



WRE 2025



上海交通大学
SHANGHAI JIAO TONG UNIVERSITY



环境科学与工程学院
SCHOOL OF ENVIRONMENTAL SCIENCE AND ENGINEERING

The 11th International Conference on Water Resource and Environment Conference Program

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December 5–8, 2025 Shanghai, China





WRE 2025

December 5-8, 2025 Shanghai, China



Host



上海交通大学

SHANGHAI JIAO TONG UNIVERSITY



环境科学与工程学院

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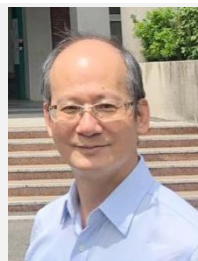
CONFERENCE COMMITTEE

Chairs



General Chair

**Distinguished Prof.
Zhimin Qiang**
Shanghai Jiao Tong University



General Chair

**Emeritus Prof.
Chih-Huang Weng**
I-Shou University

Local Organizing Committee



Chair

**Distinguished Prof.
Zhimin Qiang**
Shanghai Jiao Tong University



Secretary

Assist. Prof. Wentao Li
Shanghai Jiao Tong University

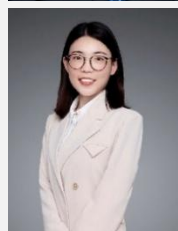
Members



Prof. Wendong Wei
Shanghai Jiao Tong University



Prof. Xiaoyun Xu
Shanghai Jiao Tong University



Assoc. Prof. Yancai Yao
Shanghai Jiao Tong University



Assist. Prof. Yu Lei
Shanghai Jiao Tong University



Prof. Chao Liu
Research Center for Eco-
Environmental Sciences,
Chinese Academy of Sciences



Prof. Mengkai Li
Research Center for Eco-
Environmental Sciences,
Chinese Academy of Sciences

International Technical Program Committee

Prof. AbdAllah Tharwat Abdelkhalik, Jazan University, Saudi Arabia
Dr. Abdelkader Hamlat, University of Laghouat, Algeria
Dr. Ackmez Mudhoo, University of Mauritius, Mauritius
Dr. Anoop Kumar Shukla, Manipal Academy of Higher Education, India
Prof. Azza Moustafa Abdelaty, National Research Center, Egypt
Dr. Chunjiang An, Concordia University, Canada
Prof. Fei Qi, Beijing Forestry University, China
Prof. Foo Keng Yuen, Universiti Sains Malaysia, Malaysia
Prof. George N. Zaimes, Democritus University of Thrace, Greece
Dr. Habib Bouzid, University of Mostaganem, Algeria
Dr. Hao Han, Institute of Earth Environment, Chinese Academy of Sciences, China
Assoc. Prof. Ignacy Kitowski, University College of Applied Sciences in Chelm, Poland
Prof. Leehyung Kim, Kongju National University, South Korea
Prof. Meng-Wei Wan, Chia-Nan University of Pharmacy and Science
Dr. Pedro Antonio Guido Aldana, Mexican Institute of Water Technology, Mexico
Prof. Peiyue Li, Chang'an University, China
Assoc. Prof. Porowska Dorota, University of Warsaw, Poland
Prof. Qingfeng Chen, Shandong Normal University, China
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Prof. Teik-Thye Lim, Nanyang Technological University (NTU), Singapore
Assoc. Prof. Wong Lai Peng, Universiti Tunku Abdul Rahman, Malaysia
Assoc. Prof. Xinxin Guo, Universiti Tunku Abdul Rahman, Malaysia
Prof. Yuk Feng Huang, Universiti Tunku Abdul Rahman, Malaysia

(The Technical Program Committee list above is in alphabetical order.)

CONFERENCE PROGRAM OVERVIEW

WRE 2025 PROGRAM OVERVIEW December 5-8, 2025 Shanghai, China

Time	Dec. 5	Dec. 6		Dec. 7			Dec. 8
	Friday	Saturday		Sunday			Monday
08:30-09:00	/	Registration @ SESE, SJTU		S5 @ E200		S6 @ E231	/
09:00-12:20		Plenary Session @ E100		Session 5: Low-Carbon Wastewater Treatment and Resource Recovery		Session 6: Keynote & Invited Talks Session	Technical Visit
		Opening Ceremony					
		Plenary Speech 1: Prof. Tinglin Huang					
		Poster Session & Coffee Break					
		Plenary Speech 2: Prof. Mohamed Gamal El-Din					
		Plenary Speech 3: Prof. Hyunook Kim					
Plenary Speech 4: Prof. Zhimin Qiang							
12:20-13:20		Lunch Break @ School Canteens					
13:20-18:10	Registration 14:00-19:00 @ Platinum Han Jue Hotel	S1 @ E200	S3 @ E231	P1 @ E200	P2 @ E208	P3 @ E231	
		Session 1: Water Resources and Hydrology	Session 3: Water Circulation through Nature- based Solutions	Postgraduate Forum (1)	Postgraduate Forum (2)	Postgraduate Forum (3)	
		S2 @ E200	S4 @ E231	Plenary Session @ E100			
		Session 2: Aquatic Ecosystems and Restoration	Session 4: Drinking Water Safety	Plenary Speech 5: Prof. Zuxin Xu			
				Plenary Speech 6: Prof. Cheng-Di Dong			
				Closing Ceremony			
18:10-20:30	Welcome Banquet		/				

ABOUT SESE, SJTU

School of Environmental Science and Engineering, Shanghai Jiao Tong University (SESE, SJTU)

Address: No. 800 Dongchuan Road, Shanghai, China

Website: <https://sese.sjtu.edu.cn/>



Tracing back to the municipal engineering program established in 1928, the discipline of Environmental Science and Engineering (ESE) at Shanghai Jiao Tong University (SJTU) has so far cultivated numerous brilliant alumni, including Gu Kangle, Zhou Wende, Gu Xiasheng, Hu Jiajun, and Xu Xiaobai. In September 1999, a school was officially established for this branch, namely the School of Environmental Science and Engineering (SESE). The first three years of the 21st century have witnessed significant progress achieved by SESE as it was approved to establish the environmental engineering doctorate program in 2001, the environmental engineering master's program in 2002, and the first-level discipline doctoral program of ESE in 2003. After two decades of rapid growth on the basis of other disciplines of SJTU like engineering, management, and medicine, SESE has developed its own superiority in the nationwide field of environmental science, and is now one of the most influential institutions of education and scientific research in the worldwide field of environmental science and engineering.

At present, SESE has not only built up an excellent faculty team and has been nurturing numerous students to be talents skilled at environmental science research and engineering, but also has formed 8 characteristic research areas, namely water pollution control and reclamation, air pollution control and regional air quality modeling, solid waste treatment and resource recovery, soil and ground-water contamination reclamation, environmental functional materials, resource and environmental management and climate change mitigation, clean and renewable energy, and bio-toxicology and environmental health. In 2019, SESE published 212 SCI papers in many leading journals, including Science, Nature, Environmental Science & Technology, Journal of Hazardous Materials, Water Research, Applied Energy, etc. Moreover, SESE provides powerful support in terms of intelligence and talent for prominent national strategies and local environmental protection, as many pieces of its advice have been adopted by the government.

Campus Map



School Building of SESE, SJTU

Scan the QR code to explore SJTU campus online.



FEATURED SPEAKERS

Plenary Speakers

Prof. Zuxin Xu

Academician of the Chinese Academy of Engineering; Tongji University



Prof. Zuxin Xu has been dedicated to the comprehensive management of urban river pollution for an extended period, conducting research that reveals the causes and major issues of urban river pollution in China. By leveraging the interdisciplinary advantages of environmental science, hydraulics, and municipal engineering, she has innovated a systematic, coordinated, and coupled governance technology system. She developed a coupled pollution control technology for urban drainage and river networks, established a collaborative regulation method for ecological flow and environmental capacity, and pioneered key technologies

for storm overflow management in urban drainage systems and ecological treatment of rural sewage. Her work played a significant role in the remediation of the Suzhou Creek in Shanghai. She has served as the Deputy Chief Engineer of the National Major Science and Technology Project for Water Pollution Control and Management and as a consulting expert for the United Nations Zimbabwe Water Project, making outstanding contributions to the management of urban river pollution in China. Prof. Zuxin Xu has been awarded two National Science and Technology Progress Second Prizes, three First Prizes, and four Second Prizes at the provincial and ministerial levels. She has published four academic monographs, was invited to co-author a special technical report for the United Nations Human Settlements Programme, and has been granted 23 invention patents. Additionally, she has published over 100 papers as the first or corresponding author. In 2019, she was elected as a member of the Chinese Academy of Engineering.

Speech Title: Risk Analysis and Control of Urban Drainage Water Quality During the Rainy Season

Prof. Tinglin Huang

Xi'an University of Architecture and Technology



Dr. Tinglin Huang is a Distinguished Professor at the School of Environmental and Municipal Engineering, Xi'an University of Architecture and Technology, and former Vice President of the university. His research focuses on source water pollution and eutrophication control, water treatment technologies, water environment remediation, and optimization of water engineering systems. A National Model Teacher and recipient of the State Council's Special Government Allowance, he was named to the National "New Century Hundred, Thousand, and Ten Thousand Talents Project" in 2007. He served as a member of the Seventh and Eighth Academic Degree Evaluation Committees of the State

Council and as Deputy Director of the Ministry of Education's Teaching Steering Sub-Committee for Water Supply and Drainage Science and Engineering. Prof. Huang leads the National Key Discipline of Environmental Engineering and directs the Shaanxi Provincial Collaborative Innovation Center for

Water Pollution Control and Water Quality Security. He chairs the Water Supply and Drainage Committee of the Shaanxi Provincial Civil Engineering Society and holds leadership roles in professional bodies including the Chinese Society for Environmental Sciences and the International Water Association (IWA). He has led over 30 national-level projects—including key programs under the National Key R&D Program and NSFC grants—published more than 600 papers, edited six textbooks, and authored seven monographs. With an h-index of 59 and over 13,500 Google Scholar citations, his work has significantly advanced the field of environmental and municipal engineering.

