation	Liangkai Xu	Tianjin University
09:42-09:48	FA-08	Plasma-Modified Key Interfacial Materials for Zinc-Iodine Batteries with Enhanced Electrochemical Performance	Qi Qi	Anhui University
09:48-09:54	FA-09	Plasma-Engineered CeO_2@C with Frustrated Lewis Pairs for High-Performance Zinc-Iodine Batteries	Yurong Yang	Anhui University

Parallel Session A (2F Tianbofu Ballroom AB)

Monday, July 27, 2026 Session Chair: Yunxiang Pan

Time	Type	Title	Speaker	Affiliation
Chair: Guoxing Chen | Binran Zhao | Hao Zhang | Xuming Zhang				
09:54-10:00	FA-10	Plasma-Enabled Synthesis and Dynamic Interface Engineering of SiO_x Anodes for High-Performance Lithium-Ion Batteries	Yurun Chen	Henan University
10:00-10:06	FA-11	Spatial Mapping of Reactive Species in a Helium Atmospheric Pressure Plasma Jet via Optical Emission Spectroscopy for Plasma-Surface Interaction Analysis	Xianxuan Huang	University College London
10:06-10:12	FA-12	Preparation of MIL-88B/NH_2-MIL-125 and Its Application in Visible-Light Photo-Fenton Degradation of Rhodamine B	Yibo Xie	Wuhan Institute of Technology
10:12-10:18	FA-13	Liquid Phase Gliding Arc Plasma for Efficient Methanol to Hydrogen Conversion	Quanli Wang	Dalian Maritime University
10:18-10:24	FA-14	Streamer Propagation Characteristics in Patterned Dielectric Barrier Discharges	Xinyang Li	Dalian University of Technology
10:24-10:30	FA-15	Dimensionless Automated Machine Learning for Interpretable Modeling and Process Optimization of Low-Temperature Plasma Systems	Daqian Zhu	Shandong Normal University
10:30-10:36	FA-16	Cold Plasma-Induced Surface Reconstruction of Spinel Oxides into Defect-Rich Sulfide Heterojunctions for Efficient Water Splitting	Haiyang Cao	Tianjin University
10:36-10:42	FA-17	Efficient NH_3 Production from Air via Plasma-Driven NO_x-Supply and Interface-Engineered Electrocatalysis	Jieping Fan	Xi'an Jiaotong University
10:42-10:48	FA-18	One-Step O_2 Plasma Synthesis of Oxygen-Vacancy-Rich Cu_2O on Cu Foam for Enhanced Nitrate-to-Ammonia Electroreduction	Tong Xu	Dalian Maritime University
10:48-10:54	FA-19	Plasma-Assisted Synthesis of CoO_x/C Catalyst for Methanolysis of Ammonia Borane	Guanhua Pan	Liaoning Normal University
10:54-11:20	Coffee Break			

Parallel Session B (2F Tianbofu Ballroom C)

Saturday, July 25, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Xiaoliang Yan | Guoqiang Cao				
13:30 - 13:45	IB-01	Non-Thermal Plasma-Assisted Dinitrogen Fixation to Ammonia by Alkali Hydrides and Imides	Jianping Guo	Dalian Institute of Chemical Physics, CAS
13:45 - 14:00	IB-02	Designing Plasma-Compatible Materials for Integrated CO_2 Capture and Conversion	Sirui Li	Eindhoven University of Technology
14:00 - 14:25	KB-01	Electrostatic Confinement of Plasma Electrons by Water Microdroplets: A New Paradigm for Energy-Efficient Nitrogen Fixation	Xiaolei Fan	The University of Manchester
14:25 - 14:40	IB-03	Exploring the Plasma-Enhanced Surface Reactions by Ambient Pressure Photoelectron Spectroscopy	Jun Cai	Shanghai Tech University
14:40 - 14:55	IB-04	Solution Plasma Catalytic Production of H_2O_2	Changhua Wang	Northeast Normal University
14:55 - 15:20	KB-02	Plasma-Promoted Activation and Conversion of Inert Small Molecules	Dehui Deng	Dalian Institute of Chemical Physics, CAS
15:20 - 15:30	OB-01	Non-Thermal Plasma/Catalysis for Upgrading Waste-Derived Pyrolysis Oils and Gases, and Methanation of CO_2	Maryam Khatibi	University of Leeds
15:30 - 15:45	Coffee Break			

