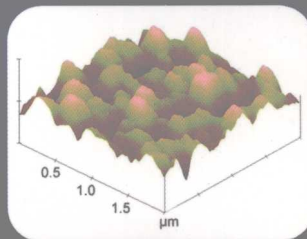
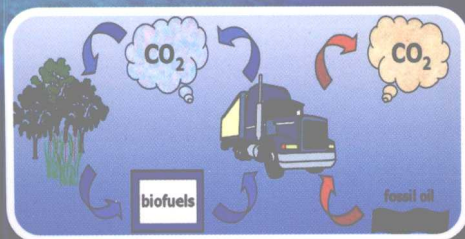


CHEMICAL ENGINEERING IN SUSTAINABLE DEVELOPMENT

Vol 1 Clean Energy Technology

Edited by

Xuhong QIAN and Jingping QU



Dalian University of Technology Press

Book of Abstracts of the 12th Asian Pacific Confederation of
Chemical Engineering Congress
Aug 4~6, 2008, Dalian, China

CHEMICAL ENGINEERING IN SUSTAINABLE DEVELOPMENT

Vol 1 Clean Energy Technology

Edited by

Xuhong QIAN and Jingping QU

In cooperation with

Zhong XIN, Xuehu MA, Feng QIAN, Jie BAO, Li LI, Xuhong GUO,
Haoquan HU, Shuguang LV, Xinwen GUO, Changsheng LIU,
Dongfeng XUE, Jianhe XU, Qing YANG, Zhenmin CHENG,
Mingzhai QI, Gaohong HE

Organizer

The Chemical Industry and Engineering Society of China

Contractors

East China University of Science and Technology
Dalian University of Technology



Dalian University of Technology Press

图书在版编目(CIP)数据

化学工程的可持续发展/钱旭红,曲景平主编. —大连:大连理工大学出版社,2008.7

ISBN 978-7-5611-4285-1

I. 化… II. ①钱…②曲… III. 化学工程—研究 IV. TQ02

中国版本图书馆 CIP 数据核字(2008)第 111353 号

大连理工大学出版社出版

地址:大连市软件园路 80 号 邮政编码:116023

发行:0411-84708842 邮购:0411-84703636 传真:0411-84701466

E-mail: dulp@ dulp. cn URL: <http://www. dulp. cn>

大连图腾彩色印刷有限公司印刷 大连理工大学出版社发行

幅面尺寸:210mm×290mm	印张:24.75	字数:566 千字
2008 年 7 月第 1 版		2008 年 7 月第 1 次印刷

责任编辑:刘新彦 王颖鑫	责任校对:知 轩
封面设计:宋 蕾	

ISBN 978-7-5611-4285-1

定 价:1580.00 元(共 5 册)

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 (Taipei, 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.

A handwritten signature in black ink, appearing to read 'Qian Xuhong', with a long horizontal stroke extending from the end.

Qian, Xuhong, Ph. D.

Chairman of the Executive Committee

President of Asian Pacific Confederation of Chemical Engineering

President of East China University of Science and Technology,

Professor of Bioorganic Chemistry and Engineering

Organizations

ADVISOR COMMITTEE

Chairman

Xianghong Cao

President of CIESC, Chief Engineer of China Petrochemical Corporation,
Member of Chinese Academy of Engineering

Vice Chairman

Jinghai Li

Vice President, Member of Chinese Academy of Science (CAS)

Jinping Ou

President of Dalian University of Technology (DUT),
Member of Chinese Academy of Engineering

Xiaofei Qu

Vice Mayor of Dalian

Members

Bingzhen Chen	Weiyang Fei	Musun Guo	Ying Hu
Yong Jin	Zhengming Li	Dadong Li	Wanzhen Lu
Bingquan Mao	Enze Min	Pingkai Ouyang	Yinchu Shen
Xingtian Shu	Jingkang Wang	Jiading Wang	Jiming Wang
Jinzong Yang	Shengli Yang	Guozong Yu	Qingtang Yuan
Quan Yuan	Weikang Yuan	Daoben Zhu	



INTERNATIONAL ADVISOR COMMITTEE

David Wood

Chair of the World Chemical Engineering Council Executive,
Emeritus Professor & Professorial Fellow,
Department of Chemical and Biomolecular Engineering, University of Melbourne, Australia

Zhanfeng Cui

Professor, Oxford University, UK

Guohua Hu

Professor at the Institut National Polytechnique de Lorraine (INPL) ,
Nancy, France, Membre de L'Institut Universitaire de France

Norman N Li

Member of National Academy of Engineering, USA;
NL Chemical Technology, Inc

Otto Lin

CEO of China Nansha Technology Enterprises;
Senior Advisor to the President of Hong Kong University of Science & Technology