Speech Title: Water-Lifting and Aeration Induced Water Quality Improvement Technology and Application in Source Water Reservoirs

Prof. Mohamed Gamal El-Din

University of Alberta; Research Chair in Environmental Engineering, Tongji University



Dr. Mohamed Gamal El-Din is a Professor in the Department of Civil and Environmental Engineering at the University of Alberta. His research focuses on innovative treatment approaches for municipal and industrial wastewater, including oil and gas. Since 2011, he has held an NSERC Senior Industrial Research Chair in Oil Sands Tailings Water Treatment and is also a Theme Lead for the Future Energy Systems (FES) theme on Resilient Reclaimed Land and Water Systems. In 2017, Dr. Gamal El-Din was awarded the Alberta Science and Technology Leadership (ASTech) Foundation Award for Innovation in Oil Sands Research. He is a Jinshan Distinguished Professor at Jiangsu University and was awarded the Research Chair in Environmental Engineering at Tongji University in China in 2020. In 2023, he was appointed the Canada Research Chair (Tier 1) in Sustainable and Resilient Wastewater Treatment for Reuse. That same year, he was also named the University of Alberta Engineering Research Chair in Community-Based Wastewater Management, with a focus on advancing the circular economy. Since May 2023, Dr. Gamal El-Din has served as Director of the Water Research Centre (WRC), and he currently holds the Senior University of Alberta Engineering Research (UAER) Chair in Wastewater Management. In 2024, Dr. Gamal El-Din was awarded the Albert E. Berry Medal by the Canadian Society for Civil Engineering (CSCE) for outstanding contributions to the field of environmental engineering in Canada and the Killam Award for Excellence in Mentoring. Dr. Gamal El-Din's commitment to education and research is unparalleled. Over the course of two decades, he has supervised a diverse group of 210 graduate students, research assistants, postdoctoral fellows, and research associates. Under his mentorship, these individuals have grown into accomplished professionals who are making significant contributions to their respective fields. Dr. Gamal El-Din is also a prolific researcher, with an extensive body of work that includes 360 peer-reviewed journal papers and 450 conference and workshop presentations, among other publications. His contributions to the field have been widely recognized, as evidenced by his impressive h-index of 75, and over 20,000 citations as per Google Scholar.

Speech Title: Application of Surface Microlenses in Solar-Driven Photolysis and Photocatalytic Degradation of Micropollutants

Abstract: The removal of emerging micropollutants via solar-driven photodegradation processes represents an environmentally sustainable approach for water and wastewater treatment. However, its efficiency is often limited by the low intensity and low photon energy of solar irradiation in aquatic environments. To overcome these limitations, Microlenses (MLs) technology is being proposed as a

promising strategy to improve photocatalyst performance by optimizing solar light distribution and increasing light intensity within photochemical reactors. In this study, surface MLs were fabricated on photoreactors of various geometries using a solvent exchange process (SEP)-assisted method to enhance photodegradation efficiency. Two types of MLs systems were investigated: polymer MLs and photocatalytic-functionalized MLs systems. Polymer MLs, including random MLs, ML arrays, and flexible concave MLs, demonstrated enhanced performance in various water matrices, attributed to their light-focusing and redistribution capabilities. Moreover, immobilized photocatalytic-functionalized MLs, Ag/ZnO nanorods, were successfully fabricated on the photoreactor, exhibiting robust photocatalytic activity, good stability, and operational reusability. These features position them as promising candidates for wastewater treatment, by effectively addressing the practical limitations associated with suspended photocatalysts. These MLs-based materials demonstrated efficient photodegradation of organic micropollutants (dyes, pharmaceuticals, and pesticides) and industrial contaminants, including naphthenic acids derived from the oil and gas industry, using a sustainable solar-driven approach with a low-energy, low-carbon, and high-efficiency strategy for water treatment.

Prof. Hyunook Kim

University of Seoul



Dr. Hyunook Kim is Professor at Environmental Engineering, University of Seoul, Korea, and Director of R&D Center of Core Technologies for Water Treatment. Professor Kim earned his B.S. degree in Environmental Science from Yonsei University, Korea in 1994, and an M.S. degree in Environmental Engineering from Johns Hopkins University in 1997, and a Ph.D. from University of Maryland at College Park in 2000. Before he joined the faculty member at University of Seoul in 2002, he worked as Environmental Engineer

for US Dept. of Agriculture, MD, USA. Professor Kim's research in the area of water pollution control includes a number of projects on process control and operation of water and wastewater treatment plants. In particular, he is interested in the monitoring and control of contaminants of emerging concern. He has published numerous journal papers and made conference presentations. He has received several awards for his academic and research achievements.

Speech Title: Microplastics Are Detected in Every Water Resource: Analytical Challenge in Their Detection and Management

Abstract: Microplastics (MPs), defined as plastic particles smaller than 5 mm, have now been detected in virtually every aquatic environment; they are detected from surface water and groundwater to drinking water, raw and treated wastewater, and storm water. Their ubiquity poses urgent challenges for both accurate quantification and effective management. Despite increasing global concern, methodological inconsistencies remain a major barrier to reliable monitoring and risk assessment. Current analytical approaches for MP detection/quantification which generally involve sample pretreatment consisting of density separation, filtration, and analytical quantification based on either spectroscopy (e.g., (-Fourier-transform infrared spectroscopy ((-FTIR), (-Raman spectroscopy), or gas-chromatography coupled to mass spectrometry (GC/MS), vary widely in recovery efficiency, size detection limits, and polymer identification accuracy. These variations hinder comparability across studies reported by different researchers. Establishing standardized analytical methods and data-driven management strategies is essential to protect water resources from the emerging threat of MP pollution. In this presentation, we discuss advances in MP detection, including automated imaging based on (-FTIR and (-Raman, and pyrolysis-GC/MS alongside ISO/TC 147 and TC 61 initiatives toward

harmonized measurement methods. A few management strategies for MPs in water resources have been being reported: for examples, source control, improved wastewater treatment, sludge management, and public-policy interventions to reduce primary and secondary MP emissions. Due to the complexity and costs associated with MP quantification, only limited amounts of data are produced. Namely, we need an analytical method which is more routine-analysis friendly; for better evaluation of a management approach, a simple, uncostly, and rapid analytical method is required. This presentation introduces a total-organic-carbon based method to rapidly and effectively analyze MPs in water resources.

Prof. Cheng-Di Dong

*International Honorary Member of American Academy of Environmental Engineering and Science;
Kaohsiung University of Science and Technology*



Prof. Cheng-Di Dong is a Chair Professor in the Department of Marine Environmental Engineering, Kaohsiung University of Science and Technology. Dr. Dong obtained his Ph.D. in Environmental Engineering from the University of Delaware, USA in 1993 and M.S. in Environmental Science from New Jersey Institute of Technology, USA in 1990. Dr. Dong is Dean of the College of Hydrosphere of Kaohsiung University of Science and Technology. Dr. Dong's research focuses on waste-to-resources, biotechnology, nanotechnology, novel catalytic materials and biochar for environmental applications. Dr. Dong has published more than 500 research and review articles in leading international journals, 7 book chapters, and edited 6 special issues of scientific journals. His h-index is approximately 66, with more than 17,000 citations according to Google Scholar. He has won several scientific awards and grants from renowned academic bodies. Dr. Dong was in the "World's Top 2% Scientist-Stanford University Releases List (2020, 2021, 2022, 2023)" for Environmental Sciences. He is a Fellow of International Bioprocessing Association. Dr. Dong currently serves as Editor of Sustainable Environment Research, and he is Editorial Board Member of Bioresource Technology. He has also served as Guest Editor of Special Issues in Bioresource Technology, Environmental Pollution, Bioresource Technology Report, Catalysts, and Applied Sciences.

Speech Title: Urban Port Sediments as Indicators of Aquatic Pollution and Ecological Risk

Abstract: Over 80% of global cargo is transported by sea, making port development vital to international trade and economic growth. However, semi-enclosed harbor environments are vulnerable to contamination from port activities and land-based inputs. Pollutants such as metals, polycyclic aromatic hydrocarbons (PAHs), phthalate esters (PAEs), and alkylphenols (APs) tend to accumulate in sediments, posing ecological risks. This study analyzed the distribution, composition, sources, and ecological risks of metals, PAHs, PAEs, and APs in sediments from seven major commercial ports in Keelung, Taichung, and Kaohsiung City. Results indicated that different assessment models yielded varying pollution and risk levels. Source apportionment (MLR-APCS) revealed that Cr was influenced by both anthropogenic and geological factors, Mn, Ni, and Co were mainly geogenic, while Cu, Hg, Zn, Cd, and Pb were primarily anthropogenic. PAE concentrations ranged from 129 to 1894 ng/g dw (DEHP 55.1%), APs from <0.2 to 913 ng/g (4-NP 93.2%), with DnBP, DnOP, and 4-NP being key contributors to ecological risk. Total PAH concentrations (8.4–572.5 ng/g) originated mainly from coal combustion (31.5%), vehicular and fossil fuel emissions (23.5%), and biomass burning (45.0%). Based on TEQ-derived indices, outer-port sediments showed low to moderate risk, while inner-port sediments exhibited

moderate to high risk. Urban port sediments provide an effective medium for assessing aquatic pollution, reflecting both anthropogenic impacts and potential ecological risks. As sediments serve as both habitats and contaminant sinks, accurate sediment quality evaluation is essential for informed management and sustainable environmental development.