Parallel Session B (2F Tianbofu Ballroom C)

Saturday, July 25, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Dehui Deng | Sirui Li				
15:45-16:00	IB-05	Preparation of Nickel-Based Catalysts by the Solution Combustion Method and Their Application in Methanation of Carbon Dioxide	Zhongwei Liu	Beijing Institute of Graphic Communication
16:00-16:15	IB-06	Surface Engineering of Ru-Based Catalysts toward Enhanced Plasma-Catalytic Ammonia Synthesis	Guoqiang Cao	Institute of Coal Chemistry, CAS
16:15-16:40	KB-03	Plasma-Catalysis for Chemical Production: Hydrogen, Green Methanol, and Ammonia	Mahendra Sunkara	University of Louisville
16:40-16:55	IB-07	Preparation of Carbon-Based Supported Catalysts by Low-Temperature Plasma	Hongmei Sun	Institute of Plasma Physics, Hefei Institutes of Physical Science, CAS
16:55-17:10	IB-08	Non-Thermal Plasma-Initiated Water-Gas Shift for the Direct Synthesis of Hydrogen Peroxide and Ammonia	Junliang Wu	South China University of Technology
17:10-17:25	IB-09	Plasma-Assisted Catalytic-Pyrolysis of Plastics and Multiscale Simulation of Pyrolysis Reactors	Xi Gao	Guangdong Technion-Israel Institute of Technology
17:25-17:35	OB-02	Insight into the Synergistic Effect Between Plasma and Oxygen Vacancies in Direct Oxidation of CH_4 to CH_3OH by Molecular O_2 at Mild Conditions	Kai Li	Zhejiang Sci-Tech University
17:35-17:45	OB-03	A Double-Helix DBD Reactor for Enhanced Plasma-Assisted Ammonia Synthesis	Yibing Mu	Institute of Wenzhou, Zhejiang University
17:45-17:55	OB-04	Integrated CO_2 Capture and Non-Thermal Plasma-Assisted Catalytic Conversion to Value-Added Chemicals	Bin Shao	East China University of Science and Technology
18:00 - 20:30	Banquet			

Parallel Session B (2F Tianbofu Ballroom C)

Sunday, July 26, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Junliang Wu | Yaolin Wang				
08:30-08:55	KB-04	Surface and Interface Reaction Chemistry in Plasma Catalysis	Daiqi Ye	South China University of Technology
08:55-09:10	IB-10	Copper-Based Catalysts for the Plasma-Driven Conversion of CO_2	George Fulham	University of Cambridge
09:10-09:25	IB-11	Plasma-Catalysis for the Co-Conversion of Methane and CO_2 via a Chemical-Looping Mode	Yunfei Gao	East China University of Science and Technology
09:25-09:50	KB-05	Plasma-Designed Robust Ni Catalysts for CO_2 Conversion	Xiaoliang Yan	Taiyuan University of Technology
09:50-10:05	IB-12	Overcoming the Conversion-Selectivity Trade-off in Plasma Catalytic Conversion of Methane to Ethylene	Weiming Wan	Lanzhou University
10:05-10:20	IB-13	Revealing the Cooperative Role of Non-Thermal Plasma and ZSM-5 Supported Cu-Zn Catalysts in CO_2 Hydrogenation	Shanshan Xu	The University of Manchester
10:20-10:30	OB-05	Facet Engineering in Plasma Catalysis for Non-oxidative Methane Coupling to Ethylene at Mild Temperature	Rui Liu	Xi'an Shiyou University
10:30-10:40	OB-06	Cold Plasma Enhanced Regeneration of Atomically Dispersed Pd on CeO_2 for Passive NO_x adsorption	Zhihui Wang	Dalian University of Technology
10:40-10:55	Coffee Break			

Parallel Session B (2F Tianbofu Ballroom C)

