

China-US 2010 Joint Symposium “Energy, Ecosystem, and Environmental Change”

INTRODUCTION

On July 20, 2006, in Beijing, representatives of the University of Tennessee-Oak Ridge National Laboratory’s (UT-ORNL) Joint Institute for Biological Sciences (JIBS) and UT’s Institute for a Secure and Sustainable Environment (ISSE) signed a framework agreement establishing the **China-US Joint Research Center for Ecosystem and Environmental Change** (<http://jrceec.utk.edu>). The focus of this agreement is to promote research collaboration, academic exchange, student education, and technology training and transfer in areas of environmental concern. This specific agreement was reached with two Institutes of the Chinese Academy of Science (CAS)—the Institute of Geographical Science and Natural Resources Research (IGSNRR) and the Research Center for Eco-Environmental Science (RCEES)—both in Beijing. The Joint Center’s primary collaborative themes include: (1) ecosystem processes and management, (2) environmental sustainability of bioenergy production, (3) ecological foundations of water resources and quality, and (4) technologies for improvement of eco-environmental systems.

Since establishment of the Joint Center, an Environmental Sustainability and Bioenergy theme has arisen and been the topic of several reciprocal visits and joint workshops in China and the US. The first annual workshop was convened on September 11-14, 2007, in Knoxville, Tennessee, to address the environmental aspects of bioenergy production and sustainability. Approximately 40 scientists from the partnering institutions and six program officers from the US National Science Foundation (NSF) and the Chinese government attended the workshop.

The second China-US workshop, sponsored by the US NSF and the Natural Science Foundation of China (NSFC), was held on October 15-18, 2008, in Beijing, China, with a focus on bioenergy consequences for global environmental change. About 80 scientists, program leaders, and students attended the conference, including officials from US Embassy in Beijing.

The third China-US workshop, “Climate-Energy Nexus,” jointly sponsored by the US NSF and US Department of Energy, was held on November 11-13, 2009, at Oak Ridge National Laboratory, Oak Ridge, Tennessee. More than 50 presentations were made at the conference, with a focus on climate-energy interactions and their global impacts. About 120 leading scientists, program leaders, and students attended the conference.

This year’s workshop, “Energy, Ecosystem, and Environmental Change,” is being organized by the Research Center for Eco-Environmental Sciences of the Chinese Academy of Sciences and will be held on September 22-24 in Beijing, China. It will bring together more than 200 leading scientists in the areas of renewable energy, ecology, environmental science and engineering, and biology from China and the US to exchange perspectives and findings, identify opportunities, and develop action plans for promoting bilateral research collaboration in energy, ecology, and environment. The 2010 symposium will be an important communications tool among the leading scientists of

the US and China in preparation for future United Nations conferences on global climate and sustainable development. The workshop is fully consistent with the US-China Ten-Year Energy and Environment Cooperation Framework agreed to by the two governments in June 2008.

BACKGROUND

The economies of the US and China are the globally dominant drivers of fossil fuel consumption and the release of greenhouse gases and are thus strategically linked to the challenges of global climate change and the sustainable development of alternative and renewable energy sources. In addition, the US and China are natural partners for protecting climate through the transformation of energy production and use. These two nations share responsibility for developing realistic goals, effective strategies, and practical protocols for the best solutions for global energy, climate, and environmental problems. More than ever before, the US and China need to exchange perspectives at all levels and develop a sustainable, mutually beneficial joint agenda on sustainable development and the mitigation of greenhouse gas emissions. More importantly, US-China collaboration in energy and climate will not only represent the realization of a series of bilateral environment and energy agreements signed at the annual meetings of the **US-China Strategic Economic Dialogue (SED)**, but will also create new economic opportunities through technology transfer under the established goals of clean and sustainable development mechanisms.

WORKSHOP GOALS AND OBJECTIVES

The workshop will seek to strengthen and promote China-US research partnerships through specific joint research and education initiatives related to clean energy, ecosystem management, and mitigation of environmental damages. Specifically, the conference will address:

- Advances in critical research and development of microbial ecology and technologies that are used for bioenergy production, bioremediation, and below-ground ecological restoration;
- Coupled cycles of carbon and nitrogen associated with natural and urban ecosystems as well as other processes that influence net greenhouse gas (GHG) emissions;
- Technologies and deployment strategies for renewable energy production, energy efficiency, and other energy supply options that reduce GHG emissions and maintain ecosystem services;
- Environmental health issues such as risk assessment approaches, environmental contamination and remediation, ecotoxicological processes, and waste reduction and treatments;
- Joint programs of research for students and young faculty.

EXPECTED OUTPUT

Special topic articles or reports in *Science*, *PNAS*, *Environmental Science and Technology*, *Frontiers in Ecology and the Environment*, or *Ecological Applications*.