Prof. Zhimin Qiang

Shanghai Jiao Tong University



Dr. Zhimin Qiang is a distinguished professor at the School of Environmental Science & Engineering, Shanghai Jiao Tong University. He was a recipient of the National Science Fund for Distinguished Young Scholars, and had served as the director of Drinking Water Science and Technology of Chinese Academy of Sciences, and the director of State Key Laboratory of Environmental Aquatic Chemistry of China. His research covers advanced treatment, green disinfection, and safe distribution of water and wastewater. Prof. Qiang has led over 40 research projects, published about 250 SCI papers (H index = 62) and 120 Chinese papers,

and been recognized as a Highly Cited Researcher by Elsevier in China. He holds 20 innovation patents and has received 8 national/provincial honors and awards.

Speech Title: Unraveling the Radical Chemistry of Nitrophenols and Biomass-Burning Brown Carbon in Waters

Abstract: More frequent global wildfire events intensify the exposure risks of nitrophenols through brown carbon (BrC) emissions. Radical reactions dominate the fates of nitrophenols in surface, municipal, and atmospheric waters, yet the involved reaction kinetics and mechanisms remain poorly understood. In this work, by combining transient and steady-state multispectral analyses, the second-order rate constants (k) for nitrophenols and biomass-burning BrC reacting with $\text{HO}^\bullet$ as well as common secondary radicals (e.g., $\text{Cl}_2^{\bullet-}$, $\text{CO}_3^{\bullet-}$ and $\text{NO}_3^\bullet$) were determined ($k \sim 10^5\text{--}10^{10} \text{ M}^{-1} \text{ s}^{-1}$ at pH 2.0~10.0 for both protonated and deprotonated nitrophenols), most of which are reported for the first time. We also experimentally demonstrated that the reactions of nitrophenols and BrC with various radicals could produce a substantial amount of HONO/NO_2^- (a key precursor of tropospheric $\text{HO}^\bullet$), with molar yields reaching ~50%. Mechanistic investigations revealed that phenoxy radical ($\text{PhO}^\bullet$), generated either from either single electron transfer or addition-elimination reactions during the radical reactions of nitrophenols, acted as a universal intermediate for the de-nitration. Hence, the new kinetic and mechanistic insights suggest that radical-induced de-nitration process of BrC and nitrophenols in acidic waters may serve as a previously overlooked HONO source, but such de-nitration does not guarantee detoxification due to the simultaneous generation of high-risk biphenols. This work highlights the critical role of secondary radicals in nitrophenols and BrC transformation across different waters, shedding light on several unforeseen chemical impacts driven by intensified global wildfires.

Keynote Speakers



Prof. Lee-Hyung Kim
Kongju National
University



Prof. Ming-Chun Lu
Chung Hsing University



Prof. Yao-Tung Lin
Chung Hsing University



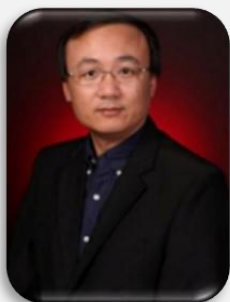
Prof. Qiuwen Chen
Nanjing Hydraulic
Research Institute



Prof. Xiaohong Guan
East China Normal
University



Prof. Yayi Wang
Tongji University



Prof. Chuanyu Qin
Jilin University



Prof. Hua Zhong
Eastern Institute of
Technology



Prof. Chao Liu
Chinese Academy of
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Prof. Deyin Hou
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**Prof. Yaohui Bai**

Research Center for Eco-
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Chinese Academy of
Sciences

**Prof. Mengkai Li**

Research Center for Eco-
Environmental Sciences,
Chinese Academy of
Sciences

**Prof. Dawei Wang**

Hohai University

**Prof. Yiliang He**

Shanghai Jiao Tong
University

**Prof. Xinze Wang**

Shanghai Jiao Tong
University

**Prof. Wendong Wei**

Shanghai Jiao Tong
University

**Prof. Xiaoyun Xu**

Shanghai Jiao Tong
University

**Prof. Yancai Yao**

Shanghai Jiao Tong
University

Invited Speakers



Prof. Nay Htun

Stony Brook University,
State University of New
York



Prof. Chart Chiemchaisri

Kasetsart University



Prof. Yoshihiro Hamaguchi

Hannan University



Prof. Ching-Lung Chen

Ming Chi University of
Technology



Prof. Zhikang Wang

Guizhou Minzu University



Prof. Yen-Ping Peng

Sun Yat-sen University



Prof. Wei-Fan Kuan

Chang Gung University



Prof. Jenn-Fang Su

Chang Gung University



Prof. Yingying Xu

Jilin Jianzhu University



Prof. Yeit Haan Teow

Universiti Kebangsaan
Malaysia

PLENARY SESSION

Saturday, December 6, 2025	
Venue	E100, 1 st Floor
Opening Ceremony	
Chair: Prof. Hao Zheng, Party Secretary of SESE, SJTU	
09:00-09:15	Opening Speeches <i>Prof. Xiaoqin Zeng, Vice President, Shanghai Jiao Tong University</i> <i>Prof. Chih-Huang Weng, I-Shou University</i>
09:15-09:30	Group Photo
Plenary Speeches	
Chairs: Prof. Zhimin Qiang & Prof. Chih-Huang Weng	
09:30-10:00	Plenary Speech 1: Water-Lifting and Aeration Induced Water Quality Improvement Technology and Application in Source Water Reservoirs <i>Prof. Tinglin Huang, Xi'an University of Architecture and Technology</i>
10:00-10:30	Plenary Speech 2: Application of Surface Microlenses in Solar-Driven Photolysis and Photocatalytic Degradation of Micropollutants <i>Prof. Mohamed Gamal El-Din, University of Alberta; Research Chair in Environmental Engineering, Tongji University</i>
10:30-11:00	Poster Session & Coffee Break
11:00-11:30	Plenary Speech 3: Microplastics Are Detected in Every Water Resource: Analytical Challenge in Their Detection and Management <i>Prof. Hyunook Kim, University of Seoul</i>
11:30-12:00	Plenary Speech 4: Unraveling the Radical Chemistry of Nitrophenols and Biomass-Burning Brown Carbon in Waters <i>Prof. Zhimin Qiang, Shanghai Jiao Tong University</i>

Sunday, December 7, 2025

Venue

E100, 1st Floor

Plenary Speeches

Chair: Prof. Yong Geng, Dean of SESE, SJTU

16:20-16:50

Plenary Speech 5: Risk Analysis and Control of Urban Drainage Water Quality during the Rainy Season

Prof. Zuxin Xu, Academician of Chinese Academy of Engineering; Tongji University

16:50-17:20

Plenary Speech 6: Urban Port Sediments as Indicators of Aquatic Pollution and Ecological Risk

Prof. Cheng-Di Dong, International Honorary Member of American Academy of Environmental Engineering and Science; Kaohsiung University of Science and Technology

Awarding & Closing Ceremony

Chairs: Prof. Zhimin Qiang & Prof. Chih-Huang Weng

17:20-17:40

Awarding Ceremony

17:40-18:00

Closing Remarks



PARALLEL ORAL SESSIONS

Saturday, December 6, 2025 Venue: E200, 2 nd Floor	
Session 1	Water Resources and Hydrology
Chairs: Prof. Qiuwen Chen AND Prof. Dawei Wang	
13:30-13:50	Keynote Speech: Urban Flood Modeling and Evacuation Route Optimization <i>Qiuwen Chen, Nanjing Hydraulic Research Institute</i>
13:50-14:10	Keynote Speech: DOM Transformation Driven by Water Mixing in South-to-North Water Diversion Project <i>Dawei Wang, Hohai University</i>
14:10-14:30	Invited Speech: Water Is Life – Integrated and Holistic Response Imperative <i>Nay Htun, Stony Brook University, State University of New York</i>
14:30-14:45	Current Situation, Pressure and Mitigation Paths of Agricultural Water and Land Resources Utilization in Jiangxi, Eastern China <i>Shuai Fu, Jiangxi University of Finance and Economics</i>
14:45-15:00	Is the Climate Change Reflected by the Breakpoints of the Meteorological Time Series? <i>Alina Bărbulescu, Transilvania University of Braşov</i>
15:00-15:15	Long-Term Hydrological Drought Modeling of Lake Nuntaşi-Tuzla <i>Carmen Elena Maftai, Transilvania University of Braşov</i>
15:15-15:30	Evaluation of Both a Conventional and Venturi Incorporated Air Systems for A Rainfall Simulator <i>Eli Daniel Beltran Ccanto, National University of Engineering</i>
15:30-15:45	Coffee Break
Session 2	Aquatic Ecosystems and Restoration
Chairs: Prof. Xinze Wang AND Prof. Yaohui Bai	
15:45-16:05	Keynote Speech: Erhai Lake Overview and Preliminary Analysis of Organic Matter <i>Xinze Wang, Shanghai Jiao Tong University</i>
16:05-16:25	Keynote Speech: EcoImprove: Revealing Aquatic Ecological Effects of Micropollutant Discharge from Municipal Wastewater Treatment Plants <i>Yaohui Bai, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>
16:25-16:40	Detection of Microplastics in Milkfish Harvested from Freshwater Farms in Laguna de Bay, Philippines: A Plausible Study and Its Solution <i>Araceli M. Monsada, Industrial Technology Development Institute</i>
16:40-16:55	Internal Wave-Driven Variability of Dissolved Oxygen in a Large Dimictic Lake <i>Lidi Shi, University of Toronto</i>
16:55-17:10	From Erosion to Conservation: The Essential Role of Forests in Soil and Water Management <i>Ziqing Zhao, Research Institute of Subtropical Forestry, Chinese Academy of Forestry</i>
17:10-17:25	Habitat Connectivity Modeling for Urban Conservation Planning: A Case Study of Pileated Woodpecker (<i>Dryocopus Pileatus</i>) in Hamilton County, Ohio, USA <i>Ruijia Hu, University of Cincinnati</i>
17:25-17:40	Copper Determination from Calancan Bay Seawater: A Method Optimization and Ruggedness Analysis <i>Kathlia D. Cruz, Mapua University</i>