Sunday, July 26, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Jinhai Niu				
10:55-11:20	KB-06	Recent Advances in Plasma Technologies for Materials Processing and Catalysis	Sibudjing Kawi	National University of Singapore
11:20-11:35	IB-14	Topology, Cage, and Cation Effects in Zeolite-Guided Plasma CH_4/CO_2 Conversion	Li Wang	Dalian Maritime University
11:35-11:50	IB-15	Synergistic Catalysis of Hybrid Discharges for Sustainable Nitrogen Fixation via Nanosecond Pulse-Driven Underwater Bubble Systems	Zhaolun Cui	Dalian University of Technology
11:50-12:00	OB-07	Introduction to PST Journal	Wenjin Zhang	Hefei Institutes of Physical Sciences, CAS
12:00-13:30	Buffet Lunch			

Parallel Session B (2F Tianbofu Ballroom C)

Sunday, July 26, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Jun Cai | Li Wang				
13:30-13:45	IB-16	Promoting CO_2 Reforming of CH_4 in a Coaxial Three-Electrode Dielectric Barrier Discharge Reactor	Danhua Mei	Nanjing Tech University
13:45-14:00	IB-17	Rational Catalyst Design for Plasma-Catalytic CO_2 Hydrogenation to Methanol	Yaolin Wang	Zhejiang University
14:00-14:25	KB-07	Study on the Performance and the Origin of Synergy between Plasma and Catalyst for the Elimination of Particulate Matter	Zhen Zhao	Shenyang Normal University / China University of Petroleum-Beijing
14:25-14:40	IB-18	Research on the Synergistic Removal of Ethylene and Preservation of Apples Using Dielectric Barrier Discharge and Mn/Al_2O_3 Catalyst	Jinhai Niu	Dalian Minzu University
14:40-14:55	IB-19	Plasma-Catalytic Ammonia Decomposition for CO_x-Free Hydrogen Production	Zhijun Wang	Chengdu University
14:55-15:10	IB-20	Ultra-Fast Synthesis of Core-Shell Composites through Plasma Treatment for High Selective CO_2 Capture	Jun Hu	East China University of Science and Technology
15:10-15:20	OB-08	Plasma-Enabled Direct Methane-to-Methanol Conversion on Zeolite-Confined Copper-Oxo Clusters: Role of Vibrational Excitation and Radical-Mediated Pathways	Shangkun Li	Research group of COMMIT & PLASMANT, University of Antwerp
15:20-15:40	Coffee Break			

Parallel Session B (2F Tianbofu Ballroom C)

Monday, July 27, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Guoxing Chen | Binran Zhao | Hao Zhang | Xuming Zhang				
08:30-08:40	OB-09	Efficient Hydrogen Production and Anti-Coking via Reforming of Waste Plastics Pyrolysis Oil by Plasma-Catalysis	Xinrui Wang	Sichuan University
08:40-08:50	OB-10	Fluidized-Bed Plasma Catalysis Enables Electrified CO-to-Graphitic Carbon Conversion for Chemical-Looping CO_2 Fixation	Xiaozhong Chen	Institute of Science Tokyo
08:50-09:00	OB-11	Plasma-Catalytic Co-Activation of CH_4 and CO_2 for Energy-Efficient Hydrogen Production via over Conductive Carbon Tube-Supported Ni@NiO_x	Hui Su	Sichuan University
09:00-09:10	OB-12	Strategies for Non-Thermal Plasma-Driven Methane Coupling to Unsaturated C_2 Hydrocarbons	Chunqiang Lu	Kunming University of Science and Technology
09:10-09:16	FB-01	Ambient-Pressure XPS for Plasma-Enhanced Surface Reactions Study	Yang Gu	ShanghaiTech University
09:16-09:22	FB-02	Support-Tuned Selectivity of Copper-Based Catalysts for Non-Thermal Plasma Conversion of CH_4/CO_2 to Methanol	Zeen Zhu	Zhejiang University of Technology
09:22-09:28	FB-03	Plasma Assisted Steel Slag Catalyzed Ammonia Decomposition for Hydrogen Production	Jike Liang	Anhui University of Technology
09:28-09:34	FB-04	Ru and N Co-Doped $LaCo_{1-x}Ru_x(O, N)_3$ Perovskite for Efficient Non-Thermal Plasma-Catalytic Ammonia Synthesis	Yutong Feng	Institute of Coal Chemistry, CAS
09:34-09:40	FB-05	Plasma-Catalytic CO_2 Hydrogenation to Methanol: A Mechanism Study	Qian Chen	Dalian University of Technology
09:40-09:46	FB-06	Microdroplet-Assisted Plasma Catalysis the Production of H_2O_2	Liping Cao	Institute of Wenzhou, Zhejiang University
09:46-09:52	FB-07	Cage-Dependent Selectivity of Alcohol and Acid in Plasma-Catalytic CH_2/CO_2 Conversion over 13X Zeolite	Qingxi Yin	Dalian Maritime University
09:52-09:58	FB-08	Defect-Engineered Ru-Co/TiO_{2-x} Catalysts for Highly Efficient Plasma-Catalytic Ammonia Synthesis at Ambient Conditions	Bianbian Gao	Institute of Coal Chemistry, CAS

