International Symposium on Membrane Science and Technology for Water Sustainability

Host: **Hebei University of Technology, China**

Universität Duisburg-Essen, Germany

Harbin Institute of Technology, China

Date: **April 26, 2025, 9 am to 6 pm**

Venue: **Riverside Hall, Holiday Inn Tianjin Riverside, Tianjin, China**

Shaping the Future of Water

04·26

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Prof. Dr. Mathias Ulbricht: mathias.ulbricht@uni-due.de

International Symposium on Membrane Science and Technology for Water Sustainability

Welcome to International Symposium on Membrane Science and Technology for Water Sustainability

Notice：

Organized by Prof. Zhijun Ren (Hebei University of Technology, China), Prof. Mathias Ulbricht (Universität Duisburg-Essen, Germany), Prof. Jun Ma (Harbin Institute of Technology, China) the International Symposium on Membrane Science and Technology for Water Sustainability will be held on April 26, 2025.

Venue:

Holiday Inn Tianjin Riverside, Tianjin, China

Conference Date:

April 26, 2025, 9 am to 6 pm

Host:

Hebei University of Technology, China; Universität Duisburg-Essen, Germany; Harbin Institute of Technology, China

Topics:

(1) Research and application of new membrane materials
(2) Enhancement and optimization of membrane separation processes
(3) Membrane fouling mechanisms and control strategies
(4) Innovative applications of membrane technology in the fields of energy and environment
(5) Modeling and simulation of membrane processes

Registration:

No registration fee; please register by April 25, 2025

Important Dates:

Registration Date: April 25, 2025
Conference Date: April 26, 2025

Supported by:

Chinesisch-Deutsches Zentrum für Wissenschaftsförderung

We are looking forward to meeting you.

International Symposium on Membrane Science and Technology for Water Sustainability

Conference Committees

General Chair: Zhijun Ren, Hebei University of Technology

Confirmed Speakers:

 **Jun Ma** Harbin Institute of Technology, China	 **Mathias Ulbricht** Universität Duisburg-Essen, Germany	 **Heng Liang** Harbin Institute of Technology, China	 **Frank Lipnizki** Lund University, Sweden
 **Xiaomao Wang** Tsinghua University, China	 **Xing Zheng** Zhejiang University of Science and Technology, China	 **Roy Bernstein** Ben Gurion University, Israel	 **Stefan Herrmann** Twente University, Netherlands
 **Xiaojun Huang** Zhejiang University, China	 **Yasin Orooji** Zhejiang Normal University, China	 **Yue Wang** Tiangong University, China	 **Xiaoyang Liu** Hebei University of Technology, China

Conference Program

UTC+8 (Tianjin)	Friday, April 25, 2025 (Holiday Inn Tianjin Riverside, Tianjin, China)
12:00-21:00	Registration (Foyer)

