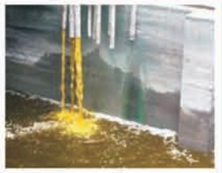
Enhancement of relationships with other organizations

In order to consider solutions for the original problem in environmental facilities, which contributes to an environmental improvement, we are visiting environmental facilities such as landfills, water treatment plants and wastewater treatment plants in Shenzhen city. Moreover, we plan to make opportunities for sharing our research knowledge by extending our network to local government agencies and environmental service companies, which are located around Shenzhen city.



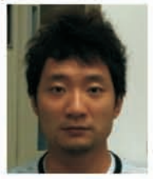




Full-time Faculties

Dr. Makoto YASOJIMA, Associate Prof.
Environmental monitoring,
Analytical technology
m.yasojima@aw8.ecs.kyoto-u.ac.jp

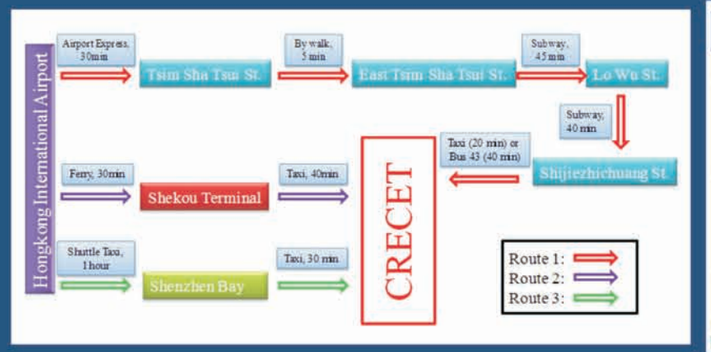
Dr. Xingbao GAO, Assistant Prof.
Comprehensive municipal solid
waste management
gaoxb@tsinghua.edu.cn



Dr. Dawei QUAN, Postdoctoral Fellow
Dringking water treatment, health
risk assessment
davidquan@urban.env.kyoto-u.ac.jp

Ms. Xiaoxia SUN, Secretary
f_sxx@yahoo.com.cn

Access



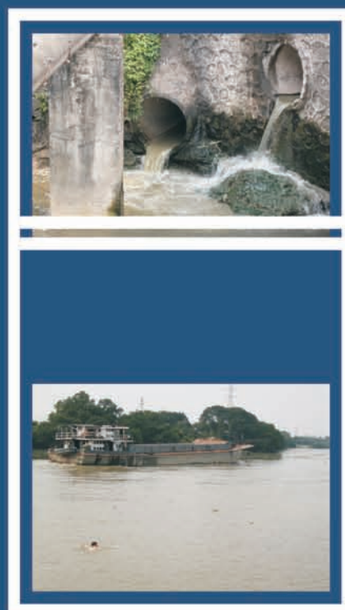
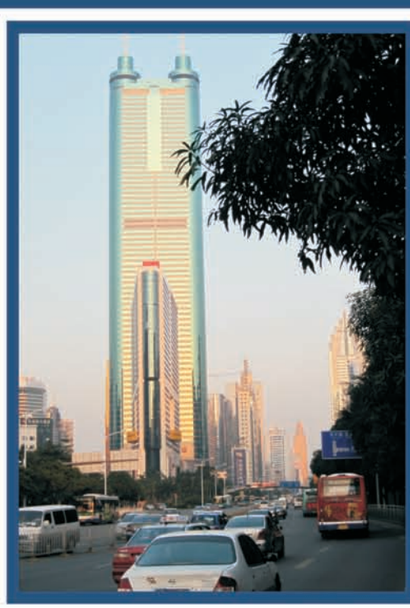
Contact us

Address: L-204, The Univ. Town, Tsinghua Univ., Xili, Nanshan District,
Shenzhen City, Guangdong Province, P. R. China
Tel: +86-755-2603-2454/6065
Fax: +86-755-2603-6401
GCOE HP: http://hse.gcoe.kyoto-u.ac.jp/index.html
EML HP: http://www.ges.kyoto-u.ac.jp/cyp/modules/jst/

Kyoto University - Tsinghua University

Cooperative Research and Education Center for Environmental Technology «CRECET»

-Overseas base for GCOE program and field campus for EML program-


Nov. 2010 version

Greetings from CRECET leaders

Prof. Hiroaki TANAKA

The reflection of the rapid economic development can be seen as serious environmental problems in Southern China. Simultaneously, environmental protection programs are still insufficient to identify and conquer the current environmental problems. Since Japan has accumulated much experience and know-how in deal with variety of environmental problems, we are trying to transfer our technological skills to China thorough cooperative research activities. Furthermore, we would like to make our activities more useful by suggesting the solution for present environmental problems of China.

Prof. Hongying HU

The environmental pollution in China caused by rapid economic development has attracted much attention from all over the world. Energy saving and emission reduction has been a national strategy, aiming to solve the environmental pollution. It will give a good opportunity for developing environmental technologies. Japan, as a developed country, is experienced in the environmental protection. Therefore, to strengthen the academic communication and collaboration between China and Japan and to foster highly creative young scientists will be quite beneficial to the solution of complicated environmental issues in China.

Prof. Hiroshi TSUNO

It is difficult for only one country to solve the environmental problems sufficiently. It is therefore necessary for many countries to cooperate and tackle the problems continuously. China has been our neighbor for a very long history, so is our active cultural exchanges. It is necessary for us to cultivate the research activities in the environmental field under the cooperation of Tsinghua University. Therefore, we established this Cooperative Research and Education Center in Shenzhen Campus. We hope that our partnership will grow stronger and stronger and this center would bring up much more young scholars to solve the environmental problems in China, Japan and the world.