Philip W Lee

DuPont Crop Protection, USA

ACADEMIC COMMITTEE

Chairman

Xinhua Li

Vice President of CIESC,
Vice President of China National Petroleum Corporation

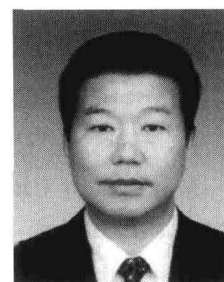
Vice Chairman

Xunfeng Liu

President of Shanghai Huayi Group Company

Xiaoshen Fan

Vice President of CIESC, Vice President of China National Chemical Corporation



Members

- | | |
|---------------------------------|----------------------------------|
| Prof. Jie Bao (China) | Prof. Xuehu Ma (China) |
| Prof. Suresh Bhatia (Australia) | Prof. Ashok Mulchandani (USA) |
| Prof. Feng-Chih Chang (Taipei) | Prof. Toshio Nishi (Japan) |
| Prof. De Chen (Norway) | Prof. Say Leong Ong (Singapore) |
| Prof. Zhenmin Cheng (China) | Prof. Sunghoon Park (Korea) |
| Prof. Zhanfeng Cui (UK) | Prof. Xiaojun Peng (China) |
| Prof. Xinwen Guo (China) | Prof. Mingzhai Qi (China) |
| Prof. Xuhong Guo (China) | Prof. Xuhong Qian (China) |
| Prof. Kazuichi Hayakawa (Japan) | Prof. Jieshan Qiu (China) |
| Prof. Gaohong He (China) | Prof. Jingping Qu (China) |
| Prof. Haoquan Hu (China) | Prof. Xie Quan (China) |
| Prof. Guo-Hua Hu (France) | Prof. Vivek V Ranade (India) |
| Prof. Takashi Inoue (Japan) | Prof. Xu Shen (China) |
| Prof. Ming-Jer Lee (Taipei) | Prof. Chun-shan Song (USA) |
| Prof. Kuangfei Lin (China) | Prof. Philippe A Tanguy (Canada) |
| Prof. Changsheng Liu (China) | Prof. Dongzhi Wei (China) |
| Prof. Boping Liu (China) | Prof. Gang Wei (Australia) |
| Prof. Max Lu (Australia) | Prof. Nae-Lih Wu (Taipei) |
| Prof. Xiaobing Lv (China) | Prof. Tiancun Xiao (UK) |

Prof. Zhong Xin (China)
Prof. Dongfeng Xue (China)
Prof. Chunhua Yan (China)
Prof. Yuanyi Yang (China)
Prof. Qing Yang (China)

Prof. Wei-chi Ying (China)
Prof. Quan Yuan (China)
Prof. Shufen Zhang (China)
Prof. Zhibing Zhang (UK)

ORGANIZING COMMITTEE

Chairman

Qiyi Gong

Vice President and Secretary General of CIESC, Senior Engineer

Vice Chairman

Dinyi Hong

Secretary General of CIESC, Senior Engineer

Hongming Sun

Dalian PCIA

Members

Zhixia Fu

Vice Chief Engineer of China National Chemical Corporation,
Standing Council member of CIESC

Jie Hu

Chief Engineer of Chemical & Marketing Company of CNPC,
Standing Council member of CIESC

Xuteng Hu

Vice Secretary General of CIESC,
Vice President of Petrochemical Research Institute of CNPC

Zhong Xin

Dean of the School of Chemical Engineering, ECUST

Xuehu Ma

Head of Department,
School of Chemical Engineering, DUT, member of CIESC



EXECUTIVE COMMITTEE

Chairman

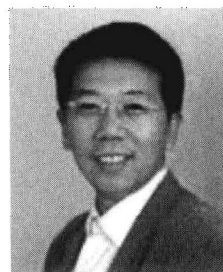
Xuhong Qian

President of APCCChE,
Vice President of CIESC,
President of East China University of Science and Technology (ECUST)

Vice Chairman

Jingping Qu

Vice President of CIESC,



Dean of the School of Chemical Engineering, Dalian University of Technology

Secretary General

Zhong Xin

Dean of the School of Chemical Engineering,

East China University of Science and Technology (ECUST)

Vice Secretary General

Xuehu Ma

Head of Department, School of Chemical Engineering,

Dalian University of Technology

Members

Tao Bai	Zhengfang Cao	Ruihua Cheng	Ju Chu
Hongguang Dong	Jian Du	Chunhua Gu	Shui Guan
Xuhong Guo	Xinwen Guo	Chongheng He	Gaohong He
Haoquan Hu	Jiajun Jiao	Hao Jin	Lijun Jin
Zhong Lan	Chunzhong Li	Li Li	Yang Li
Boping Liu	Yanlai Liu	Xuewu Liu	Lianhe Lv
Yulu Ma	Xin Meng	Feng Qian	Yuanyuan Qu
Zhicong Shi	Zhongye Si	Li Sun	Wensong Tan
Dazhi Tan	Xiongyue Wang	Jin Wang	Zhonggang Wang
Jin Wang	Guangli Xiu	Jianhe Xu	Dongfeng Xue
Jun Yang	Qing Yang	Bangze Ye	Xiongfeng Zhang
Xingui Zhou	Yian Zhu		