UTC+8 (Tianjin)	Saturday, April 26, 2025 (Riverside Meeting Room, 5F)		
7:30-9:30	Registration (Foyer)		
9:00-9:10	**Welcome and opening remarks** **Lang Jiang** Vice President of Hebei University of Technology		
9:10-9:40	**Jun Ma**	Harbin Institute of Technology	Development of Future Sustainable Urban Water Systems
9:40-10:10	**Frank Lipnizki**	Lund University, Sweden	Advancing membrane-based solutions for water treatment: From seawater to stormwater and wastewater
10:10-10:40	**Heng Liang**	Harbin Institute of Technology	Ultrafiltration technology for drinking water treatment in China
10:40-11:00	**Tea Break**		
11:00-11:30	**Roy Bernstein**	Ben Gurion University, Israel	Polymeric brush grafting to membranes for enhanced performance and fouling mitigation
11:30-12:00	**Xing Zheng**	Zhejiang University of Science and Technology	Low carbon emission operation of membrane systems based on fouling control and energy recovery
12:00-14:00	**Lunch (Cafe Venice, 2F)**		
14:00-14:30	**Mathias Ulbricht**	Universität Duisburg-Essen, Germany	Advanced desalination membranes by tailored ionic polymer films or anti-fouling coatings
14:30-15:00	**Xiaomao Wang**	Tsinghua University	The combined process of loose nanofiltration and ozonation / activated carbon adsorption for advanced drinking water treatment
15:00-15:30	**Stefan Herrmann**	University Twente, The Netherlands	Ozonation with membrane contactors
15:30-16:00	**Tea Break**		
16:00-16:30	**Yue Wang**	Tiangong University	In-situ recovery of precious metal platinum using anaerobic biofilm method based on hollow fiber membranes
16:30-17:00	**Yasin Orooji**	Zhejiang Normal University	Elucidating Membrane Fouling Mechanisms and Advancing In-Situ Membrane Fouling Mitigation Strategies
17:00-17:30	**Xiaojun Huang**	Zhejiang University	Artificial lung-based oxygen permeable membrane bioreactor (MABR) for applications of low carbon and energy-saving wastewater treatment
17:30-18:00	**Xiaoyang Liu**	Hebei University of Technology	Research on multi-scale membrane fouling behavior based on molecular spectroscopy

Expert Introduction

Jun Ma
Harbin Institute of Technology, China

Academician of Chinese Academy of Engineering, professor/doctoral supervisor of School of Environment, director of National Engineering Research Center of Urban Water Resource (North), Fellow of International Water Association, Fellow of the Royal Society of Chemistry, Chairman of the Plant Design and Operation Management Group, International Water Association, Associate Editor of Water Research, Associate Editor of ES&T Engineering. Prof. Jun Ma has published over 300 peer-reviewed papers in international journals with an H index of 130. Prof. Ma received the Sustainable Water Award from the Royal Society of Chemistry (2016), the Honor Award for Scientific Excellence from the American Chemical Society (2017), the Outstanding Achievements Award in Environmental Science & Technology (2014), and the National Invention Award twice (2002, 2005). His research results have been listed in the textbooks and guidelines of the IWA, and have been applied to a few hundred water and wastewater treatment plants. Prof. Ma launched the Future Green Urban Water System Characterized by Low Carbon Emissions.

Mathias Ulbricht
Universität Duisburg-Essen, Germany

Professor for Industrial Chemistry in the Department of Chemistry, University of Duisburg-Essen, Essen, Germany. Prof. Mathias Ulbricht is one of the Editors of the Journal of Membrane Science, the leading international journal in the field of membranes. Additionally, Prof. Ulbricht is on the Editorial boards of important journals such as Separation and Purification Technology and Polymer. Professor Ulbricht has guided more than 80 PhDs and 125 master's students to complete their dissertations, published more than 370 SCI papers, participated in the compilation of 16 books or monographs, and has 20 internationally authorized patents. His H-index (Google Scholar) is 80.

Heng Liang
Harbin Institute of Technology, China

Dean, Professor, at the School of Environment, Harbin Institute of Technology. Prof. Heng Liang is a national high-level talent, the Chief Scientist of the National Key Research and Development Program, the director of the Youth Committee of the China Urban Water Association, and the deputy director of the National Engineering Research Center of Urban Water Resources. Prof. Liang is the recipient of the National Science Fund for Excellent Young Scholars, Young and Middle-aged Leaders in Science and Technology Innovation of the Ministry of Science and Technology, and New Century Excellent Talents in the University of the Ministry of Education. Prof. Liang has specialized in research on membrane water treatment technology, presided over National Key Research and Development Program projects, National Major Science and Technology Projects, the National Natural Science Foundation, and other research initiatives. Prof. Liang has won two First Prizes in the Provincial Technology Invention Award, one Second Prize in National Teaching Achievement, and other awards.

