

EU-CHINA WORKSHOP ON RESOURCE RECOVERY FROM BIOMASS AND GREEN TECHNOLOGY

NOV. 8-9, 2014, SJTU, SHANGHAI, CHINA

Welcome Address



**Charles Banks, Co-Chair, Professor,
University of Southampton, UK**

The

FP7 ECOFUEL Project is a joint initiative between the Universities of

Southampton, Aston and Aalto in Europe with Shanghai Jiao Tong University and Guangzhou Institute of Energy Conversion in China, and we are proud to have been invited to contribute towards this prestigious workshop. The Workshop programme covers 'Biofuel technologies for waste biomass utilisation'; 'Green technologies for environmental protection and remediation'; 'Resource recovery from wastes and new biomass sources' and 'Advanced technologies for wastewater treatment'. These are all vital areas in which the ECOFUEL project is making a contribution to securing lasting links between Europe and China in the field of sustainable energy production and environmental protection. We are also pleased to have the opportunity to come together with other Universities in China, Japan, the US and Australia, with key businesses in this sector and with young researchers at this truly international event.

**Zhenjia Zhang, Co-Chair, Professor,
Shanghai Jiao Tong University, P.R.C.**



On

behalf of the workshop organizing committee, I warmly welcome all

participants to join this exciting event in a cheerful season at Shanghai. Security of resources and energy supplies are amongst the major challenges facing governments throughout the world in the goal of achieving sustainable development. Biomass and wastewater treatment can both offer promising contributions towards this goal, and show how science and technology can be used to achieve it in an environmentally friendly way. Prof Banks and I are committed to this programme which is the only start of further joint actions that we hope to pursue with the invited participants, from China and from elsewhere in the world including the US, Australia, Japan and the UK. We look forward to seeing you in Shanghai Jiao Tong University for this prestigious Workshop.



About the Workshop

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he workshop is designed to provide keynote presentations from top international experts in the

fields of biomass-derived renewable energy and fuels and advanced resource-efficient wastewater treatment technologies. These platform presentations will provide the focus for discussion between all delegates attending the workshop to start to network and develop links. An important aspect is the opportunity it presents to all participants to summarise their work in the form of poster presentations, with specific time allocated within the programme to follow these up with individual discussions.

The Workshop topics have been chosen to address key issues relating to engineering solutions for sustainable energy and resource recovery, in areas where rapid technical advances are occurring. They also represent closely-aligned issues, with the aim of encouraging exchange of ideas between technical experts in these fields.

The Workshop has a strong practical focus with a number of key industries represented and will allow participants to explore options for translation of research ideas into commercial reality in a technically-driven field of application.

Shanghai Jiao Tong University is an outstanding venue for the workshop because of its excellent scientific and technical facilities and very strong links to industry. The campus itself is spacious, well laid out and provides an ideal environment for interaction between academics, business and industry. Shanghai is a thriving metropolis with good transport links to the rest of China and across the world.





IMPORTANT DATE

Call for posters **18 Sep.,2014**

Deadline for poster submission

27 Oct., 2014

Notification of poster acceptance

31 Oct., 2014

**Deadline for submission of scripts
of presentations for proceedings**

5 Nov., 2014

Registration on site

7 Nov. , 2014

Conference Theme

The application of advanced technologies to biofuel production, resource recovery, and environmental protection or remediation. This will include thermal, biological and chemical recovery from municipal and industrial wastewaters and agricultural, industrial and municipal wastes. Green technologies will be considered alongside conventional ones to identify ways in which performance can be improved and to assess their spectrum of application.

Topics

Topic 1: Biofuel technologies for waste biomass utilisation

Topic 2: Green technologies for environmental protection and remediation

Topic 3: Advanced technologies for wastewater treatment

Topic 4: Resource recovery from wastes and new biomass sources



Programme



November 8 (Saturday)

Opening

8:30~8:45 Prof Aidang Shan (Dean, School of Environmental Science and Engineering, Shanghai Jiao Tong University)
Prof Charles Banks
(Head of Water and Environmental Engineering Group,
Faculty of Engineering and Environment, University of Southampton)

Session 1 **New approaches to energy and resource - solid waste and biomass**

Chair: Prof Ronghou Liu

8:45~9:15 **European perspective on anaerobic digestion of solid wastes and biomass**
Prof Michael Chesshire, Evergreen Gas, UK

9:15~9:45 **Food waste as part of a circular economy**
Dr Yue Zhang, University of Southampton, UK

9:45~10:15 **Hydrogen and Methane fermentation by a pH and temperature-phased two stages circulation process**
Prof Yuyou Li, Tohoku University, Japan

10:15~10:45 *Coffee break (meanwhile Poster session 1 takes place in Room214)*

Session 2 **Green technologies for environmental protection and remediation**

Chair: Prof Craig Criddle

10:45~ 11:15 **Application of photocatalysis for environmental remediation**
Prof Shangguan Wenfeng, Shanghai Jiao Tong University, China

11:15~11:45 **Remediation of waste cutting oils**
Dr Duane Ager, University of Oxford /Microbial Solutions, UK

11:45~12:15 **Rice husk ash utilisation for establishing a local sustainable energy community**
Prof Masafumi Tateda, Toyama Prefectural University, Japan