Parallel Session B (2F Tianbofu Ballroom C)

Monday, July 27, 2026 Session Chair: Lanbo Di

Time	Type	Title	Speaker	Affiliation
Chair: Guoxing Chen | Binran Zhao | Hao Zhang | Xuming Zhang				
09:58-10:04	FB-09	Plasma-Catalytic Dry Reforming of CH_4/CO_2 over Ni-Cu/Al_2O_3: Effects of Electrode Material and Packing Configuration	Binghui Wu	Zhejiang University of Technology
10:04-10:10	FB-10	Ni/MgAlO Catalyst for Plasma-Catalytic Toluene Reforming: Performance, Stability, and Carbon Deposition Characteristics	Ke Li	Zhejiang University of Technology
10:10-10:16	FB-11	Sustainable Solution Plasma Catalysis for H_2O_2 Production	Shuang Liang	Zhejiang University of Technology
10:16-10:22	FB-12	Decoupling Nonthermal and Thermal Effects in Plasma-Catalytic Promotion of CO_2 Methanation	Wenjun Zhang	Institute of Science Tokyo
10:22-10:28	FB-13	Optimization of Process Parameters of the Boudouard Reaction Toward Plasma Catalysis	Yue Li	Institute of Science Tokyo
10:28-10:34	FB-14	Spatially Decoupled Plasma-Catalysis for Long-Term Methane Cracking: Mechanism of Precursor Regulation and Anti-Coking over Ni/AC Catalysts	Ningning Li	China University of Mining and Technology
10:34-10:40	FB-15	Microwave Plasma-Assisted Construction of Ni-Fe Catalysts for Highly Stable Dry Reforming of Methane	Yubin Li	Taiyuan University of Technology
10:40-10:46	FB-16	A Novel Tandem Reaction System for High-Concentration Acetic Acid Production from Methane and Oxygen	Chaoqun Gu	China University of Petroleum (East China)
10:46-10:52	FB-17	Plasma-Catalytic CO_2 Dissociation in DBD Reactor with X/Ni (X=Zn, Al, Cr, Mo) Composite Metallic Foam: Effect and Mechanism Analysis	Lasa A	Harbin Institute of Technology
10:52-10:58	FB-18	Plasma-Catalytic Ammonia Synthesis from N_2 and H_2O via Rational Catalyst Design	Long Tian	Northwest University
10:58-11:04	FB-19	Cold Plasma-Assisted Co-Conversion of Polyolefin Wastes and CO_2 into Aromatics over Hierarchical Ga/ZSM-5 Catalyst	Tianqi Yun	Dalian University of Technology
11:04-11:20	Coffee Break			

05 Introduction of Experts



Gabriele Centi

- **University of Messina, Italy**

Gabriele Centi is a Full Professor of Industrial Chemistry at the University of Messina, Italy, and President of the European Research Institute of Catalysis (ERIC). The research interests encompass the fields of applied heterogeneous catalysis, sustainable energy and chemical processes, hydrogen production and use, biomass conversion, and environmental protection. Recent activities focus on the development of catalytic technologies for solar fuels, carbon circularity, and the electrification of chemical production.