Frank Lipnizki
Lund University, Sweden

Prof. Frank Lipnizki has a PhD from the University of Bath (UK) and is now a full-time professor in the Department of Process and Life Science Engineering, Division of Chemical Engineering at Lund University (Sweden), and the president of the European Membrane Society. Before joining Lund University in 2017, Prof. Lipnizki had been working for 16 years in the Membrane Division of Alfa Laval, Denmark. Prof. Lipnizki's main research focuses on separation processes, particularly membrane processes in the food, biotech, pulp and paper industries, as well as in biorefineries and water and wastewater treatment. Within these industries, his research targets the integration and optimization of membrane processes as stand-alone units and as part of hybrid processes. Prof. Lipnizki is investigating fouling and cleaning challenges faced in these industries. Furthermore, he is working on the optimization of membranes and modules required for specific applications in industry.

Xiaomao Wang
Tsinghua University, China

Associate professor at the School of Environment, Tsinghua University. Dr. Xiaomao Wang's main research areas encompass nanofiltration technologies for water treatment, improved and novel water treatment processes, and water and resources recovered from seawater. Dr. Xiaomao Wang has hosted and participated in several projects granted by the National Natural Science Foundation of China and the National Key Research and Development Program, the Ministry of Science and Technology. Dr. Wang has published more than 100 SCI papers. He has been awarded the Second Prize of the Science and Technology for Environmental Protection, the Second Prize of the Science and Technology Award from the China Membrane Industry Association, and the Young Scientist Award from the Chinese Society for Environmental Sciences. Dr. Wang serves as a committee member of the Water Supply Professional Committee of the China Water Industry Branch, Vice Chair of the Municipal Water Supply and Drainage Application Branch of the China Membrane Industry Association, a committee member of the Engineering and Application Professional Committee of the China Membrane Industry Association, Secretary-General of the China Chapter of the IWA Membrane Technology Committee. He also serves as an editorial board member of journals such as Desalination.

Xing Zheng
Zhejiang University of Science and Technology, China

Professor, doctoral supervisor, leader of the innovation team of "Water Purification, Carbon Control and Environmental Heathy" at Zhejiang University of Science and Technology, doctor of environmental engineering in the Technical University of Berlin, Germany, postdoctoral fellow in the King Abdullah University of Science and Technology, Saudi Arabia, formerly Grundfos water treatment research and development expert, project manager. In 2017, Prof. Xing Zheng was awarded as a member of the "100 Talent Plan" of Shaanxi Province, and served as the leader of the innovation team of "Water Saving and Reuse" in Shaanxi province and the academic leader of the national environmental protection equipment quality inspection and supervision center (Jiangsu). Prof. Zheng is also a member of the Environmental Protection Professional Committee of the China Chemical Industry Society, the Smart Water Committee of China Engineering Construction Standardization Association, and the Carbon Peak and Carbon Neutral Standard Committee in Shaanxi province. Additionally, he is the editor of the Process Safety and Environmental Protection journal.

Roy Bernstein
Ben Gurion University, Israel

Associate professor in the Zuckerberg Institute for Water Treatment (ZIWR) at Ben-Gurion University (BGU) of the Negev in Israel. Dr. Roy Bernstein received his BSc in Chemistry and Environmental Science and MSc in Soil and Water Sciences, both from the Hebrew University in Israel. He completed his PhD at the Department of Environmental Engineering and the ZIWR at BGU. After conducting post-doctoral studies at Essen University in Germany and KULeuven in Belgium, he returned to the ZIWR to establish his laboratory. Dr. Bernstein focuses on advancing material and polymer science in membrane science and technology, aiming to develop and improve membranes with specific properties for environmental and industrial applications, especially water and wastewater treatment and desalination. His research not only includes the fundamental studies conducted in the lab on model systems with well-defined characteristics, but also laboratory- and pilot-scale investigations using real solutions. This enables the investigation of membrane properties and optimization of their performance for practical applications.

