

1 INSTITUTE OF ENVIRONMENT AND ECOLOGY (iEE)

The Institute of Environment and Ecology belongs to Tsinghua Shenzhen International Graduate School, which is a vital part of Tsinghua's environmental science discipline. Oriented to the core needs of high-quality development and based on the forefront of international disciplines, the institute is committed to studying the theory of ecological and environmental protection, investigating key technologies, cultivating high-level personals with global competence, and contributing Tsinghua's thought and Shenzhen's paradigm for ecological civilization and community building with a shared future for mankind.



2 RESEARCH FIELDS OF iEE

- **Urban Environment and Compound Ecology**
Urban ecosystem evolution and protection, urban atmospheric environment protection, resilience city and multi-water sources security, zero-waste city and resource recovery, smart city
- **Industry and Special Environmental Protection**
Prevention and control of industrial air pollution, industrial ecology and coordinated control of water and solid pollution, emerging ultra-pure water production for electronic industry, safety management of deep tunnel and comprehensive pipe gallery
- **Land and Sea Interactive Environmental Protection**
Land-ocean-atmosphere nexus, Marine pollution control and ecological protection, island resource self-sufficiency and ecological maintenance, deep-sea resource development and ecological environment protection
- **Regional Cross-media Complex Pollution and Environmental Health**
Cross-medium transport and health risk of chemical pollutants, pathogenic microorganism transmission and risk assessment, multi-pollutant's cross-medium prevention and control
- **Big Data and System Management of Ecological Environment**
Ecological service value evaluation and green policy, regional ecological environment accurate management, green energies and global climate governance
- **Climate Change and Future Ecological Environment Protection**
Aerospace environment simulation and protection, climate change impact on subtropical regions, carbon-neutral cities and carbon-neutral environments, deep-sea resources exploitation and ecological environmental protection, integrated energy-environment-climate regulation



3 FACULTY OF iEE

The Institute has formed a team of talents with a reasonable age structure and professional structure led by Academician Kebin He. The faculty team currently includes Academician Kebin He, Professor Jian'e Zuo, Professor Yuntao Guan, Professor Xihui Zhang, Professor Xiaoyan Li, as well as 7 Associate Professors and 6 Assistant Professors, which provide a strong guarantee for the smooth implementation of high-level teaching, scientific research and social services.



4 GRADUATE EDUCATION AND TRAINING

The Institute of Environment and Ecology aims to cultivate high-level environmental and ecological talents with international vision and global competence. Through the unified enrollment of Tsinghua University, it carries out doctoral and master's graduate education in Shenzhen, providing postgraduates with in-depth professional training including fundamental knowledge, environmental engineering professional practice, site visit, international exchange and multi-level academic activities.

At present, iEE has:

	Major	Research Field
Full-time Doctoral Programs	Environmental Science and Engineering Environmental Science and New Energy Technology	
Full-time Master's Programs	Environmental Engineering (including Tsinghua University-Kyoto University Double Master's Degree Program in Environmental Engineering) Tsinghua University-Leibniz University Hannover Dual Master's Degree Program in Resources and Environment Tsinghua University-Kanazawa University Double Master's Degree Program in Resources and Environment Green Environmental Infrastructure	
	Environmental Science and New Energy Technology	Global Environment and New Energy Technology

Meanwhile, iEE also participates in cultivation of Tsinghua Engineering Doctoral Program for Guangdong-Hong Kong-Macau Greater Bay Area (non-full-time).

Furthermore, iEE has established close cooperative relations with many world-renowned universities such as Seoul National University, University of Auckland, Rice University, Yale University, University of New South Wales, National University of Singapore, and also has carried out cooperation and preparation for international education programs with several universities.



5 RESEARCH PLATFORM

With the strong support of the Ministry of Ecology and Environment, Guangdong Province and Shenzhen Municipal Government, iEE has established multiple high-level research centers, and has international joint laboratories with Kyoto University and other institutions. At present, iEE is equipped with first-class scientific research platform and facilities, including 4,000 m² innovation lab space and ¥50 million fixed assets of the equipment.



6 RESEARCH ACHIEVEMENTS

In recent years, iEE has undertaken several national-level scientific research projects such as National Science and Technology Major Project, National Key R&D Program of China, National Natural Science Foundation of China, and many important subjects from Guangdong Province and Shenzhen Municipal Government. It has also secured a number of achievements and patents in environmental protection science and technology, and has completed the transformation of the achievements and application demonstration in the Pearl River Delta and Yangtze River Delta regions. Moreover, iEE has won multiple awards such as Second-Class Prizes of The State Scientific and Technological Progress Award, First-Class Prizes of Ministerial and Provincial-Level Awards. In the field of water reuse, two ISO International Standards developed by iEE have been transformed into British and French standards, which won the ISO Outstanding Contribution Award.

7 INTERNATIONAL COOPERATION

In response to the national the Belt and Road Initiatives, iEE has conducted in-depth cooperation with "the Belt and Road" Environmental Technology Exchange and Transfer Center (Shenzhen) and other institutions to organize and provide environmental technology professional training. iEE actively participates in global environmental protection training programs organized by the Ministry of Commerce and other institutions, and introduces practical experience of environmental engineering to the staff of government departments, enterprises and institutions in Sri Lanka, Tanzania, Fiji and other countries. In addition, iEE actively promotes the international standardization of water reuse technology, and is responsible for several working groups, such as Design of a centralized water reuse system in urban areas (ISO/TC282/SC2/WG1) and Reclaimed water safety evaluation (ISO/TC282/SC2/WG3), and has compiled the ISO international standard and won the ISO Outstanding Contribution Award.



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