SPONSORS

Ministry of Science and Technology of China

Chinese Academy of Sciences

Natural Science Foundation of China

US Department of Energy

US Environmental Protection Agency

US National Science Foundation

PARTICIPANTS

Participants (~200) will include scientists, students, industry experts, and government officials from

- The University of Tennessee (UT)
- Purdue University (Purdue)
- Oak Ridge National Laboratory (ORNL)
- Lawrence Berkeley National Laboratory (LBNL)
- US Department of Energy (USDOE)
- US National Science Foundation (USNSF)
- US Embassy in Beijing, China
- University of Oklahoma
- Chinese Academy of Sciences (CAS)
- China Ministry of Science and Technology of China (MOST)
- University of Science and Technology of China (USTC)
- Tsinghua University (Tsinghua)
- Zhejiang University
- East China University of Science and Technology (ECUST)
- China Agricultural University

WORKSHOP ORGANIZERS AND COMMITTEE

Organizing Committee

Chairperson: Dr. Guibin Jiang (Deputy Director, Research Center for Eco-Environmental Sciences, CAS)

Co-Chairperson: Dr. Gary S. Sayler (Director, UT-ORNL Joint Institute of Biological Science [JIBS])

Members:

- Dr. Rusong Wang (RCEES, CAS)
- Dr. Zhiyun Ouyang (Deputy Director, RCEES, CAS)
- Dr. Guirui Yu (Deputy Director, IGSNRR, CAS)
- Dr. Shenggong Li (Associate Director, Synthesis Center of Chinese Ecosystem Research Network, IGSNRR, CAS)
- Dr. Qingxiang Guo (Director, Anhui Key Laboratory of Biomass Clean Energy, USTC)
- Dr. Hanqing Yu (Director, Environmental Engineering Laboratory, USTC)
- Dr. Randall W. Gentry (President, UT Research Foundation; Director, ISSE, UT)
- Dr. Jie Zhuang (Research Director, ISSE, UT)
- Dr. John W. Bickham (Director, Center for the Environment, Purdue University)
- Dr. Pankaji Sharma (Associate Director, Discovery Park, Purdue University)
- Dr. Keith Kline (StaffScientist, Center for Bioenergy Sustainability, ORNL)

Secretary General

Dr. Zhiyun Ouyang (Deputy Director, RCEES, CAS), zyouyang@rcees.ac.cn

Dr. Jie Zhuang (Research Director, ISSE, UT), jzhuang@utk.edu

Secretary:

Dr. Bing Han (RCEES, CAS) hanbing666@rcees.ac.cn

Ms. Hong Gao (RCEES, CAS), gaohong521@gmail.com

Dr. Qiufeng Wang (IGSNRR, CAS), qfwang@igsnr.ac.cn

Hotel

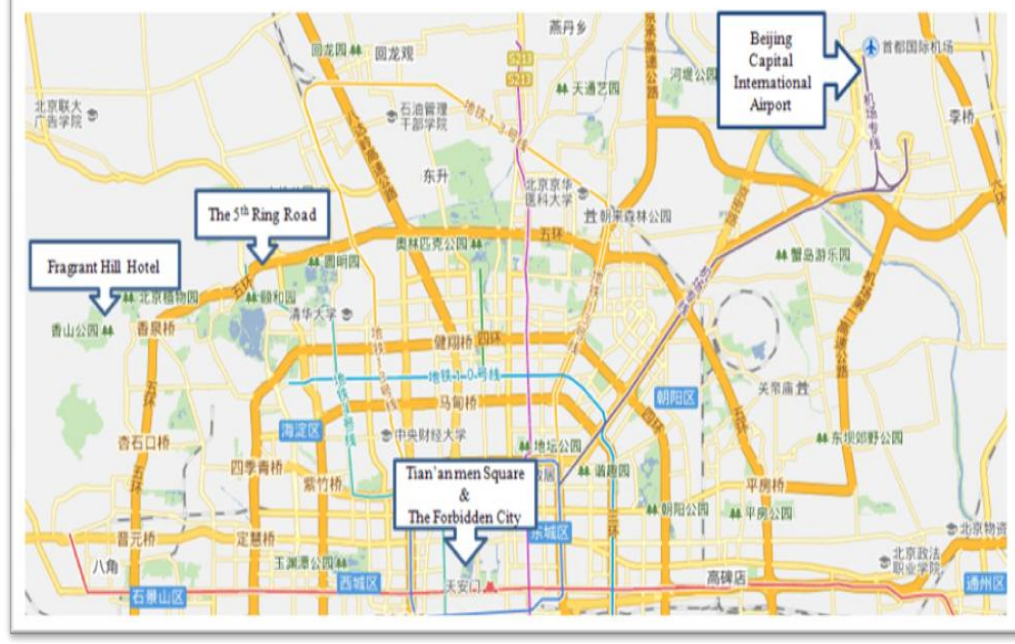
Participants will stay at the Fragrant Hill Hotel located at Fragrant Hill Park, 40 Mai Mai Street, Hadian District, Beijing, China. Conference organizers will reserved hotel rooms for the invited American participants.