Stefan Herrmann
Twente University, Netherlands

Dr. Stefan Herrmann is currently the Research Group Leader at the Chair of Technical Chemistry II, University of Duisburg-Essen, Germany (since April 2025), focusing on membranes and porous materials for water and energy applications. He earned a BSc degree in Mechanical Engineering (2013-2017) and an MSc degree in Chemical Process Engineering (2017-2019) from RWTH Aachen University, Germany. His Master's thesis, conducted at CSIRO in Melbourne, Australia (2019), investigated water capture from ambient air using metal-organic frameworks. As a Research Associate and Doctoral Candidate at RWTH Aachen's Chair of Chemical Process Engineering under Prof. Matthias Wessling (2019-2024), his research included the fabrication of mixed-matrix hollow fiber membranes, development of helical static mixer membrane geometries, photocatalytic membrane ozonation for micropollutant degradation, and membrane contactors for fluoropolymer synthesis (*e.g.*, PVDF). During his postdoctoral tenure at the University of Twente, Netherlands (2024-2025), Dr. Herrmann worked with Prof. Hannah Roth on data management for membrane research, establishing the Open Membrane Database for Hollow Fibers (OMD4HF), and water-based membrane fabrication with bio-based polyelectrolytes.

Xiaojun Huang
Zhejiang University, China

Doctor of Science, associate professor, doctoral supervisor, Zhejiang University Qiushi young scholar, Gusu innovation and entrepreneurship leading talent. As the project leader, Prof. Xiaojun Huang presided over two major sub-projects of the "Twelfth Five" National 863 plan, one major sub-project of the "Eleventh Five" National 863 Plan, three projects of the national natural science foundation, one sub-project of the "Twelfth Five" Zhejiang major technological achievements transformation project, one project of the Natural Science Foundation of Zhejiang province, the youth science fund of Fresenius pharmaceutical company in Germany. Prof. Huang has published over 60 SCI papers and 26 national invention patents. These papers have been cited over 1,200 times, and the H-index is 21. He participated in the compilation of the Chinese and English monographs Organic Nano Functional Materials and Surface Engineering of Polymer Membranes, and won the second prize of the 2008 National Science and Technology Progress Award. Prof. Huang has obtained one second prize of the Natural Science Award of Science and Technology Award of Higher Education Institutions in 2007, one first prize of the Science and Technology Progress Award of Ningbo City in 2013, and three first prizes of excellent scientific research achievements of Zhejiang universities in 2006, 2009, and 2010. In 2010, Prof. Huang won the Zhejiang Province Natural Science Academic first prize.

Orooji Yasin
Zhejiang Normal University, China

Clarivate Analytics (Web of Science) Highly Cited Researcher and top 1% author in Environmental Science and Ecology, Chemistry, and Engineering. Prof. Orooji is a doctoral mentor, post-doctoral tutor, and Distinguished Professor at Zhejiang Normal University and has been listed among the Stanford-Elsevier top 2% scientists since 2021. Since 2017, Prof. Orooji has published more than 200 SCI papers (i.e., 39 ESI top papers, including 10 hot papers) with a cumulative impact factor of about 2000 of which about 150 were published as the first author and corresponding author, with an H index of 66 (cited for 15936 times by about 10000 documents). Moreover, Prof. Orooji has 10 patents, one of which is the best national patent award. He has the editor, guest editor, and editorial board member record for more than 10 SCI journals such as The Innovation, Chemical Engineering Journal, EcoMat, Biofuel Research Journal, Composites Communications, International Journal of Antimicrobial Agents, Scientific Reports, and Membranes. He is the reviewer of 150 SCI journals such as Nature Communications, Science Advances, Advanced Materials, and JACS.