12:15-14:15 *Lunch / (meanwhile Poster session 2 takes place in Room214)*

Session 3 **Biofuel technologies for waste biomass utilisation**

Chair: Prof Zhongming Wang

14:15~14:45 **Potential for energy recovery from thermal and biochemical routes in China**
Prof Ronghou Liu, Shanghai Jiao Tong University, China

14:45~15:15 **FAME hydrotreated and isomerized to aviation alkanes fuel catalyzed by acid Ni-M mesoporous molecular sieve**
Prof Pengmei Lv, Guangzhou Institute of Energy Conversion, China

15:15~15:45 **Algricultural residues for power generation in China**
Dr Joe Zhao, ESD China Group Limited, China

15:45~16:15 *Coffee break (meanwhile Poster session 3 takes place in Room214)*

Programme



November 8 (Saturday)

Session 4 Improving Performance of Biofuel technologies

Chair: Prof Shangguan Wenfeng

- 16:15~16:45 **Role of heterogeneous catalysis in energy research**
Dr Zheng Jiang, University of Southampton, UK
- 16:45~17:15 **Improving performance of biofuel systems using catalysis**
Dr Zhijun Tai , Aston University, UK
- 17:15~17:45 **Biofuels and engine combustion**
Dr Ossi Kaario, Aalto University, Finland
- 17:45~18:15 *Coffee break (meanwhile Poster session 4 takes place in Room214)*
- 18:30~20:30 *Welcome Banquet*

November 9 (Sunday)

Session 5 Advanced Technology for Wastewater Treatment

Chair: Prof David Stuckey

- 9:00~9:30 **Energy-neutral removal of organics, nitrogen, and salt from domestic wastewater: emerging technologies could do it, but can they cross the "Valley of Death"?**
Prof Craig Criddle, Stanford University, US
- 9:30~10:00 **Potential for nutrient removal and low-cost wastewater treatment using granular sludge technology**
Dr Yongqiang Liu, University of Southampton, UK
- 10:00~10:30 **Bioremediation of contaminated subsurface via reductive reactions**
Prof Weimin Wu, Stanford University, US
- 10:30~11:00 *Coffee break (meanwhile Poster session 5.1 takes place in Room214)*
- Chair: Prof Weimin Wu*
- 11:00~ 11:30 **Anaerobic treatment of liquid wastes**
Prof Zhenjia Zhang, Shanghai Jiao Tong University, China
- 11:30~12:00 **Ambient temp anaerobic treatment of industrial wastewater**
Prof Charles Banks, University of Southampton, UK
- 12:00~12:30 **Application of anaerobic membrane bioreactors: effect of SMP and colloids on fouling**
Prof David Stuckey , Imperial College London, UK
- 12:30-14:00 *Lunch / (meanwhile Poster session 5.2 takes place in Room214)*

Programme



November 9 (Sunday)

Session 6 New approaches to energy and resource - effluents and liquids

Chair: Prof Charles Banks

14:00~14:30 **Synthetic biology for value-adding in sustainable energy photo-bioreactors**

Prof Brett Neilan, University of New South Wales, Australia

14:30~15:00 **Integration of processes for efficient wastewater treatment and energy recovery**

Frank Rogalla, Aqualia, Spain

15:00~15:30 **Algae as a potential third-generation biofuel: state of the art in China**

Prof Zhongming Wang, Guangzhou Institute of Energy Conversion, China

15:30~16:00 *Coffee break (meanwhile Poster session 6 takes place in Room214)*

16:00~18:30 **Flash presentation section (5 min/ poster)**

19:00~21:00 **Farewell Dinner**

Venue

Conference venue: Conference Hall in Environmental Science Building

会议地点:环境科学楼会议厅

Address: The Second Floor of Environmental Science Building, 800 Dong Chuan Rd., Min Hang District, Shanghai, China

详细地址: 上海市闵行区东川路800号环境科学楼二楼会议厅

Registration and accommodation

Workshop Registration Desk:

located in the lobby of Shanghai Jiao Tong University Academic Exchange Centre

Operation time:

Nov.7--11:00am~11:00pm

Please Visit the Registration Desk when you arrive onsite to pick up official access badge and registration package.

Hotel: Shanghai Jiao Tong University Academic Exchange Center

Address: 800 Dong Chuan Rd., Min Hang District, Shanghai, China

Notes: Standard accommodation is available at Shanghai Jiao Tong University Academic Exchange Centre. And we could help to book the room for the participants who required room reservation. From SJTU Academic Exchange Centre to the No.1 entrance of SJTU is about 3 minutes' walk. And it will take 10 minutes' walk from SJTU Academic Exchange Centre to Environmental Science Building where the workshop to be held. Phone number: +86-21-54740800.





Organizers

Shanghai Jiao Tong University
University of Southampton

Chairs

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Prof Zhenjia Zhang, Shanghai Jiao Tong University

Organising and Scientific Committee Members

Prof Brett Neilan, University of New South Wales
Prof Craig Criddle, Stanford University
Prof Weimin Wu, Stanford University
Prof Ronghou Liu, Shanghai Jiao Tong University
Prof Pengmei Lv, Guangzhou Institute of Energy

Conversion

Dr Sonia Heavens, University of Southampton
Prof Shuguang Lv, East China University of Science and

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