Saturday, December 6, 2025 Venue: E231, 2 nd Floor	
Session 3	Water Circulation through Nature-based Solutions
Chairs: Prof. Tinglin Huang AND Prof. Leehyung Kim	
13:30-13:50	Keynote Speech: Impact of Emerging Pollutants on Aquatic Ecosystem Health and Management Strategies <i>Leehyung Kim, Kongju National University</i>
13:50-14:10	Invited Speech: Effect of Influent Conditions on Biomass Production and Associated Microbial Communities in Duckweed Wastewater Treatment System <i>Chart Chiemchaisri, Kasetsart University</i>
14:10-14:25	Use of Rice in Floating Treatment Wetland for Water Purification and Crop Production <i>Yaoping Chen, Anhui University of Science and Technology</i>
14:25-14:40	A Geospatial Modelling Framework to Assess Nature-Based Solutions for Flood Mitigation <i>Izni Zahidi, Monash University</i>
14:40-14:55	Nature-Based Solutions for River Restoration in Urban City – The Example of Haikou Yawei Brook <i>Xintong Jiang, Ministry of Water Resources, China Water Pearl River Planning, Surveying & Designing Co., Ltd</i>
14:55-15:10	Effect of Land Use on Surface Runoff and Soil Loss <i>Benzhi Zhou, Research Institute of Subtropical Forestry, Chinese Academy of Forestry</i>
15:10-15:25	Solar-Driven Ecological Water Cycling for Saline Soil Remediation <i>Pan Wu, Hubei University of Technology</i>
15:25-15:40	Coffee Break
Session 4	Drinking Water Safety
Chairs: Prof. Xiaohong Guan AND Prof. Chao Liu	
15:40-16:00	Keynote Speech: From Probing to Application: Novel Analytical Methods for Ferrate (IV) Chemistry and Their Exploration in Environmental Detection <i>Xiaohong Guan, East China Normal University</i>
16:00-16:20	Keynote Speech: CuO Catalysis in Oxidative Water Treatment: The Good, the Bad, and the Ugly <i>Chao Liu, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>
16:20-16:40	Invited Speech: The Role of Extracellular Polymeric Substances on the Formation and Decay of Disinfection By-Products: The Impact of Disinfection Methods and Divalent Ions <i>Zhikang Wang, Guizhou Minzu University</i>
16:40-16:55	Mitigating Biofouling in Seawater Reverse Osmosis Systems: A Case Study on the Application of KURIVERTER™ IK-110 with Tide-Responsive Dosing Strategies <i>Yinghong Lu, Kurita R&D Asia Pte. Ltd</i>
16:55-17:10	A Hazard Characterization of La₂O₃ Nanoparticles: Inverted Dose-Response Neurotoxicity from Low-Dose Redox Dysregulation to High-Dose Excitotoxicity <i>Nouf Mahdi Alyami, King Saud University</i>
17:10-17:25	Innovative Electrode Design and Interface Modulation in Electrochemical Reduction-In Situ Precipitation for Cr(VI) Removal <i>Xiong Yang, Hubei University of Technology</i>
17:25-17:40	Research on Early Warning and Emergency Response for the Langshan Drinking Water Source in the Yangtze River <i>Liujun Yang, Bureau of Hydrology and Water Resources Survey of Jiangsu Province (Nantong)</i>

Sunday, December 7, 2025 Venue: E200, 2nd Floor

Session 5 Low-Carbon Wastewater Treatment and Resource Recovery

Chairs: Prof. Yayi Wang AND Prof. Deyin Hou

08:30-08:50	Keynote Speech: Emerging Trends in Advanced Nitrogen Removal from Municipal Wastewater and Microbial Mechanisms <i>Rui Du, Beijing University of Technology</i>
08:50-09:10	Keynote Speech: Membrane Distillation: Membrane Materials, Module Design and Applications in High-Salinity Wastewater Treatment <i>Deyin Hou, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>
09:10-09:30	Invited Speech: Perm-Selective Membranes and Engineered Electrocatalysts for Nitrate Reduction in Wastewater Treatment <i>Jenn-Fang Su, Chang Gung University</i>
09:30-09:50	Invited Speech: Z-Scheme g-C₃N₄/TiO₂ Nanotube Array Heterojunction for Enhanced Photoelectrochemical Degradation of Trichloroethylene <i>Yen-Ping Peng, Sun Yat-sen University</i>
09:50-10:05	RED Determination of UV Wastewater Disinfection Systems Based on Conserved Genes in Indigenous Bacteria <i>Zhe Sun, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>
10:05-10:20	Turning Waste into Oxidant: Sludge-Based Ferrate (VI) for Green Desulfurization of Fuels <i>Angelo Earvin Sy Choi, De La Salle University</i>
10:20-10:35	Coffee Break
10:35-10:50	Optimization and Kinetic Insights into the Degradation of Antibiotics Using NiZnSe-Modified Nickel Foam Electrode <i>Joseph R. Ortenero, De La Salle University</i>
10:50-11:05	Insights into the Mechanism of Carbocatalysis for Peracetic Acid Activation: Kinetic Discernment and Active Site Identification <i>Fei Miao, Jinan University</i>
11:05-11:20	Simultaneous Removal and Recovery of Lead and Zinc from Simulated Industrial Wastewater: A Kinetic and Characterization Study via the Fluidized Bed Homogeneous Granulation Process <i>Roselle Y. Mamuad, Mariano Marcos State University</i>
11:20-11:35	Selective Removal of Perchlorate from Water by Imidazole-Nitrogen Modified Activated Carbon Statistical Optimization and DFT Insights <i>Pin Hou, China University of Mining and Technology</i>
11:35-11:50	Investigation of Trends in Global Greenhouse Gas Emissions <i>Mohammed Sharif, Jamia Millia Islamia (Central University)</i> <i>Zavvar Kazim, Municipal Corporation of Delhi</i>
11:50-12:05	Novel High-Performance Dense Janus Membranes: Design and Mechanism in Membrane Distillation <i>Longfei Ren, Shanghai Jiao Tong University</i>
12:05-12:20	Assessing Salinity Impacts and Modeling Rice Irrigation Demands under Climate Scenarios in Morocco's Gharb Irrigated Region <i>Yousra Cheikhaoui, Ibn Tofail University</i>

Sunday, December 7, 2025

Venue: E231, 2nd Floor

Session 6

Keynote & Invited Talks Session

Chairs: Prof. Chuanyu Qin AND Prof. Xiaoyun Xu

08:30-08:50

Keynote Speech: Gas-Driven Technology for Enhanced Groundwater Contamination Remediation*Chuanyu Qin, Jilin University*

08:50-09:10

Keynote Speech: From Mercury Lamps to UV-LEDs: The Future of Point-of-Use Water Disinfection*Mengkai Li, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences*

09:10-09:30

Keynote Speech: Interfacial Electron Transfer in Soil Iron Cycling Driving Pollutant Transformation*Xiaoyun Xu, Shanghai Jiao Tong University*

09:30-09:50

Invited Speech: How Plant Leaves Absorb Dew by Isotope Tracing Technology?*Yingying Xu, Jilin Jianzhu University*

09:50-10:10

Invited Speech: Sustainable Battery Recycling via Direct Regeneration of Cathode Materials*Wei-Fan Kuan, Chang Gung University*

10:10-10:30

Invited Speech: Sustainable Blue Economy Towards Finance-Led Tourism Growth Hypothesis in A R&D-Based Marine Growth Model*Yoshihiro Hamaguchi, Hannan University*

10:30-10:45

Coffee Break

10:45-11:05

Keynote Speech: Fluidized-Bed Homogeneous Crystallization and Related Approaches for Nutrient Recovery from Livestock Wastes*Ming-Chun Lu, Chung Hsing University*

11:05-11:25

Keynote Speech: The Oxidative Reaction Zone Built on Fe-Based Particles for Groundwater Remediation*Hua Zhong, Eastern Institute of Technology*

11:25-11:45

Invited Speech: Electrochemical Degradation and Sensing of Aqueous Pollutants Using Copper-Based Electrodes*Ching-Lung Chen, Ming Chi University of Technology*

11:45-12:05

Invited Speech: Optimizing Direct Contact Membrane Distillation for Seawater Desalination: Porous PVDF Membrane Performance via Response Surface Methodology*Teow Yeit Haan, Universiti Kebangsaan Malaysia*