Yue Wang
Tiangong University, China

Associate Professor, master's supervisor, "Women in STEM Scientist Award" selected by the research institution American Microbial Resistance Research Center, Member of the International Society of Microbial Ecology (ISME), International Water Association (IWA), and Australian Water Association (AWA). Dr. Wang has published a book chapter in English and more than 40 SCI papers, including 4 papers in The ISME Journal (Nature-Index journal), one paper in PNAS (Nature-Index journal), and one paper in Microbiome as the first author. Dr. Wang has been cited a total of 782 times (Google Scholar, 2025.04) and published articles with a total impact factor of more than 100, including 2 highly cited papers with ESI (1%). Dr. Wang is the reviewer of Environmental Science & Technology, Journal of Hazardous Materials, Chemical Engineering Journal, Frontiers of Environmental Science and Engineering, and Science of the Total Environment.

Xiaoyang Liu
Hebei University of Technolgy, China

Associate Professor at the School of Energy and Environmental Engineering of Hebei University of Technology. Dr. Xiaoyang Liu graduated with a PhD from the University of Science and Technology of China in 2020, under the guidance of Academician Hanqing Yu. From 2016 to 2018, Dr. Xiaoyang Liu visited Germany for academic studies and studied under the supervision of the biophotonics expert Prof Juergen Popp. Dr. Xiaoyang Liu's research focuses on environmental analytical chemistry. Specifically, Dr. Liu has developed a series of spectroscopic and chemometric methods to investigate the multi-scale environmental interface behaviors of pollutants, including pollutant-interface and pollutant-pollutant interaction mechanisms, spatial distribution of pollutants on interfaces, and pollutant behavior prediction. Currently, Dr. Liu has published 11 papers in TOP journals like Environmental Science & Technology, Water Research, Analytical Chemistry, Chemical Engineering Journal, and Journal of Membrane Science as the first/corresponding author, and the H-index is 22. Dr. Liu has led 4 national and provincial-level projects and 1 collaboration and exchange project sponsored by the Royal Society.

Introduction of Hebei University of Technology

The predecessor of Hebei University of Technology (HEBUT) is called the Beiyang Technology School, established in 1903, which is the earliest university in China to cultivate industrial talents, and it founded the earliest university-run factory in China. The University ranked among the first batch of key universities under the national "Project 211" in 1996. In 2014, it was jointly built by Hebei Province, Tianjin, and the Ministry of Education. In 2017, it was selected as a national "double first-class" University. In recent years, three disciplines, i.e., materials science, chemistry, and engineering, have been ranked in the top 1% of the global ESI rankings and have been moving forward. In 2020, the university was awarded the "National Civilised Campus".

In recent years, around the major national strategic needs of Beijing-Tianjin-Hebei synergistic development and regional industrial transformation and upgrading development needs, the university relies on the platform jointly built by the province and municipality and ministries, establishes the "landing high" scientific research ideas, and gathers regional resources. The university has built 54 national and provincial research platforms, including provincial and ministerial state key laboratories, national engineering technology research centers, and national joint local engineering laboratories. The university has been awarded the second prize of the National Natural Science Award, the second prize of the National Science and Technology Progress Award, the Hou Debang Chemical Science and Technology Achievement Award, and the Hebei Provincial Science and Technology Outstanding Contribution Award. During the 13th Five-Year Plan period, the university hosted 21 major national key projects and more than 400 national natural science fund projects, granted more than 2,700 patents, and was approved as one of the first national pilot universities for intellectual property rights, ranking 70th among the top 100 universities in China for patents. The first "Yuanguang" small satellite was successfully flown by the Long March 8 launch vehicle and operated in orbit. The high-performance robot haptic sensing intelligence system was selected as one of the pioneering technologies in the "Science and Technology China" list in 2020. The university has spent 300 million yuan on science and technology annually, and more than 100 scientific research achievements have won national and provincial awards, making it the most awarded university in Hebei Province for outstanding contributions to science and technology, and one of the top ten outstanding invention and creation units in Hebei Province.

The university focuses on international exchange and cooperation. At present, the university has signed cooperation agreements with more than 60 foreign universities, covering all levels from undergraduate to doctoral in cooperation training. The university has also established the "Finland Campus" with LUT University in Lappeenranta, Finland, and the "Arizona College of Technology" with the world-renowned University of Arizona, USA. Currently, there are nearly 1,000 students in Sino-foreign cooperative programs and more than 290 international students at HEBUT.