He was the coordinator of the EU Network of Excellence IDECAT and the President of IACS (International Association of Catalysis Societies). Previously, he served as the President of EFCATS (European Federation of Catalysis Societies). He has served as the coordinator or PI in over 30 EU projects. He recently initiated and coordinated an ERC Synergy project on plasma catalysis. He is also a member of the board of SUNERGY, the European initiative on solar fuels, and SUNER-C, the EU coordination and support actions to prepare a partnership on substituting fossil fuels.

He has received numerous awards, including i) the International Fellowship Initiative of the President of the Chinese Academy of Sciences, PIFI, as a Distinguished Scientist, ii) the Humboldt Research Award, iii) the Chini Memorial Lecture and the Gold Medal S. Cannizzaro of the Italian Chemical Society and recently iv) the EFCATS & APCATS Michel Che Award. He is involved in various publishing activities. He chaired the editorial board of *ChemSusChem* until 2019 and is co-editor-in-chief of the *Journal of Energy Chemistry*, which has been elevated to a high-IF journal, and *the Studies in Surface Science and Catalysis series* of books, one of the oldest and best-known in catalysis. He has been chairperson of numerous international conferences, including Europacat 2017 in Florence and the 16th International Zeolite Conference, jointly with the 7th International Mesostructured Materials Symposium (Sorrento, Italy, 2010). He has been extensively plenary and keynote lectures worldwide.

He is the author of over 650 scientific publications (Iris Cineca) and 17 books (2 in prints), and he serves as the editor of more than 25 special issues of internationally recognized journals. The current h-index is 103, with >43,000 citations and >450 articles that have received more than 10 citations (Google Scholar, Aug 2025). In the 2024 ranking by Stanford University of the top 2% of worldwide scientists, he was among the top 5,000 researchers worldwide in all scientific areas and among the first in Sicily.



Tomohiro Nozaki

- **Institute of Science Tokyo, Japan**

Tomohiro Nozaki is a Professor at the Institute of Science Tokyo, Japan, where he leads research in plasma-assisted catalysis and sustainable energy conversion. Dr. Nozaki received B.E. and M.E. degrees from Toyohashi University of Technology, Japan, both in Energy Engineering, in 1993 and 1995. He started his career at Ishikawajima-Harima Heavy Industries Co. Ltd. (currently IHI) ('95-'96), where he engaged in the pulverized coal combustion and environmental protection technology development. He became a faculty member of Gifu University in Mechanical Engineering ('96-'99) and an Assistant Professor of Tokyo Institute of Technology in the Department of Mechanical Engineering ('99). He directed his research to atmospheric pressure plasma chemistry and received Ph.D. from Tokyo Tech in 2003. After his postdoctoral work at the University of Minnesota ('03-'04), he received a full professorship from Tokyo Institute of Technology in 2012. He pioneered various innovative plasma processing technology based on atmospheric pressure plasmas and is exploring new technology in the fields of Plasma Catalysis, CH_4 and CO_2 conversion, Carbon recycling, and Silicon nanoparticles synthesis and photovoltaic application. He is the author of more than 170 publications including several book chapters. He is currently a *Board of Director of International Plasma Chemistry Society*, *Editorial Board of Plasma Chemistry* and *Plasma Processing* (Springer), International Advisory Board of *Plasma Processes and Polymers* (Wiley). He appointed a visiting professor at Hokkaido University, Institute of Catalysis, in 2021.



Tao Shao

- **Wuhan University, China**

Tao Shao is a distinguished professor of Wuhan University. His research interests primarily focus on high voltage engineering, pulsed power technology, and low-temperature plasma applications.

Dr. Shao received his B.E. in Electrical Engineering and Automation from Wuhan University of Hydraulic and Electrical Engineering in 2000, his M.E. in High Voltage and Insulation Technology from Wuhan University in 2003, and his Ph.D. in High Voltage and Insulation Technology from the Graduate University of the Chinese Academy of Sciences in 2006. He joined the Institute of Electrical Engineering, CAS, as an Assistant Professor in 2006, was promoted to Associate Professor in 2009, and has been a Full Professor since 2013.