Fragrant Hill Hotel is four-star hotel designed by the world-famous architect, I. M. Pei. It's well-known for the Chinese classicism architecture garden scenery and human studies. The hotel is situated at a former royal garden of western hills scenic area in Beijing. It's just by the western road of No. 5 Ring easy and fast for car driving.

Hotel Tel: 0086-010-62591166

Hotel Location

Hotel Location



Contact Information

Dr. Han Bing and Ms. Hong Gao

Research Center for Eco-Environmental Sciences

Chinese Academy of Sciences

18 Shuangqing Road, Haidian District

Beijing 100085, China

Phone: +86-10-62941033

Fax: +86-10-62849816

Emails: hanbing666@cees.ac.cn, and gaohong521@gmail.com

Tuesday, September 20-21, 2010

US delegates arrive in Beijing

Wednesday, September 22, 2010

- 8:30-9:00 am **Opening Ceremony** (Auditorium)
- 9:00-12:30 pm **Keynote Addresses** (four 45-minute keynotes in Auditorium)
Session 1: Microbial Ecology and Technology
Session 2: Ecosystem Cycles of Carbon and Nitrogen
- 10:30-11:00 am **Coffee Break and Group Picture**
Session 3: Renewable Energy and Emission Reduction
Session 4: Environmental Change and Health
- 12:30-1:30 pm **Lunch and Poster Presentations**
- 1:30-5:40 pm **Concurrent Sessions** (total 32 oral presentations)
- Session 1: Microbial Ecology and Technology** (Room 1)
Theme: *Bioenergy Science and Technology*
- 30-min plenary presentation
 - Seven 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- Session 2: Biogeochemical Cycles** (Room 2)
Theme: *Natural Ecosystem Processes*
- 30-min plenary presentation
 - Seven 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- Session 3: Renewable Energy and Emission Reduction** (Room 3)
Theme: *Energy Sustainability and Strategies*
- 30-min plenary presentation
 - Seven 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- Session 4: Environmental Change and Health** (Room 4)

Theme: *Environmental Contamination, Remediation, and Risk Assessment*

- 30-min plenary presentation
- Seven 20-min presentations
- 30-min questions
- 20-min summary (by Chair/co-Chair)

3:20-3:50 pm **Coffee Break**

6:00 pm **Reception**

Thursday, September 23, 2010

8:30-12:30 pm **Concurrent Sessions** (total 32 oral presentations)

Session 1: Microbial Ecology and Technology (Room 1)

Theme: *Biotechnology for Environmental Remediation*

- 30-min plenary presentation
- Seven 20-min presentations
- 30-min questions
- 20-min summary (by Chair/co-Chair)

Session 2: Ecosystem Cycles of Carbon and Nitrogen (Room 2)

Theme: *Urban Ecosystem Management*

- 30-min plenary presentation
- Seven 20-min presentations
- 30-min questions
- 20-min summary (by Chair/co-Chair)

Session 3: Renewable Energy and Emission Reduction (Room 3)

Theme: *Low Emission Technology and Strategies*

- 30-min plenary presentation
- Seven 20-min presentations
- 30-min questions
- 20-min summary (by Chair/co-Chair)

Session 4: Environmental Change and Health (Room 4)

Theme: *Ecotoxicological Processes and Technology*

- 30-min plenary presentation
- Seven 20-min presentations
- 30-min questions

- 20-min summary (by Chair/co-Chair)
- 10:20-10:40 am **Coffee Break**
- 12:30-1:30 pm **Lunch and Poster Presentations**
- 1:30-5:10 pm **Concurrent Sessions** (total 28 oral presentations)
- Session 1: Microbial Ecology and Technology** (Room 1)
- Theme: *Belowground Ecological Processes*
- 30-min plenary presentation
 - Six 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- Session 2: Ecosystem Cycles of Carbon and Nitrogen** (Room 2)
- Theme: *Greenhouse Gas Emission and Land Use*
- 30-min plenary presentation
 - Six 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- Session 3: Renewable Energy and Emission Reduction** (Room 3)
- Theme: *Resources Utilization and Strategies*
- 30-min plenary presentation
 - Six 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- Session 4: Environmental Change and Health** (Room 4)
- Theme: *Wastes Treatment and Management*
- 30-min plenary presentation
 - Six 20-min presentations
 - 30-min questions
 - 20-min summary (by Chair/co-Chair)
- 3:20-3:40 pm **Coffee Break**
- 5:15-6:00 pm **Session for International Collaboration** (Auditorium)
- 6:30 pm **Dinner** (Free exchange at Beer Bar)

Friday, September 24, 2010

1. Morning: Concurrent panel meetings on different research topics by interesting groups (details will be announced in the full agenda).
2. Afternoon: Tours on laboratory and facility as well as shopping
3. Evening: Chinese Cultural Dinner

Saturday, September 25, 2010

Route 1: Tour on Great Wall, Ming Tomb, and Forbidden City

Route 2: Depart for a trip to Karst Site in southern China (near the famous tourism city of Guilin)