POSTGRADUATE FORUM

Sunday, December 7, 2025 Venue: E200, 2 nd Floor	
Session 7	Postgraduate Forum (1)
Chairs: Prof. Hua Zhong AND Prof. Wendong Wei	
13:20-13:40	Keynote Speech: Household Climate Action and Sustainability in China <i>Wendong Wei, Shanghai Jiao Tong University</i>
13:40-13:50	Enhancing Vegetation Monitoring through Deep Learning-Based Super-Resolution Fusion of Multi-Source Satellite Indices in the Korean Peninsula <i>Seoyeong Ku, Korea University</i>
13:50-14:00	Evaluating the Characteristics of Short-duration Rainfall Extremes on Urban and Rural Areas from Minutely Data in Korea <i>Hoyoung Cha, Korea University</i>
14:00-14:10	Quantification of Agricultural Drought Damage in South Korean Paddy Fields Using Remote Sensing and Machine Learning Framework <i>Hyochan Kim, Korea University</i>
14:10-14:20	Seasonal Dry-Wet Alternation Influences Nitrogen Speciation and Enhances Bioavailability in Sediments of Erhai Lake <i>Huaji Liu, Shanghai Jiao Tong University</i>
14:20-14:30	Non-Tariff Measures in Environmental Governance for International Trade: Insights on Fisheries Trade <i>Scarlett Queen Almeida Bispo, University of Brasilia</i>
14:30-14:40	Research on Key Technologies for Climate-resilient Sponge Cities Using Eco-bioengineering and Smart Regulation Strategies <i>Lanxin Sun, Changjiang River Scientific Research Institute (CRSRI)</i>
14:40-14:50	Hydrological Performance of Extensive Green Roofs un-der Extreme Rainfall and Antecedent Wet Conditions in High-Andean Cities <i>Mitsue Michel Huatuco, National University of Engineering</i>
14:50-15:00	Developing a Climate-Stratified Extreme Weather Exposure and Resilience Index for Nature-based Stormwater Infrastructure under Future Climate Scenarios <i>Miguel Enrico Robles, Kongju National University</i>
15:00-15:10	A Multi-Dimensional Index for Assessing Blue-Green Network Connectivity in Urban Environments <i>Cloie Chie Mueca, Kongju National University</i>
15:10-15:20	Spatial Layout Optimization of Nature-based Solutions Considering the Impacts of Precipitation Characteristics <i>Sujing Lin, Sun Yat-Sen University</i>
15:20-15:30	Impact of Wastewater Treatment Plants Upgrade on Nitrogen-Cycling Microorganisms and DNA Viruses in Receiving Rivers <i>Linhao Zhang, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>

15:30-15:40	Mn-Mn Diatom Catalysts for Sustainable Oxidative Polymerization of Phenols in Fenton-like Reactions <i>Bo He, Shanghai Jiao Tong University</i>
15:40-15:50	Interfacial Phosphate Ions Dehydration for Advanced Phosphate Removal and Recovery <i>Lufa Hu, Shanghai Jiao Tong University</i>
15:50-16:00	Groundwater Flow System and Hydrochemical Analysis in Typical Area of China <i>Tianchi Wang, Anhui University of Science and Technology</i>

Sunday, December 7, 2025 Venue: E208, 2nd Floor	
Session 8	Postgraduate Forum (2)
Chairs: Prof. Yiliang He AND Prof. Yancai Yao	
13:20-13:40	Keynote Speech: Key Technological Pathways for Achieving Carbon Neutrality in Energy Use at Wastewater Treatment Plants <i>Yiliang He, Shanghai Jiao Tong University</i>
13:40-14:00	Keynote Speech: Investigation of Catalyst Design and Reaction Mechanism for Efficient Electrosynthesis of Singlet Oxygen from Molecular Oxygen <i>Yancai Yao, Shanghai Jiao Tong University</i>
14:00-14:10	Enhanced Visible-Light Degradation of Diclofenac Using TiO₂/g-C₃N₄ Nanocomposite with PMS Activation <i>Kumbhar Gouri Suresh, Kyungpook National University</i>
14:10-14:20	Peroxymonosulfate Activation by Hemin-Modified Biochar for Ciprofloxacin Degradation <i>Hoang Bao Linh, Kyungpook National University</i>
14:20-14:30	Recovery of Cobalt from Cobalt-Containing Wastewater Using Fluidized Bed Homogeneous Crystallization Technology <i>Rueicheng Liou, Cheng Kung University</i>
14:30-14:40	Recovery of Zirconium from Zirconium-Containing Wastewater Using Fluidized Bed Homogeneous Crystallization Technology <i>Pin Chang Chou, Cheng Kung University</i>
14:40-14:50	Large-Sized Topological Defect-Driven Electron Shuttling: Efficient Carbon-Based Persulfate Activators Prepared by Reverse Engineering <i>Jingyi Gao, Eastern Institute of Technology</i>
14:50-15:00	In-situ Removal of PFAS in Groundwater Using a Combination of Adsorption and Advanced Oxidation Processes on Metal-Modified Zeolites <i>Junyi Wang, Eastern Institute of Technology</i>
15:00-15:10	Regulating the Oxygen-Containing Functional Groups on Carbon Material Surfaces to Achieve Synergistic Adsorption and Catalytic Degradation for the Removal of Pollutants from Water <i>Xianyao Ma, Eastern Institute of Technology</i>
15:10-15:20	Divergence in Denitrification Behavior of Solid Carbon Sources and Its Underlying Mechanism <i>Kaixuan Huang, Eastern Institute of Technology</i>

15:20-15:30	Mapping Groundwater Potential Zones and Recharge Using AHP Techniques and Remote Sensing Data <i>Osama Abdul Rahim, Tongji University</i>
15:30-15:40	Novel Photo-electro-Fenton Process with Natural Air Diffusion Electrode Coating Recycled Zn-Mn/C Catalysts from Spent Zn-Mn Dry Battery: Fast Generation and Activation of H₂O₂ <i>Ke-Xin Shi, Beijing University of Technology</i>
15:40-15:50	Tire Wear Particles as an Emerging Precursor for Toxic Disinfection Byproducts <i>Khaled Elsharkawy, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>
15:50-16:00	Optical Field Revelation in UV-LED Reactors Propels Source Transition in UV Disinfection <i>Xingjia Gao, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</i>

Sunday, December 7, 2025		Venue: E231, 2 nd Floor
Session 9	Postgraduate Forum (3)	
Chairs: Prof. Yao-Tung Lin AND Prof. Mengkai Li		
13:20-13:40	Keynote Speech: Transforming Biomass Waste into Advanced Antimicrobial Materials: A 3D-Resolved Pathway for Sustainable Water and Environmental Protection <i>Yao-Tung Lin, Chung Hsing University</i>	
13:40-13:50	Rapid Inactivation of Enterococcus Faecalis by an Innovative Magnetic Confinement-enabled Zerovalent Iron Flow-through Reactor <i>Liang Wei, Eastern Institute of Technology</i>	
13:50-14:00	Modified Phosphated Zero-Valent Iron in Groundwater Contaminant Degradation and Their Reaction Mechanism and Migration Behavior <i>Annan Hu, Eastern Institute of Technology</i>	
14:00-14:10	Effects of Atomic-Scale Constraints on the Molecular Migration During the Hydration of Bentonite: A GCMC Simulation Study <i>Shengyi Yan, Tongji University</i>	
14:10-14:20	Detection of surface soil moisture through hybrid ensemble learning with interpretable features <i>Shengkui Tian, Tongji University</i>	
14:20-14:30	Mineralogical Stability and Reaction Mechanisms of Bentonite in Saturated Portlandite Water <i>Xiaoya Li, Tongji University</i>	
14:30-14:40	Explainable Physics-Informed Bayesian Graph Neural Networks (PI-BSTGNN) for Groundwater Surrogate Modeling and Sensitivity Analysis <i>Fan Liu, Nanjing University</i>	
14:40-14:50	Topology-Adaptive Graph Attention Networks Coupled with Radial Basis Functions: A Novel Framework for Hydraulic Conductivity Inversion in Unstructured Meshes <i>Zhao Guo, Nanjing University</i>	
14:50-15:00	Collaborative Catalysis of Single Atoms and Atomic Clusters as Dual Sites for Confined Peroxymonosulfate Activation to Coordinate Radical and Singlet Oxygen Pathways <i>Mengdi Zhao, Eastern Institute of Technology</i>	

15:00-15:10	Quantitative Analysis of Coastal Waterway Construction Impact Based on Ecopath Model <i>Wenming Xu, Nanjing Hydraulic Research Institute</i>
15:10-15:20	Exploring Phosphorus Retention, Transformation and Bioavailability in Biochar Produced from Microalgae <i>Shahista Farheen, Indian Institute of Technology Kanpur</i>
15:20-15:30	DISOptimizer: A Machine Learning-Driven Framework for Optimizing Disinfection in Drinking Water Treatment <i>Zhengdi Wu, Tongji University</i>
15:30-15:40	Advancing Illicit Connection Diagnosis of Urban Stormwater Pipes: Comprehensive Analysis with EEM Fluorescence Spectroscopy <i>Feiyang Ao, Tongji University</i>
15:40-15:50	Intramolecular Hydrogen Bond Engineering of Covalent Organic Frameworks Accelerates Proton Transfer for Efficient H₂O₂ Electrosynthesis <i>Xiaohang Yang, Tongji University</i>
15:50-16:00	Light-Enhanced PMS Activation by Nitrogen-Doped Biochar for Efficient Non-Radical Degradation of Benzo(a)pyrene <i>Haixia He, China University of Mining and Technology</i>