Throughout his prolific career, Dr. Shao has received numerous prestigious awards and honors. He is the recipient of the prestigious National Natural Science Foundation for Outstanding Young Scientist fund (2019) and the National Natural Science Foundation for Excellent Young Scientist fund (2012). He has also been honored with the Newton Advanced Fellowship from the Royal Society (2015), the Lu Jiaxi Young Talent Award from CAS (2012), and the prestigious IEEE William Dunbar Award (2018). Early in his career, he was also recognized with the CAS President's Excellence Award (2004).

Dr. Shao holds an extensive portfolio of editorial roles, serving as Associate Editor for prestigious journals such as *High Voltage*, *IEEE Transactions on Dielectrics and Electrical Insulation*, and *Laser and Particle Beams*. He is also on the editorial boards of *Plasma Processes and Polymers*, *Plasma Science and Technology*, and several leading Chinese academic journals in his field. He is a Fellow of the Institution of Engineering and Technology (IET) and serves as the Chair of the *Plasma Science* and *Application Committee of the China Electrotechnical Society*.



Christopher Hardacre

- **The University of Manchester, UK**

Christopher Hardacre is Head of the School of Natural Sciences at the University of Manchester and a Professor of Chemical Engineering. He obtained a PhD from Cambridge University in 1994 and moved to Queen’s University, Belfast in 1995 and was appointed as Professor of Physical Chemistry in 2003. In 2016, he moved to the University of Manchester. He was awarded the Royal Society of Chemistry Encouraging Innovation Award with Merck Chemicals Ltd and was part of the team to win the Queen’s Anniversary Prize for Further and Higher Education, in 2013 was the inaugural winner of the IChemE’s Andrew Medal for catalysis, in 2022 won the Tilden Prize from the RSC and in 2024 won the RB Anderson Prize from the Canadian Institute of Chemistry. He is a co-PI of the UK Catalysis Hub and is an elected member of the Royal Irish Academy.

He has strong research interests in catalysis and ionic liquids. Current catalysis projects range from water gas shift and emission control catalysis using thermal and plasma activation to the use of transients to determine gas and liquid phase reaction mechanisms to liquid phase hydrogenations under batch and flow conditions to biomass conversion, CO_2 utilisation, polymer conversion and clean energy conversion. In addition, his research in ionic liquids includes their use in modifying the properties of heterogeneous catalysts, structural determination of ionic liquids and species dissolved therein, process intensification for sustainability including CO_2 utilisation and waste polymer valorisation, and prediction of the physical properties of ionic liquids. In both aspects of the research, the group has developed a number of state-of-the-art techniques both within the University as well as using synchrotron and neutron central facilities. Much of the work is collaborative and industrially related involving a combination of modelling and experimental studies. He has published over 520 papers, 14 patents, 11 book chapters and has an h-index = 100.



Yuri Akishev

• The State Research Centre Troitsk Institute for Innovation and Fusion Research, Russia

Yuri Akishev is a distinguished physicist specializing in non-thermal plasma and gas discharge technologies. He graduated from the Physical Department of Moscow State University in 1971 and earned his Candidate of Science degree (equivalent to a PhD) in 1979 from the Kurchatov Atomic Energy Institute, Moscow, with a thesis on instabilities in glow discharges. In 1988, he received his Doctor of Science degree from the same institute, focusing on the spatial structure of glow discharges at higher pressures. Since 1988, Akishev has served as head of the Plasma Physics Laboratory at the State Research Centre Troitsk Institute for Innovation and Fusion Research, and since 1996, he has been a Professor of Physics at the Moscow Engineering Physics Institute. His career includes roles as a junior and senior researcher, group leader, and leading researcher at the Kurchatov Institute and its successor. Akishev' s research focuses on diffusive, constricted, and micro discharges for applications such as airflow control, gas cleanup, plasma surface modification, and non-thermal plasma disinfection. His laboratory excels in developing DC and AC non-thermal plasma sources for surface treatment, pollutant removal, and sterilization, supported by extensive expertise in experimental and numerical plasma physics.