Introduction of School of Energy and Environmental Engineering

The School of Energy and Environmental Engineering originated from the Department of Mechanical Engineering, re-established by Hebei Institute of Technology in 1958. In 1960, the Shipbuilding major of the Department of Mechanical Engineering was changed to the Internal Combustion Engine major. In 1961, the Internal Combustion Engine major was separated to form the Department of Agricultural Machinery. Since then, it has been renamed as the Second Department of Mechanical Engineering, the Department of Power Machinery Engineering, and the Department of Thermal Energy and Power. In 2002, it was renamed to the School of Energy and Environmental Engineering.

The School of Energy and Environmental Engineering in Hebei University of Technology has 6 undergraduate programs, including Energy and Power Engineering, Environmental Engineering, Building Environment and Energy Application Engineering, Environmental Protection Equipment Engineering, Environmental Engineering (Sino-German cooperation), and Energy Storage Science and Engineering. The Energy and Power Engineering, Environmental Engineering, Building Environment, and Energy Application Engineering are national first-class majors. The Environmental Protection Equipment Engineering major was newly established in 2018. It is an urgently needed major in Hebei Province and a first-class major in Hebei Province. The Environmental Engineering major passed the international engineering education professional accreditation of the Ministry of Education in 2022.

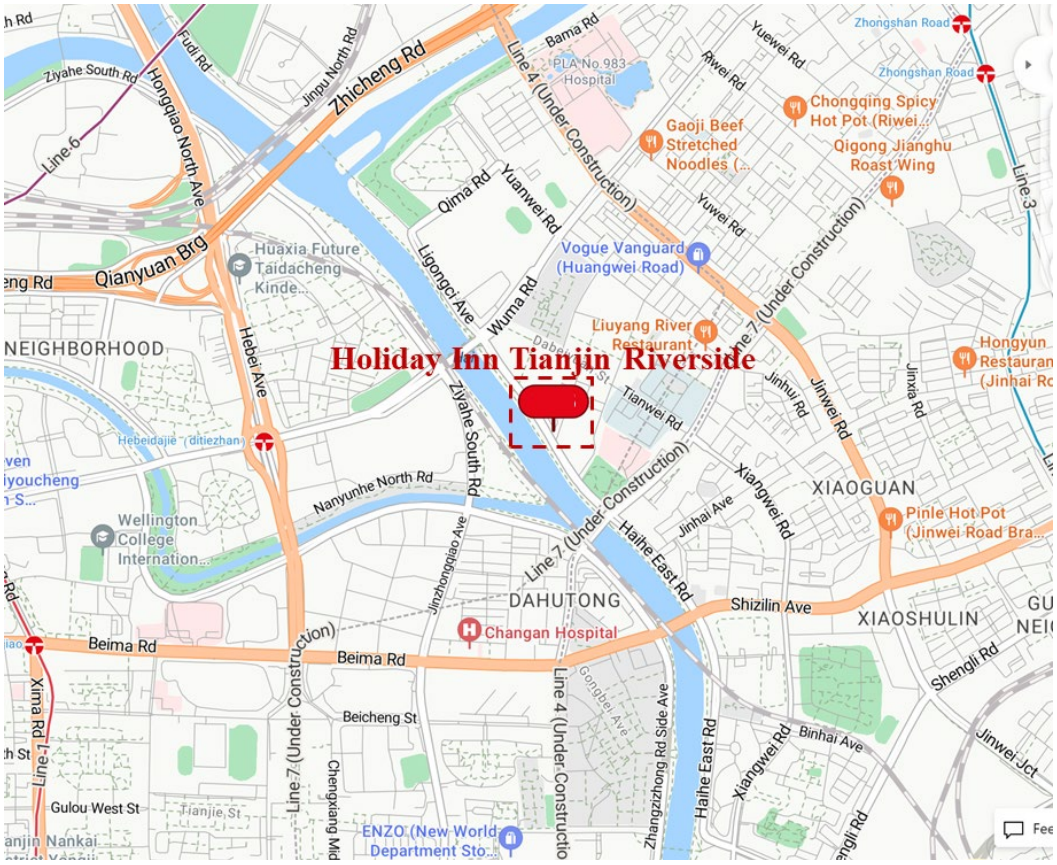
The college has a postdoctoral research station and the authority to confer first-level doctoral degrees in Power Engineering and Engineering Thermophysics. The college also has four second-level doctoral degree authorization points (i.e., Engineering Thermophysics, Thermal Energy Engineering, Chemical Process Machinery, and Energy and Environmental Engineering). The college has two first-level master's degree authorization points in Power Engineering and Engineering Thermophysics, as well as Environmental Science and Engineering, and two professional degree authorization points in Power Engineering and Resources and Environmental Engineering.

