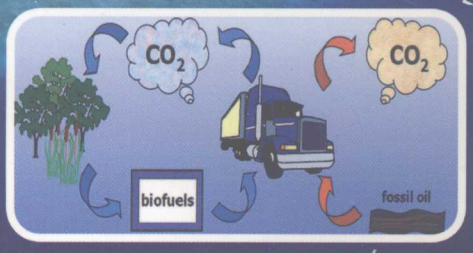
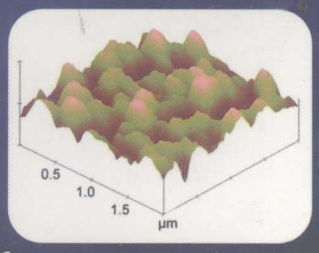
CHEMICAL ENGINEERING IN SUSTAINABLE DEVELOPMENT

Vol 4 Biotechnology

Edited by
Xuhong QIAN and Jingping QU





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Book of Abstracts of the 12th Asian Pacific Confederation of Chemical Engineering Congress

Aug 4~6, 2008, Dalian, China

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Preface

This five-volume book contains the final abstracts of most of the papers presented at the **12th Asian Pacific Confederation of Chemical Engineering Congress** (APCChE2008) held in Dalian, China in August 4 ~6, 2008. Each volume contains approximately 400 abstracts from one or two themes. In addition, a proceeding of the APCChE2008 in a CD-ROM (containing all accepted full-length manuscripts by a large percentage of authors, the technical program, the author-program index and many more) has been prepared for distribution to all participants of APCChE2008.

APCChE2008 is the 12th in the series of Congresses on Chemical Engineering launched by the Asian Pacific Confederation of Chemical Engineering (APCChE) in 1979 in Jakarta, Indonesia. Since then, APCChE Congresses have been organized in Philippines (1981), Thailand (Bangkok, 1984), Singapore (1987), Malaysia (Kuala Lumpur, 1990), Australia (1993), China (Taibei,1996), Korea (Seoul, 1999), New Zealand (Christchurch, 2002), Japan (Kitakyushu, 2004) and Malaysia (Kuala Lumpur, 2006).

The objective of this biennial congress is to provide engineers, scientists, researchers, technologists, teachers and students from the member societies in 13 countries or areas in Asian Pacific region as well as the other parts of the whole world a platform to present their latest results, to interchange ideas, to make new friends and to establish new collaborations. The conference addresses the full spectrum of chemical engineering, including current trends and future needs. The focus of APCChE2008 is **Chemical Engineering in Sustainable Development** including six themes: (1) Clean Energy Technology; (2) Environment and Green Processing; (3) Materials Science and Engineering; (4) Biotechnology; (5) New Frontiers in Chemical Engineering; (6) Education for Chemical Engineers.

I would like to thank all the authors for submitting their abstracts and full papers. I thank the members of the Organizing Committee for their reviews, their advice during the selection process

and the preparation of the technical program. Special thanks go to Prof Jingping Qu, Prof Zhong Xin, Prof Xuehu Ma, Prof Feng Qian, Prof Jie Bao, Prof Li Li, Prof Xuhong Guo, Prof Haoquan Hu, Prof Shuguang LV, Prof Xinwen Guo, Prof Changsheng Liu, Prof Dongfeng Xue, Prof Jianhe Xu, Prof Qing Yang, Prof Zhenmin Cheng, Prof Mingzhai Qi, Prof Gaohong He and the editors of Dalian University of Technology Press in getting abstracts ready for these books. Also, I would like to acknowledge all the contributors to APCChE2008.

I hope that these books of abstracts will serve as a valuable record of reference of the contributions made at APCChE2008.

Qian, Xuhong, Ph. D.
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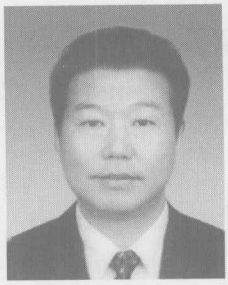

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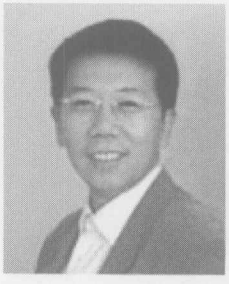

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