Video Presentations

Video Presentations Link: <http://www.academicconf.com/video?confname=wre2025>

5232	Effect of Climate Change on Morphological Divergence and Species Discrimination in Tropical Fish Species <i>Caroline Joseph Odum, University of Calabar</i>
5240	Water Sustainability for Ecological Public Health in the Anthropocene <i>Alice Miu Ling Li, Hong Kong Metropolitan University</i>
5288	Optimization and Design of Integrated Deepwater Drilling and Oil Pumping System for Shipwreck Residual Oil Recovery <i>Weiting Ning, China Waterborne Transport Research Institute</i>
5293	Assessment of Groundwater Quality and Irrigation Suitability in Selected Malaysian Aquifers Using Empirical Indices <i>Foo Chuan Hui, Sultan Idris Education University</i>
5182	Mechanistic Investigation and Kinetics of Sodium Percarbonate-Induced Degradation of 2,4,6-Trichlorophenol in Groundwater Using Magnetite Catalysis <i>Abubakar Aisha Gide, Chengdu University of Technology</i>

POSTER SESSION

Saturday, December 6, 10:30-11:00 (Presentation Time)		Location: Outside Area of E100, 1 st Floor
Saturday, December 6, 13:30-18:00 Sunday, December 7, 08:30-18:00 (Display Time)		
PART A		
Chairs: Prof. Yaoping Chen AND Prof. Yen-Ping Peng		
5133	Efficient Inverse Estimation of Groundwater Contaminant Sources and Transport Parameters by Integrating Analytical Solutions with Bayesian MCMC <i>Shiwing Chen, Stantec Consulting Services Inc., Taiwan Branch</i>	
5163	Understanding Flood Behavior in the Kashmir Himalayas Through Copula-Driven Models <i>Ishfaq Rasool, Yangtze University</i>	
5172	Groundwater Response and Recharge Characteristics in the Haihe River Basin During the "23.7" Extreme Rainstorm Event <i>Jingsi Zhu, Hydrology Bureau of Haihe River Water Conservancy Commission</i>	
5214	Integration of Satellite and Ground-Based Data to Assess Hydrological Droughts and Their Impact on Crop Yields in the Balkhash-Alakol Basin Under Climate Change <i>Talipova Elmira, Institute of Geography and Water Security</i>	
5218	The Dual Role of Protozoa in Water Systems: Regulators of Microbial Communities and Public Health Risks <i>Saleh Alfarraj, King Saud University</i>	
5352	Evaluating the Effectiveness of Biochar in Reducing Nitrogen Leaching from Agricultural Soil in Nova Scotia <i>Haibo Niu, Dalhousie University</i>	
5384	Inhibition of Antibiotic Resistance Genes by Indole-3-Acetic Acid Mediated Root Exudates <i>Ping Chen, Shanghai Jiao Tong University</i>	
5391	A Machine Learning Model for Predicting Coastal Water Quality <i>Yucai Bai, Shanghai Jiao Tong University</i>	
5393	Liquid Cobalt Enables Selective Polyvinyl Chloride Dechlorination and H ₂ Evolution <i>Luwei Cheng, Shanghai Jiao Tong University</i>	
5395	Source Control of Airborne Zoonoses via Welfare-Aligned Upper-Room UVGI and Multi-Scale Risk Modeling <i>Shijiao Ma, Shanghai Jiao Tong University</i>	
5396	Temperature Dependence of Halogen Radical Reactivity with Dissolved Organic Matter <i>Xiaoqin He, Shanghai Jiao Tong University</i>	
5353	Spatio-Temporal Dynamics of Nitrogen Cycling in Erhai Lake <i>Chen Wang, Shanghai Jiao Tong University</i>	
5404	Development of a Detection Method for Per- and Polyfluoroalkyl Substances (PFAS) in High-Matrix Refinery Wastewater <i>Ting Cai, CNPC Research Institute of Safety and Environmental Technology</i>	

PART B

Chairs: Prof. Wentao Li AND Prof. Yu Lei

5196	Evaluation of Ferric Chloride Applicability in Drinking Water Treatment Processes <i>Jungmoon Ryu, Water Quality Research Institute</i>
5197	A Study on the Behavior and Control of Odorants in Drinking Water Treatment Processes <i>Eunji Jung, Water Quality Research Institute</i>
5215	FeCl₃- and MnSO₄- Modified Sewage Sludge Biochars for Heavy Metal Ion Adsorption in Semiconductor Wastewater <i>Zikang Jiang, Konkuk University</i>
5236	Enhanced Underground Pipeline Leakage Detection via Deep Denoising of Mel Spectrograms and Efficient CNN Classification <i>Yutao Zou, Jilin Province Water Resource and Hydropower Consultative Company</i>
5262	A Review of Urban Flood Risk Analysis Methods and the Impacts of Flood on Power Supply and Drainage Infrastructure Systems <i>Jinmei Lu, UiT the Arctic University of Norway</i>
5265	Controlled Phosphorus Release from Encapsulated Microalgae Biochar for Sustainable Agriculture <i>Shahista Farheen, Indian Institute of Technology Kanpur</i>
5291	Constructing Confinement of Cobalt Nanoparticles Tip-Encapsulated in Carbon Nanotubes for Boosting Fenton-Like Catalysis <i>Yin Wei, Chang'an University</i>
5292	Si–O Doped Layered Carbon-Based Catalyst Boosts Nonradical Oxidation Pathways Via Peroxymonosulfate Activation for Refractory Organic Pollutants Removal <i>Cheng Han, Chang'an University</i>
5308	AI-driven Prediction of Pre-Ozonation Dose and Sensor Combination Optimization: An Approach Toward Smart Drinking Water Treatment Plants <i>Park Ji Hyun, Seoul Water Research Institute</i>
5326	Pressure Fluctuation-Driven Transmission of Pathogen-Laden Aerosols in Building Drainage Systems: Mechanisms, Risks, and Mitigation Strategies <i>Wenwen Xing, Chang'an University</i>
5332	A Novel Strategy for Simultaneous Removal of Hardness, Suspended Solids and Organics from Fracturing Wastewater: Efficiency, Mechanism and Application <i>Yabo Shang, Xi'an Jiaotong University</i>
5333	Efficient Organic Removal from Hypersaline Reverse Osmosis Concentrates Through a Hybrid Microbubble Ozonation-Coagulation Process: A Two-Stage Removal Procedure Caused by Two-Sided Effect of Salinity <i>Mengwen Liu, Xi'an Jiaotong University</i>
5401	Response of Supersaturated TDG Distribution Characteristics to Thermal Stratification in A Cascading Large Deep Reservoir <i>Haobai Wang, Sichuan University</i>

PART C

Chairs: Prof. Ching-Lung Chen AND Prof. Jenn-Fang Su

5260	Pre-Assessment of Microplastic Pollution in Pasig River: Occurrence, Distribution and Type <i>Kathlia D. Cruz, Mapua University</i>
5270	Integrating Biodiversity into Ecosystem Service Assessment for Constructed Wetlands <i>Marvin John Uy, Kongju National University</i>
5274	Estimation of Runoff Quality for Designing Green Infrastructure Functions in Large-scale Underground Stormwater Storage Facilities <i>Gahyun Lee, Kongju National University</i>
5275	Evaluation of Heavy Metal Reduction Efficiency and Phytoremediation Performance of <i>Salix Gracilistyla</i> in Multi-Metal Contaminated Soils <i>Yujin Kim, Kongju National University</i>
5276	Evaluating the Potential of Constructed Wetlands as a Nature-Based Solution for Antibiotic Resistance Management <i>Yugyeong Oh, Kongju National University</i>
5367	Research Advancements on Agricultural Non-Point Source Pollution in Major Lake and Reservoir Watersheds of China: Status, Sources, Monitoring, and Prospects <i>Yuansong Tian, Shanghai Jiao Tong University</i>
5370	Sustainable Cr(VI) Electroplating Rinsing for Efficient Wastewater Recovery and Stable Coating Quality <i>Zhinan Dai, Shanghai Jiao Tong University</i>
5380	Photoelectrocatalytic Conversion for Wastewater to High-Value Chemicals and Energy <i>Zhiyuan Su, Shanghai Jiao Tong University</i>
5381	Decoding the Divalent Cation Effect on Sulfidation of Zero-Valent Iron: Phase Evolution and FeS_x Assembly <i>Guanjun Qu, Shanghai Jiao Tong University</i>
5385	Enhanced •Cl Generation by Introducing Electrophilic Cu(II) in Co₃O₄ Anode for Urine Treatment <i>Chaoyue Xie, Shanghai Jiao Tong University</i>
5394	Reversed I₁Cu₄ Single-Atom Sites for Superior Neutral Ammonia Electrosynthesis with Nitrate <i>Bing Zhou, Shanghai Jiao Tong University</i>
5397	Formation of Odorous By-Products during Chlorination of Algae Organic Matter: Evolution, Mechanism, and Key Precursors <i>Jinglong Hu, Shanghai Jiao Tong University</i>
5140	Stochastic Multi-Criteria Decision-Making for Improved Reservoir Operations <i>Moola Rajasree, Indian Institute of Technology Tirupati</i>

TECHNICAL VISIT

Date: December 8 (Monday)

- 09:00 AM – Depart from Shanghai Minhang Platinum Han Jue Hotel
- 10:30 - 12:00 AM – Shanghai Waterworks Science and Technology Museum
- 12:00 - 13:30 PM – Lunch and Break
- 14:00 - 16:00 PM – The Bund

Notes: This is a tentative itinerary. Minor adjustments may be made based on the on-site arrangements.

