Preface

The 2nd International Conference on Chemical Engineering and Advanced Materials (CEAM 2012) was successfully taken place in Guangzhou, China, on July 13–15, 2012. CEAM 2012 is organized by Guangzhou University, Guangdong University of Technology, Wuyi University, Guangdong University of Petrochemical Technology, Fine Chemical Research Institute of Sun Yat-Sen University, Chemical Industry and Engineering Society of Guangdong, and Zhongkai University of Agriculture and Engineering.

The objective of the 2012 International Conference on Chemical Engineering and Advanced Materials (CEAM 2012) is to provide a forum for the discussion of new developments, recent progress, and innovations in the chemical engineering and advanced materials. It addresses all aspects of these fields. The emphasis is on current and future challenges in research and development in both academia and industry. It emphasizes long-term, fundamental research aimed at discovering novel phenomena, processes, and tools.

All those contributions have been peer reviewed through processes administered by the scientific committee. Reviews were conducted by the expert referees of international and domestic of China before accepted for publication. This book covers the subject areas of supermolecular chemistry and crystal engineering, polymer chemistry, physical chemistry of solid surface and catalysis, electrochemistry, inorganic and materials, chiral catalysis and organic synthesis, food chemistry, food flavor chemistry and food sensory science, theoretical and computational chemistry, chemical biology and medicinal chemistry, analytical chemistry and environmental chemistry.

We are grateful to all authors for submissions to this conference and for sharing the information and experience they've acquired. We are very delighted to welcome you to next conference. Enjoy the high quality technical program and the beauty of the local region.

The Committee of CEAM 2012

Organized by:

Guangzhou University, China

Co-organized by:

Guangdong University of Technology, China

Wuyi University, China

Guangdong University of Petrochemical Technology, China

Fine Chemical Research Institute of Sun Yat-Sen University, China

Chemical Industry and Engineering Society of Guangdong

Zhongkai University of Agriculture and Engineering, China

Supported by:

National Natural Science Foundation of China

Conference Organization

Chairman

Academician Prof. Guocong Yu, Tianjin University, China

International Scientific Committee

Academician Prof. Xue Duan, Beijing University of Chemical Technology, China

Academician Prof. Xiaoming Chen, Sun Yat-Sen University, China

Prof. Hongwei Sun, National Natural Science Foundation of China

Prof. Changjun Liu, Tianjin University, China

Prof. Junhua Li, Tsinghua University, China

Prof. Yu Qian, South China University of Technology, China

Prof. Xiaonian Li, Zhejiang University of Technology, China

Prof. Lefu Wang, South China University of Technology, China

Prof. Zhaotie Liu, Shanxi Normal University, China

Prof. Haowen Hu, East China Normal University, China

Prof. Lin Li, South China University of Technology, China

Prof. Yueming Jiang, South China Botanical Garden, China Academy of Science

Prof. Zifeng Ma, Shanghai Jiao Tong University, China

Prof. Rong Cao, Fujian Institute of Research of the Structure of Matter, CAS

Prof. Zili Liu, Guangzhou University, China

Prof. Hongbing Ji, Sun Yat-Sen University, China

Prof. Yuanming Zhang, Jinan University, China

Prof. Dan Li, Shantou University, China

Prof. Changsheng Xi, Shaoguan University, China

Prof. Guoqiang Yin, Zhongkai University of Agriculture and Engineering, China

Prof. Liewen Liao, Zhongkai University of Agriculture and Engineering, China

Prof. Xueyi Le, South China Agriculture University, China

Prof. Jianhong Liu, Shenzhen University, China

Prof. Rujin Zhou, Guangdong University of Petrochemical Technology, China

Prof. Cheng Zheng, Guangzhou University, China

Prof. Jianmin Zeng, Guangxi University, China

Prof. Michael Kwong, The Hong Kong Polytechnic University, Hong Kong

Prof. Xi Zheng, The State University of New Jersey, USA

Prof. Katsuyuki Aoki, Toyohashi University of Technology, Japan

Prof. Shahrum Abdullah, Univ. Kebangsaan Malaysia, Malaysia

Prof. Xueqiang Cao, Changsha Univ. of Science and Tech., China

Prof. Zhong Cao, Changsha Univ. of Science and Tech., China

Prof. Xinsheng Chai, South China University of Technology, China

Prof. Mingqing Chen, Jiangnan University, China

Prof. Yunsheng Ding, Hefei University of Technology, China

Prof. Huixia Feng, Lanzhou University of Technology, China

Dr. Mark Fong, Hong Kong Industrial Tech. Research Centre

Dr. Yuantong Gu, Queensland University of Tech., Australia

Prof. Cancheng Guo, Hunan University, China

Prof. Jianwei Guo, Guangdong University of Technology, China

Prof. Toshio Haga, Osaka Institute of Technology, Japan

Dr. Xinjiang Hao, University of Birmingham, UK

Prof. Yinghe He, James Cook University, Australia

Prof. Wangyu Hu, Hunan University, China

Prof. Sagar Kamarthi, Northeastern University, USA

Prof. Hongliang Li, Qingdao University, China

Prof. Yuejin Liu, Xiangtan University, China

Dr. Zhengxin Liu, National Insti. of Adv. Ind. Sci. & Tech., Japan

Dr. Chunsheng Lu, Curtin University of Technology, Australia

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

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

Prof. Walid Mahmoud Shewakh, Beni Suef university, Egypt

Dr. Jianjian Shi, Indiana University School of Medicine, USA

Prof. Lixian Sun, Dalian Institute of Chemical Physics, CAS, China

Prof. Hiroyuki Takei, Toyo University, Japan

Dr. Gui Wang, The University of Queensland, Australia

Dr. Dongbin Wei, University of Wollongong, Australia

Prof. Huiming Xiao, University of New Brunswick, Canada

Prof. Jiannan Xiang, Hunan University, China

Prof. Zhong Xin, East China University of Science and Tech., China

Prof. Qianwei Xu, Tongji University, China

Dr. Xingzhong Yan, South Dakota State University, USA

Prof. Chunming Yang, Hunan Normal University, China

Prof. Yanxuan Wen, Guangxi University, China

Prof. Qiaoqin Yang, University of Saskatchewan, Canada

Prof. Ronghua Yang, Hunan University, China

Prof. Mingshan Yang, Beijing Instit. of Petrochemical Tech.

Prof. Lin Yu, Guangdong University of Technology, China

Prof. Dulin Yin, Hunan Normal University, China

Prof. Zhen'ou Zeng, South China University of Technology, China

Prof. Xuejun Zhang, Beijing University of Chemical Tech., China

Prof. Chuanjian Zhong, State Univ. of New York at Binghamton, USA

Local Organizing Committee

Chair

Prof. Shuang Chen, Guangzhou University, China

Co-Chair

Prof. Zili Liu, Guangzhou University, China

Member

Prof. Cheng Zheng, Guangzhou University, China

Prof. Hongbing Ji, Sun Yat-Sen University, China

Prof. Lin Yu, Guangdong University of Technology, China

Prof. Ning Sun, Wuyi University, China

Prof. Guoqiang Yin, Zhongkai University of Agriculture and Engineering, China

Prof. Rujin Zhou, Guangdong University of Petrochemical Technology, China