Prof. Xihui ZHANG

China is still on a fast track in economic and social development. Variety of environmental issues come out simultaneously, i.e. comprehensive pollution. It is a giant challenge to China, while it is also an opportunity. If the intrinsic relationships were figured out with technological tool, many environmental issues could be solved at one time, thus leading to sustainable development. It is needed to learn from Japan about its experiences in dealing with different environmental issues and to collaborate for the future.

About Shenzhen, China

Shenzhen is a coastal city, which lies close to Hong Kong in South China, and administered by the Guangdong Provincial Government. The total area of Shenzhen is 1953 square kilometers in the subtropical oceanic climate zone. The annual average temperature was 22.5 ℃, and annual average rainfall was 1,966.3 mm. Shenzhen has more than 160 rivers and streams, which are associated with the hydrographic systems of the Dongjiang River, sea bays and Pearl River estuary. Shenzhen is the China's first special economic zone established in 1980, consisting of 4 districts, namely Lohu, Futian, Nanshan and Yiantian. Shenzhen is an essential southern city for high-technology innovation and production industry. Shenzhen is the first city which adopted the "Green GDP index" to assess the urban development. At present, the city is developed with low input, low energy consumption, high output, and high efficiency. Its GDP of 820.123 billion RMB in 2009 gives it 4th rank in China.

History of Shenzhen base

Cooperative Research and Education Center for Environmental Technology (CRECET), Kyoto Univ. and Tsinghua Univ., founded at Graduate School at Shenzhen, Tsinghua University as a joint effort by Kyoto University and Tsinghua University in 2005, has conducted many research and educational activities. Since 2009, a major role has been played by KTCRECET as a joint overseas base for GCOE (Global Centre of Excellence) program and EML (Environmental Management Leader) program of Kyoto University. This overseas base focuses on fostering students' global environmental awareness besides building partnerships with Tsinghua Univ. and developing research collaborations.

Research and education programs

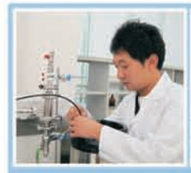
From 2008, Kyoto Univ. started research and education programs, called GCOE and EML, under the financial support from Japanese Ministry of Education, Culture, Sports, Science and Technology. GCOE program is aimed at "strengthen and enhance the education and research functions of graduate schools, to foster highly creative young researchers who will go on to become world leaders in their respective fields through experiencing and practicing research of the highest world standard". The aim of EML program is to "foster environmental leaders who solve environmental problems in Asian countries". The programs are run by Kyoto University as the core institution with cooperation with overseas bases or field campuses such as CRECET and local institutions, organizations and companies.

Research

The aim of CRECET is the promotion of collaborations in environmental issues through the GCOE Program. Its objective is: to identify various environmental problems, find their appropriate control and management tools, and propose and apply solutions for better human health. The research fields include Environmental risk assessment and management, Establishment of low carbon society, Minor element dynamics, Drinking water treatment technology, Human security programs for water environment, Waste reuse and management, and Wastewater treatment and recycle.

The research activities are as following:

1)Membrane filtration technology for drinking water in Pearl River Delta district
2)Contaminant levels of emerging pollutants (EDCs and PPCPs) in rivers of Shenzhen
3)Water quality survey for WWTPs and river in Shenzhen



Membrane filtration

Emerging pollutant research

WWTPs and river water quality survey

Education

We aim to foster graduate students of both Universities for the conduct and management of collaborative researches. The education activities are as following:

1)Special Seminar of Environmental Analysis: held both in Tsinghua Univ. Beijing campus and Shenzhen campus. The aim is to deliver advanced analysis technology of Kyoto Univ. to Chinese partner and promote the collaboration.
2)Advanced environmental engineering E-learning course: a remote course, established by Kyoto Univ., and conducted with Tsinghua Univ. and Malaya Univ. as well. The course is focused on the new development and state-of-the-art issues in environmental science and engineering. In the spring semester of 2010, 3 graduate students of Tsinghua Univ. joined the course in CRECET.
3)Lectures on up-to-date environmental technologies of Japan: When the famous profrssors of Kyoto Univ. visited CRECET, we organized several lectures. The total paticipants reached 100.
4)Long-term internship: CRECET accepts doctoral students of Kyoto Univ. to take long-term internship. Totally 4 students conducted field-oriented internship in Shenzhen since 2005.

Special Seminar of Environmental Analysis

E-learning course

Lectures on up-to-date environmental technologies of Japan

Long-term internship

International collaboration

Through CRECET, Kyoto Univ. has established good collaboration relationships with local government, institute, and companies, including Shenzhen Water Group, Human Settlements and Environment Commission of Shenzhen Municipality, Shenzhen Academy of Environmental Science, Shenzhen Environmental Science Society, Shenzhen Urban Development Research Center, Shenzhen Association of Environmental Protection Industry, Shenzhen Water Quality Monitoring Center, Zhongshan Sanjiao Town S&T innovation Center, Zhuhai Station of the National Water Quality Monitoring System for Urban Water Supply, etc. Now, activities of human exchange, academic discussion, and training have been carried out with these organizations.

Symposium and workshop

Symposium on Future Development for the Cooperative Research and Education Center for Environmental Technology, Kyoto University - Tsinghua University; Dec. 2, 2009.

Workshops

- Workshop on the advanced sewage technology between Japan and China for water environment; July 23, 24, 27, 2009
- GCOE Shenzhen base workshop; Dec. 3, 2009
- China-Japan-Korea International Workshop on Urban Water Environment Management and Drainage System; Jan 16, 2010
- Workshop on future challenge of water and sewage works in Japan and southern China; March 5 and 6, 2010