Shanghai Waterworks Science & Technology Museum



The Shanghai Waterworks Science and Technology Museum, located within the historic Yangshupu Waterworks on Yangpu riverside, spans three centuries and symbolizes Shanghai's urban heritage. Originally opened in 2003 and recently renovated by year-end, it sits at No. 830 Yangshupu Road and covers over 1,300 square meters. As a designated Shanghai science education base, the museum highlights the city's water supply evolution and serves as a key platform for public education on tap water science and technology.

The Bund



The Bund is a 1.5-kilometre waterfront in central Shanghai, bordering the Huangpu River—Shanghai's "mother river." Its western side features 52 Gothic and Baroque-style buildings that once housed financial and trading firms, earning it the title of an "outdoor museum of international architecture." Blending history with cosmopolitan charm, the Bund showcases Shanghai's rich past and its openness to foreign cultures. The scenic promenade, green spaces, and elegant historic facades set against the river create a signature destination beloved by locals and tourists alike.

PRESENTATION GUIDELINES

Parallel Oral Sessions Guidelines

Devices Provided by the Conference Organizer:

- Desktops (with MS-Office & Adobe Reader)
- Projectors & Screen: Ratio 16:9
- Laser Sticks
- Microphones

Materials Provided by the Oral Presenters:

- PowerPoint (Note: Please show your paper ID as **WRE***** on the last page.)

For presenters who don't send the PowerPoint to the Conference in advance, please have your presentation ready in a memory stick, and save it on the laptop of your corresponding session about **15 minutes** before session starts.

Duration of Each Presentation

- Plenary Speech: 30 minutes of presentation, including 3-5 minutes of Q&A
- Keynote Speech: 20 minutes of presentation, including 3-5 minutes of Q&A
- Invited Speech: 20 minutes of presentation, including 3-5 minutes of Q&A
- Oral Presentation: 15 minutes of presentation, including 3-5 minutes of Q&A
- Student Presentation: 10 minutes of presentation, including 1-2 minutes of Q&A

Poster Presentation Guidelines

Materials Provided by the Conference Organizer:

- Poster Softboard
- Adhesive Tapes or Clamps

Materials Provided by the Presenters:

- Home-Made Posters (Material: not limited; Size: 60 cm (width) × 160 cm (height))
- Posters Printed by Conference

Instructions:

- Each presenter is required to stand by their poster during the dedicated poster session on **December 6 from 10:30 to 11:00** to facilitate discussion and exchange with fellow participants. The selections for **Best** and **Outstanding Poster Presentation** awards will be made during this time.
- Posters will remain on display throughout the conference until **18:00 on December 7**. Presenters are responsible for removing their posters by this deadline. The Conference Secretariat will not be liable for any posters left uncollected after this time.

AWARDS



Best Oral Presentation Awards

During the conference, **Three** Best Oral Presentation Awards will be conferred—one each from the following session groupings: Sessions 1 & 2, Sessions 3 & 4, and Session 5—based on evaluations by the respective session chairs. Winners will be announced and presented with a certificate at the closing ceremony. **Each award includes a certificate and complimentary registration for the next WRE conference.**



Best Poster Presentation Awards

THREE Best Poster Presentation Awards will be selected during the conference—one from Poster Session Part A, Part B and Part C—by the poster session chairs. Winners will be announced and presented with a certificate at the closing ceremony. **Each award consists of a certificate and complimentary registration for the next WRE conference.**



Best Student Presentation Awards

The Best Student Presentation Awards aim to promote, recognize, and reward outstanding research conducted by undergraduate, Master's, and PhD students in the field of water resources and environment, as well as their ability to communicate their work effectively. One award will be granted from each Postgraduate Forum. Winners will be announced and presented with a certificate at the closing ceremony. **Each recipient will receive a certificate and complimentary registration for the next WRE conference.**



Outstanding Student Presentation Awards

The Outstanding Student Presentation Awards serve as runner-up honors to the Best Student Presentation Awards. **Two** recipients will be granted from each Postgraduate Forum. Winners will be announced and presented with a certificate at the closing ceremony.



Outstanding Poster Presentation Awards

The Outstanding Poster Presentation Awards serve as runner-up honors to the Best Poster Presentation Awards. **THREE** recipients—one from Poster Session Part A, Part B and PART C—will be selected by the session chairs, announced at the closing ceremony, and presented with a certificate.

GENERAL INFORMATION

Registration

*** Time:** 14:00 - 19:00, **December 5**

Location: Lobby of Shanghai Minhang Platinum Han Jue Hotel on December 5

*** Time:** 08:30 - 09:00, **December 6**

Location: Outside Area of E100, School of Environmental Science and Engineering, Shanghai Jiao Tong University (Minhang Campus)

2. Onsite Payment: US Dollars and RMB in cash and Payment via Alipay will be accepted if you register onsite.

3. Provided Items: 1. Name Badge
2. Conference Bag
3. Conference Program

Name Badge

For security reasons and easy recognition, please wear your name badge to all areas throughout the conference period. **The name badge serves as the identification credential for campus access.** Colorful name cards are for your easy identification.

 (a)	 (b)	 (c)	 (d)
Red Name Card (a)	VIPs & Plenary/Keynote/Invited Speakers		
Blue Name Card (b):	Participants		
Green Nam Card (c):	Sponsors		
Orange Name Card (d):	Conference Organizers/Volunteers		

Certificate

A certificate of oral or poster presentation will be issued upon completion of your session. If you are unable to collect it on-site, please contact the conference secretariat after the event to request an electronic copy.

Refreshment

Refreshments will be available at the coffee breaks held on December 6–7, 2025.

Welcome Banquet

The banquet ticket would be offered to you if you have registered to attend the banquet.

Time: 18:30-20:30, December 6, 2025

Locations: 302 Multi-function Hall, Shanghai Minhang Platinum Han Jue Hotel

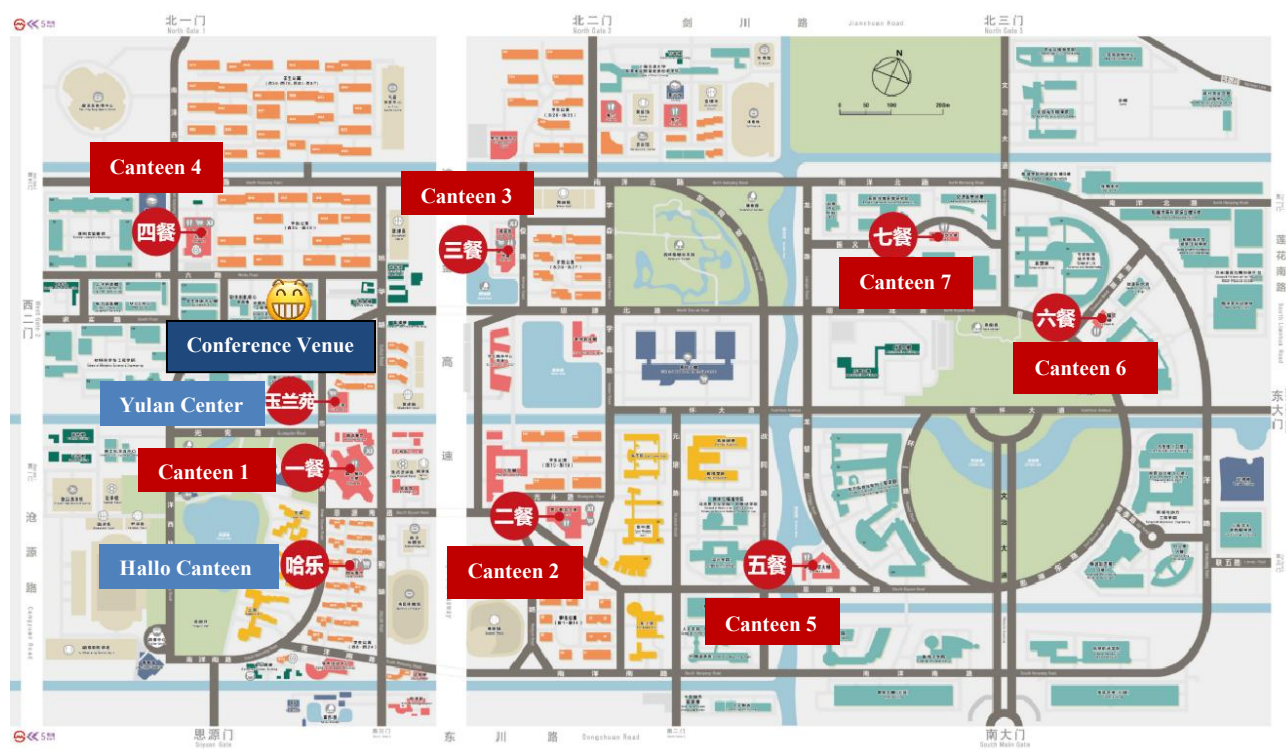
Lunch

Lunch will be provided on December 6–7, 2025. Kindly bring your meal vouchers with you to redeem your meal.