Changjun Liu

• Tianjin University, China

Dr. Chang-Jun Liu is now a Chang Jiang Distinguished Professor of School of Chemical Engineering and Technology, Tianjin University, China. He received his Ph.D. degree from Tianjin University in 1993. After postdoctoral positions at the University of Oklahoma (2.5 years) and Prairie View A&M University (1 year), he joined ABB Cooperate Research, Switzerland, as an engineer. He became a Professor at Tianjin University in 1999. Prof. Liu' s research interests include catalysis, CO_2 utilization, clean fuels, methane conversion, preparation of catalyst and nanomaterials by cold plasmas. He has published more than 200 papers. He was in the list of highly cited Chinese authors (Chemical Engineering) by Elsevier since 2014. He has made more than 40 plenary speeches and invited talks in the international conferences in USA, UK, Germany, Belgium, Japan, Canada, Norway, S Korea, Thailand and China. He served as 2010 Program Chair of the Fuel Chemistry Division of the American Chemical Society and Chair of the 10th International Conference on CO_2 Utilization. He has successfully organized more than 10 ACS symposia in USA. He initiated Green Chemistry for Fuels symposium series in ACS Fuel Chemistry Division. He initiated and organized the international symposium on plasmas for catalysts and energy materials. He was a guest editor for the *ACS Symposium Series*, *Catalysis Today*, *Green Chemistry and ChemCatChem*, and advisory board member of *Energy & Environmental Science*. He is now an advisory board member for *Greenhouse Gases: Science & Technology* and CO_2 forum. He is an editorial board member for *Applied Catalysis B*, *Journal of CO_2 Utilization* and *Chinese Journal of Catalysis*. He became a Fellow of the Royal Society of Chemistry in 2011.



Xin Tu

• University of Liverpool, UK

Xin Tu is a Professor and Chair of Plasma Catalysis in the Department of Electrical Engineering and Electronics at the University of Liverpool. His research primarily focuses on plasma chemistry and plasma catalysis for the sustainable production of fuels and chemicals, including CO_2 conversion, CH_4 activation, hydrogen production, nitrogen fixation, as well as biomass and plastic conversion. He has published over 250 peer-reviewed papers in leading international journals, including *Nat. Rev. Mater., Nat. Rev. Clean Technol., Chem, Nat. Commun., J. Am. Chem. Soc. and Angew. Chem. Int. Ed.*. He has delivered more than 120 invited talks at major national and international conferences and has chaired and co-chaired seven international conferences and workshops. Prof. Tu has received several prestigious awards, including the 2024 William Crookes Prize (European Physical Society). He served as the lead editor of the book "Plasma Catalysis: Fundamentals and Applications" (Springer Nature, 2019) and co-led the 2020 Plasma Catalysis Roadmap (J. Phys. D: Appl. Phys.). Additionally, he is an active member of international scientific committees and advisory boards for over ten international conferences.



Annemie Bogaerts

• University of Antwerp, Belgium

Annemie Bogaerts obtained her M.Sc. and PhD (both in Chemistry) at the University of Antwerp (Belgium), in 1993 and 1996, and has been a professor since 2003, and a full professor since 2012. She is the head of the research group PLASMANT, which she started "from scratch".

Her research focuses on plasma chemistry, plasma sources/reactors and plasma-surface interactions (including liquid surfaces and biomolecules), both by modeling and experiments, with special focus on plasma-based gas conversion and plasma medicine (cancer treatment). In the field of plasma medicine, she closely collaborates with the Center for Oncological Research at the University of Antwerp, for in vitro (2D and 3D cell cultures), in ovo and in vivo cancer treatment studies, also in combination with immunotherapy. In addition, her group performs computer modeling, including both molecular dynamics simulations for molecular-level interactions of plasma species with biomolecules, fluid dynamics and chemical kinetics modeling for plasma jets interacting with liquids.

She serves on the international scientific committee of several plasma conferences, a member of the Board of Directors of the International Plasma Chemistry Society, and Vice-President from 2020. She obtained the Plasma Medicine Award at the ICPM conference (June 2022), and she was selected as one of the 30 "Europe's Best Chemistry Professors" in May 2022. She is a member of the Editorial Board of 8 journals, including *Plasma Proc. Polym., Plasma Chem. Plasma Process., J. Phys. Chem. A/B/C,* and *J. Appl. Phys*. Overall, her work is very highly cited, with above 48,000 citations since 1997.

