Preface

Scientists continue to search for clean and renewable energy alternatives to our current power production methods. And the global reduction of greenhouse gases is dependent on the adoption of energy conservation technologies at industrial level as well as this clean energy generation. The 2013 International Conference on Renewable Energy and Environmental Technology (REET 2013, ICREET 2013) took place in Jilin, China, September 21-22, 2013. This conference series provides a forum for accessing to the up-to-date knowledge from both industrial and academic worlds and allows for the free exchange of ideas and challenges faced by these two key stakeholders and encourage future collaboration between these groups.

Following evaluation and feedback by the International Scientific Committee, accepted papers are selected for publications in those volumes. Studies presented in this book cover these topics: Environmental Chemistry and Biology, Environmental Materials, Environmental Safety and Health, Environmental Planning and Assessment, Environmental Analysis and Monitoring, Environmental Restoration Engineering, Pollution Control Technology, Waste Disposal and Recycling, Ecological and Environmental Protection, Forest Cultivation and Plant Protection, Hydrology, Water Resources Engineering, Soil and Water Conservation, Storage and Processing of Agricultural Products, Water Supply and Drainage, Green Building Materials, Architecture and Energy-saving Technology, Cleaner Production Processes, Development and Utilization of Solar Energy, Development and Utilization of Biomass Energy, Development and Utilization of Wind Energy, Nuclear Energy Engineering, High Voltage and Insulation Technology, Power Electronics and Power Drives, Power Grid and Smart Grid Technologies, Power System and Automation, Power System Management, Storage Technology and Energy-saving Technology, Energy Materials, Energy Chemical Engineering, New Energy Vehicles and Electric Vehicles, Engineering Thermophysics and Thermal Engineering, Research and Design of Machinery and Manufacture in Mechanical Engineering, Data and Signal Processing, Measurments, Information Technology and Automation Technology, Mineral Prospecting and Exploration, Mining Engineering and Mineral Process Engineering, Oil and Gas Well Development Projects, Urban and Regional Planning, Energy Strategy etc.

We want to thank the Organizing Committee, the Institutions and Sponsors supporting the Conference, and everyone who contributed to the organization of this meeting, for their invaluable efforts in order to guarantee the complete success of this conference.

The editors

2013 International Conference on

Renewable Energy and Environmental Technology

(REET 2013)

Organized by:

Northeast Dianli University, China

Conference Organization

Chairman

Prof. Guoqing Li, Northeast Dianli University, China

Co-Chairman

Prof. Guowei Cai, Northeast Dianli University, China

International Scientific Committee

Prof. Jun Ma, Harbin Institute of Technology, China

Prof. Guangjun Wang, Chongqing University, China

Prof. Peihong Wang, Southeast University, China

Prof. Guoqing Li, Northeast Dianli University, China

Prof. Guowei Cai, Northeast Dianli University, China

Prof. Yong Li, Northeast Dianli University, China

Prof. Zhiming Xu, Northeast Dianli University, China

Prof. Jianguo Wang, Northeast Dianli University, China

Prof. Yanzhong Ju, Northeast Dianli University, China

Prof. Gangui Yan, Northeast Dianli University, China

Prof. Mojie Sun, Northeast Dianli University, China

Prof. Xiaohui Guan, Northeast Dianli University, China

Prof. Yingjie Zhang, Northeast Dianli University, China

Prof. Jingli Xu, Shanghai University of Engineering Science, China

Prof. Wenbin Cai, Fudan University, China

Prof. Zhenqian Chen, Southeast University, China

Prof. Haozhong Cheng, Shanghai Jiao Tong University, China

Prof. Ming Dong, Shanghai Jiao Tong University, China

Prof. Boxue Du, Tianjin University, China

Prof. Yang Fu, Shanghai University of Electric Power, China

Prof. Honghua Ge, Shanghai University of Electric Power, China

Prof. Jingtao Han, University of Science & Technology Beijing, China

Prof. George A. O'Doherty, Northeastern University, USA

Prof. Tetsuro Majima, Osaka University, Japan

Prof. Zhongyang Luo, Zhejiang University, China

Prof. Yunfeng Lu, University of California, Los Angeles, USA

Prof. Jummy C. Yu, The Chinese University of Hong Kong, HK

Prof. Zhengyi Jiang, University of Wollongong, AU

Prof. Yongguang Li, Shanghai University of Electric Power, China

Prof. Boqiang Lin, Xiamen University, China

Prof. Yongdi Liu, East China University of Science and Technology, China

Prof. Lianguang Liu, North China Electric Power University, China

Prof. Xiaoming Jia, Hebei United University, China

Prof. Jianmin Chen, Fudan University, China

Prof. Jinping Jia, Shanghai Jiaotong University, China

Prof. Xuesong Jin, Southwest Jiaotong University, China

Prof. Yongfa Zhu, Qinghua University, China

Prof. Yiming Xu, Zhejiang University, China

Prof. Shaojian Ma, Guangxi University, China

Prof. Sihai Jiao, Research Institute, Baosteel, China

Prof. Yungang Li, Hebei United University, China

Prof. Shanqing Li, Research Institute, Baosteel, China

Prof. Yongchen Lin, Central South University, China

Prof. Xianghua Liu, Northeastern University, China

Prof. Lian'guang Liu, South China Electric Power University

Prof. Zifeng Ma, Shanghai Jiao Tong University, China

Prof. Weiguo Pan, Shanghai University of Electric Power, China

Prof. Jianxing Ren, Shanghai University of Electric Power, China

Prof. Shigang Sun, Xiamen University, China

Prof. Wenlei Sun, Xinjiang University, China

Prof. Zhong Tang, Shanghai University of Electric Power, China

Prof. Kaiming Wu, Wuhan University of Science and Technology, China

Prof. Jun Wang, Northeastern University, China

Prof. Fushuan Wen, Zhejiang University, China

Prof. Qiang Wang, Jinan University, China

Prof. Yongyao Xia, Fudan University, China

Prof. Gang Xu, Guangzhou Institute of Energy Conversion, CAS

Prof. Yongping Yang, South China Electric Power University

Prof. Shaohui Yin, Hunan University, China

Prof. Bo Zhang, South China University of China, China

Prof. Hong Zhang, Nanjing University of Technology, China

Prof. Guohua Zhao, Tongji University, China

Prof. Feng Zhao, Institute of Urban Environment, CAS, China

Prof. Daquan Zhang, Shanghai University of Electric Power, China

Prof. Jianmin Zeng, Guangxi University, China

Prof. Qi Zhou, Tongji University, China

Prof. Heinz-Gunter, Brokmeier, Technische Universitat Clausthal, Germany

Prof. Sagar Kamarthi, Northeastern University, USA

Prof. Christian Kloc, Nanyang Technological University, Singapore

Prof. George A. O'Doherty, Northeastern University, USA.

Prof. Tetsuro Majima, Osaka University, Japan

Prof. Yunfeng Lu, University of California, Los Angeles, USA

Prof. Jimmy C. Yu, The Chineses University of Hong Kong, Hong Kong

Prof. AKM Nurul Amin, International Islamic University, Malaysia

Dr. Chunsheng Lu, Curtin University of Technology, Australia

Prof. Geun Jo Han, Dong-A Univeristy, Korea

Prof. Ken-ichi Manabe, Tokyo Metropolitan University, Japan

Prof. Indra Putra Almanar, Universiti Sains Malaysia

Prof. Kyung-Man Moon, Korea Maritime University, Korea

Prof. Walid Mahmoud Shewakh, Beni Suef university, Egypt

Prof. Christian Kloc, Nanyang Technological University, Singapore

Prof. Jacques Noudem, CRISMAT laboratory, France

Local Organizing Committee

Prof. Yanzhong Ju, Northeast Dianli University, China

Prof. Gangui Yan, Northeast Dianli University, China

Prof. Mojie Sun, Northeast Dianli University, China

Prof. Yong Li, Northeast Dianli University, China

Prof. Yingjie Zhang, Northeast Dianli University, China