Operation Time: December 6-7, 2025

Place: Canteens 1-7 in Shanghai Jiao Tong University

Canteens Map:



Please Kindly Note:

1. Meal vouchers are valid at Canteen 1 to Canteen 7. Canteen 4 is highly recommended—it features Gimlid Western Restaurant on the second floor, as well as a café.
2. McDonald's, Yulan Center, and Hallo Canteen are not covered by the meal voucher program.
3. Each meal voucher is valid only on the date specified. Vouchers not used for lunch may be used for dinner or at the on-site bakery.



Canteen 4



Gimlid Western
Restaurant

@ 2 Floor of Canteen 4



Canteen 1



Canteen 3

ACCOMMODATION AND TRANSPORTATION

Accommodation

Shanghai Minhang Platinum Han Jue Hotel 上海白金汉爵大酒店

Address: 1577 Humin Road, Minhang District, Shanghai 上海闵行区沪闵路1577号

Tel.: 021-31850888

Remark: The conference will provide a shuttle bus service between the designated hotel (Shanghai Minhang Platinum Han Jue Hotel) and the conference venue (School of Environmental Science and Engineering, Shanghai Jiao Tong University, Minhang Campus) during the conference time. Follow first come, first served basis.

Shuttle Bus Service Timetable (From Hotel to the Venue):

Direction	Pick-up Point	Drop-off Point	Department Time	
			December 6th	December 7th
To SESE, SJTU	Hotel Entrance	East Gate of SESE, SJTU	08:10 08:30	08:10 08:20
To Hotel	East Gate of SESE, SJTU	Hotel Entrance	18:15	18:20

** There is a "WRE 2025" sign on the bus to guide you to the shuttle bus.

Transportation

The conference will be held at the ****Minhang Campus**** of Shanghai Jiao Tong University. Below are recommended routes from major transportation hubs.

From Shanghai Pudong International Airport (PVG):

Metro: Take Airport Link Line (市域机场线), and transfer to line 15 at Jinghong Road (景洪路站), and then get off at Zizhu Hi-tech Station (紫竹高新区站). Walk for 10 mins to get to SJTU Minhang Campus. (About 1 hour and 30 mins)

Taxi: About 1 hour's taxi ride at the cost of 120-150 RMB.

From Shanghai Hongqiao International Airport (SHA):

Bus: Take Shanghai Hongqiao Hub Line 4 (虹桥枢纽4路) and get off at Dongchuan Lu Yongping Lu Station (东川路永平路站) (About 1 Hour and 40 Mins)

Metro: Take Airport Link Line (市域机场线), and transfer to line 15 at Jinghong Road (景洪路站), and then get off at Zizhu Hi-tech Station (紫竹高新区站). Walk for 10 mins to get to SJTU Minhang Campus. (About 1 Hour)

Taxi: About 40 minutes' taxi ride at the cost of 60-80 RMB.

From Shanghai South Railway Station:

Metro: Take Metro Line 15 and get off at Zizhu Hi-tech Station (紫竹高新区站). Walk for 10 mins to get to SJTU Minhang Campus. (About 45 Mins)

Taxi: About 30 minutes' taxi ride at the cost of 40-50 RMB.

From Shanghai Railway Station:

Metro: Take Metro Line 1 and transfer to Line 15 at Shanghai South Railway Station (上海南站), and get off at Zizhu Hi-tech Station (紫竹高新区站). Walk for 10 mins to get to SJTU Minhang Campus. (About 1 hour and 20 mins)

Taxi: About 1 hour taxi ride at the cost of 60-80 RMB.

Emergency Services

In emergency situations, you can contact the local police, ambulance service, fire department and other emergency services.

Service	Hotline
Fire	119
Police	110
Medical Emergency	120
Government Service	12345
Train Ticket	12306/95105105
Health	12320
Medical Insurance	962218

SJTU MINHANG CAMPUS ACCESS GUIDELINES

To ensure the smooth running of the conference, registered participants have been granted special access to Shanghai Jiao Tong University's Minhang Campus during the conference period, upon presentation of their official conference badge. The arrangements are as follows:

Group Entry: Complimentary shuttle buses will run between the **Shanghai Minhang Platinum Hanjue Hotel** and the **SJTU Minhang Campus** on **December 6–7, 2025**.

Individual Entry: Registered participants may enter the Minhang Campus through **North Gate No. 1** (No. 901, Jianchuan Road) from **December 5-8, 2025**, upon showing their official conference badge. Participants may exit the campus through any gate.

Important Reminders:

- Please abide by all university rules and regulations during your visit.
- The conference badge is for the registered participant's personal use only and must not be shared, transferred, or lent to anyone else.

Should any exceptional circumstances arise, please contact the Organizing Committee immediately and cooperate fully with campus security or management staff.

Micro & Nano Bubble Generators For Research

Cutting-edge, reliable and validated MNB solutions:
New Interface, New Phenomenon, New Breakthrough

With installations in over 100 laboratories worldwide, our MNB generators have assisted in the publication of hundreds of SCI-indexed papers, with a cumulative impact factor of over 1000. In the environmental field, more than 100 of these papers are featured in leading journals including Nature, ES&T, Water Research, Langmuir, Journal of Hazardous Materials, Energy, Fuel, Bioresource Technology, Catalysts, Nanomaterials, and Desalination, etc.



NANO LF-1500

Water Flow Rate: 1500 ml/min
Gas Flow Rate: 30-50 ml/min
Core MB Conc.: 10^6 - 10^7 pcs/ml
Core MB Size: 30-50 μ m
Core NB Conc.: 10^7 - 10^8 pcs/ml
Core NB Size: 100-200 nm
Power: 80 W

Classic research-grade microbubble generator. Stable, easy to use, trusted for over a decade. Fits non-corrosive experiments.



NANO UFB-1000/Pro

Water Flow Rate: 1000 ml/min
Gas Flow Rate: 30-50 ml/min
Core MB Conc.: $<10^2$ pcs/ml
Core MB Size: —
Core NB Conc.: 10^8 - 10^9 pcs/ml
Core NB Size: 100-200 nm
Power: 80 W

Based on CNT (nucleation rate J governed by ΔF), it controls ΔF for ultrafine bubbles. Precise growth kinetics control — nearly no microbubbles, enabling continuous dissolved gas release operation.



NANO JET Series

Water Flow Rate: 300-100 LPH
Gas Flow Rate: 0-200 ml/min
Core MB Conc.: 10^3 - 10^6 pcs/ml
Core MB Size: 30-50 μ m
Core NB Conc.: 10^6 - 10^7 pcs/ml
Core NB Size: 100-200 nm

Water pressure-driven, low-energy hydraulic shear microbubble generators. No electricity, pipe-mounted for system integration.



NANO OWS-300

Water Flow Rate: 300 LPH
Gas Flow Rate: 100-500 ml/min SA
Core MB Conc.: $<10^2$ pcs/ml
Core MB Size: —
Core NB Conc.: 10^6 - 10^8 pcs/ml
Core NB Size: 100-200 nm
Power: 5.5 kW

High-Performance Integrated Ozone-MNB Platform for Disinfection/AOP experiments. Built in PSA, high-conc. ozone generator, detector & destructor, fast access to oxidation kinetics, ozone utilization data for R&D & engineering





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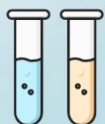


样本类型

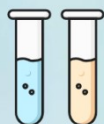
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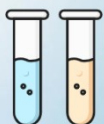
土壤
Soil



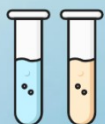
水样
Water



沉积物
Sediment



粪便
Feces



菌液
Culture



植物
Plant

基因组学
Genomics

蛋白质组学
Proteomics

转录组学
Transcriptomics

微生物研究
Microbial
Research

单细胞组学
Single-cell
Omics

代谢组学
Metabolomics

测序周期短、通量高、性价比高
Short Turnaround Time · High Sequencing
Throughput · Excellent Cost Performance

服务应答及时，售后有保障，沟通无障碍
Timely Technical Support · Assured Post-Service
Follow-Up · Clear and Effective Communication

强大的数据分析团队，行你所愿
A Highly Experienced Bioinformatics Team Providing
Rigorous and Customized Analyses

工业诊断
Industrial
Diagnostics

农业
Agriculture

复杂疾病
Complex
Diseases

水质检测
Water Quality
Testing

健康管理
Health
Management

遗传疾病
Genetic
Disorders

安徽益智慧基因科技有限公司
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<http://www.yzhgene.com/>

刘经理manager: 17352955970
Email:meta@yzhgene.com

SCIEX ZenoTOF 8600 system

Extraordinary
discoveries
demand —
— **extraordinary**
proof

10x

better sensitivity across
scan modes compared to
SCIEX previous instrument

The ZenoTOF 8600 system delivers
10x better sensitivity than the most
sensitive current SCIEX accurate mass
system across a multitude of new and
established accurate mass approaches.

This translates not only into the lower limits of quantitation
but also new enabled approaches to making biologically
relevant discoveries that the data can prove.

- The discovery of low-abundance protein or metabolite biomarkers requires high quantitative precision so that they can be translated into clinical research.

- Precise characterization of drug metabolites and disease-associated lipids requires rich and sensitive MSMS data generated using versatile fragmentation techniques.
- Quantitation of a wide variety of low-abundant compounds requires simultaneous sensitivity, precision, and speed—normally a challenge for ordinary, accurate mass technology.

**Find out more about
SCIEX ZenoTOF 8600 system**



WRE 2025 Website



SJTU-SESE Website



Contact Us.

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+86-18911869790

info@wreconf.org

www.wreconf.org