06 Symposium Poster List

No.	Author	Affiliation	Topic
P-001	Jinglin He	Sichuan University	Energy-Efficient Hydrogen Production via Plasma-Catalytic Co-activation of CH_4 and CO_2 over Conductive Carbon Tube-Supported Ni@NiO_x
P-002	Sijie Li	Guangdong Technion-Israel Institute of Technology	Tailoring Zeolite Acidity and Plasma Activation for Polyolefin Upcycling into Jet-Fuel-Range Hydrocarbons
P-003	Shijie Xian	Institute of Wenzhou, Zhejiang University	Improving Plasma-Catalytic Ammonia Synthesis Using a Coaxial Double-Helix-Electrode Reactor
P-004	Lu Wang	China University of Petroleum, Beijing	Utilization of Plasma Reaction and Separation Coupling Technology in Selective Oxidation of Methane
P-005	Jin Liu	Guangdong Technion-Israel Institute of Technology	Plasma-Enhanced Catalytic Depolymerization of Waste Plastics for Value-Added Chemicals
P-006	Yao Zhang	Weifang University of Science and Technology	On Understanding the Effect of Metal-Support Interactions on Plasma-Catalytic CO_2 Hydrogenation over the Ru/ZrO_2 Catalysts
P-007	Chenyu Lu	Xiamen University	Electron-Rich PdO Nanoclusters on γ-Al_2O_3 for Plasma-Catalytic Non-Oxidative Coupling of Methane to Ethane with High Selectivity
P-008	Xuan Wu	East China University of Science and Technology	Cu_2O/CeO_{2-x} Heterojunctions Supported on Hierarchical Porous Carbon for Plasma-Assisted CO_2 Capture and In-Situ Conversion
P-009	Shuo Cao	Sinopec Research Institute of Petroleum Processing Co., Ltd.	Performance Study of Molybdenum Carbide Nanoparticles for Catalytic Reduction of CO_2
P-010	Feiyang Zhang	China University of Petroleum, Beijing	Non-Thermal Plasma to Boost Lattice Oxygen Activation in $Ce_{1-x}Co_xO_{2-\delta}$ Catalysts for Efficient Soot Combustion at Low Temperatures
P-011	Ziyu Fan	Tianjin University	Effect of Oxide-Coated Quartz Surface Microstructure on Capacitance and Discharge Behavior in Ar Dielectric Barrier Discharge
P-012	Jiayi Wang	Dalian University of Technology	Low-Temperature Formation and Ablation Behavior of a DCB-Bonded HfC-HfB_2 After Plasma Treatment Organic/Inorganic Hybrid Ultra-High-Temperature Ceramic
P-013	Guanting Zhou	Zhejiang University	Modeling-Guided Design of DBD-DRIFTS Reaction Cells for Plasma Discharge Evaluation and Optimization
P-014	Jingze Cai	Tianjin University	Intrinsic Dielectric Barrier Discharge Enhanced by CeO_2 Coating on Frosted Quartz Dielectric
P-015	Qian Zhang	Xidian University	Study on the Influence of Thermochemical Ablation of C/C Materials on Plasma Flow Field Parameters of Hypersonic Vehicles
P-016	Chengren Zhao	Xi'an Institute of Space Radio Technology	Research on an Active Spacecraft Potential Control System Based on Pulsed Plasma Technology
P-017	Tian Xie	Xidian University	Analysis of Microstructural Evolution and Damage Mechanisms of Silicon-based Composites in High-speed Flows
P-018	Shengwei Wang	Shihezi University	Synthesis of Co Cu_2O via Underwater Spark Discharge and Its Nitrate Reduction over a Wide Temperature Range
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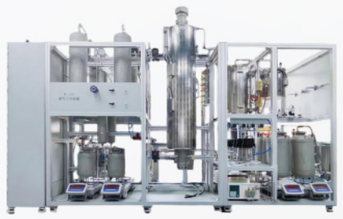
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