In recent years, the School of Energy and Environmental Engineering is committed to scientific research and development, and has undertaken several important scientific and technological projects, including hosting a national key research and development program, a key project, the National Natural Science Foundation and key research and development program (i.e., nearly 100 national projects, more than 100 provincial and ministerial projects). The Institute presided over more than 230 horizontal research projects, published more than 900 papers in high-level journals, and has won the first prize of the provincial science and technology progress award, the first and second prize of the provincial natural Science award, and other awards.

Venue

Holiday Inn Tianjin Riverside

The Holiday Inn Tianjin Riverside is situated in the Phoenix Shopping Mall A, East Haihe Road, Hebei District, Tianjin, close to the Metro Line 2 Jianguo Road Subway Station. The symposium will be held at the Riverside Hall (5 F) of Holiday Inn Tianjin Riverside. The lunch will be at the Cafe Venice (2 F).



Travel and Accommodation

Transportation

3.8 kilometers away from Tianjin West Station, about 15 minutes by taxi;

3 kilometers away from Tianjin North Station, about 12 minutes by taxi;

5 kilometers away from Tianjin Railway Station, about 15 minutes by taxi;

20 kilometers away from Tianjin Binhai International Airport, about 40 minutes by taxi.

Accommodation

Holiday Inn Tianjin Riverside

Holiday Inn Tianjin Riverside is located along the Haihe River in Tianjin within easy proximity to all major attractions such as Dabei Temple, Tianjin Haihe River, The Ferris Wheel, The five old street, The Ancient Culture Street, Food Street, Tian Hou Palac, Tianjin Italian Style Town, Jinwan Platz, Tianjin TV Tower. You will be able to travel around Tianjin via the subway and the bus.

Contact

TEL: 86-22-26278888

Email: sales@holidayinntianjin.com

Website: https://www.ihg.com.cn/holidayinn/hotels/cn/zh/tianjin/tsncr/hoteldetail

Address: Phoenix Shopping Mall A, East Haihe Road, Hebei District Tianjin, Tianjin 300141 Mainland China

Other hotels nearby

- **ATOUR Hotel** (0.15 miles/250 m from the Holiday Inn Tianjin Riverside) Tianjin Hebei District Cihang Road and Li Gongci Street intersection of Phoenix Business Square, 1 floor.
- **JIANGUO BOUTIQUE Hotel** (0.28 miles/450 m from the Holiday Inn Tianjin Riverside) No.3 Haihe East Road, Hebei District, Tianjin.
- **YIFEI Hotel** (0.28 miles/ 450 m from the Holiday Inn Tianjin Riverside) No.1 Haihe East Road, Wanghailou Street, Hebei District, Tianjin.
- **VIENNA CLASSIC Hotel** (0.25 miles/400 m from the Holiday Inn Tianjin Riverside) No. 417 Zhongshan Road, Hebei District, Tianjin.