TABLE OF CONTENTS

Preface Organization

Plenary Speeches

Oil Product Orientation of Refineries and Feedstock Selection for Ethylene and Propylene Production in the Post Petroleum Era <i>Xianghong Cao</i>	
Meso-Scale Structure – the Challenge for Understanding Multi-phase Systems <i>Jinghai Li</i>	
Global Challenges for Chemical Engineering Education and the Impact from the “New World” <i>David G. Wood</i>	3
The Molecular Frontiers of Chemical Engineering: Nanotechnology and Nanobiotechnology <i>Max Lu</i>	4
Behaviors and Toxicities of Polycyclic Aromatic Hydrocarbons and Nitropolycyclic Aromatic Hydrocarbons <i>Kazuichi Hayakawa</i>	
Perspectives of industrial biotechnology in Europe <i>Gerhard Kreysa</i>	
Research on Key Imminent Technical Issues in Coal-based Multi-generation Development <i>Xunfeng Liu</i>	5
Flows of Resource and Waste: Meeting the Challenges to Development <i>Richard C Darton</i>	6
Talents Development System in Bayer for the Sustainability of the Industry <i>Dr. -Ing. Armin Knors</i>	

Vol 1 Clean Energy Technology

Keynote Speeches

Clean Energy Technology <i>Gerhard Kreysa</i>	
Multifunctional Reactor for Hydrogen Production from Multifuels <i>Li He, Morten Beinset, Helene Berntsen, Tiejun Zhao, De Chen</i>	9
Molecular Basket Sorbent as a Novel Approach to CO ₂ Capture and Separation <i>Chunshan Song</i>	10
Role of Phase Behavior in Supercritical Micronization Processes <i>Shan-Chun Chang, Hsien-Tsung Wu, Ho-Mu Lin, Ming-Jer Lee</i>	11
Pilot Plant Testing Study on the Hydrogenation and Hydro- upgrading Processes for Coal Liquids from Direct Coal Liquefaction Process <i>Xiuzhang Wu, Yulin Shi, Hui Ma</i>	12

General Papers

Two-stage Robust Estimators for Product Concentration in a Penicillin Fermentation <i>A. Ahmad and A. W. Chow</i>	15
A Survey on Urban Air Pollution Dispersion in Kermanshah, Iran <i>A. A. Zinatizadeh, F. Yavari, S. M. Khamoushi, K. Morovati, G. D. Najafpour, S. Zinatizadeh</i>	16
Numerical Modeling of Low-NO _x Calciner for Cement Production <i>Mao Ya, Chen Zuobing, Chen Dingfang</i>	17
Optimising Artificial Neural Networks Topology Using Hierarchical Two-population Genetic Algorithm	

A. Saptoro, H. B. Vuthaluru, M. O. TadÉ	18
Extraction and Purification of Carageenan from Red Alga-chondrus Crispus	
A. Beirooti and S. N. Hosseini	19
Major Nutrients Affecting Cell Growth and Metabolite Production in <i>Glycyrrhiza uralensis</i> Cell Sspension Cultures	
Aihua Bian, Wenyuan Gao, Juan Wang	20
Synthesis of L-Ascorbyl Palmitate by Immobilized Lipase	
Huaqing Shen, Tianwei Tan	21
Study on Attrition Resistant Catalysts for Dimethyl Ether Synthesis through Single-step from Syngas	
Bai-Chuan Yang, Hai-Peng Zhang, Wei Li, Wen-De Xiao	22
Analysis for the Secondary Reactions of FCC Gasoline in a Rising Reactor Based on Multi-scale Model	
Bolun Yang, Xiaowei Zhou, Juan Yuan, Xiaohui Yang	23
Dephenolization of Phenol Polluted Drinking Water by Activated Carbon and Chlorine Dioxide Combined Technology	
Boquan Jiang, Qinfen Wu, Wenlong Zhang, Qingfang Zeng	24
New proess for Domestic Sewage Treatment by Membrane Bioreactor with Bubbleless Aeration	
Boquan Jiang, Xiaobing Liu, Qinfen Wu, Qingfang Zeng	25
Research on Adsorption of Trace Arsenic(V) by Fe(III)-modified Chelating Resin	
Boquan Jiang, Qingrong Huang, Wenlong Zhang, Qingfang Zeng	26
Synthesis of n-Butyl Propionate Catalyzed by Multi-walled Carbon Nanotubes Loaded Cerous Sulfate	
Boquan Jiang, Zhiqiang Ye, Minwei Wang, Xiaoying Yu	27
Hydrodenitrogenation of Quinoline and its Intermediates over Sulfided NiW/ γ -Al ₂ O ₃ in the Absence and Presence of H ₂ S	
Yezhi Luan, Qiumin Zhang, Demin He, Jun Guan, Changhailiang	28
Hydrogenation of Naphthalene on Nickel Phosphide Supported on Silica	
Xiaofei Zhang, Qiumin Zhang, Jun Guan, Demin He, Haoquan Hu, Changhai Liang	29
Adsorption of Four Kinds of Dyes by Anaerobic Sludge	
Manhong Huang, Chaopeng Chen, Liang Chen, Donghui Chen	30
The Flame Retardancy of Aziridine Cured by Phosphorus and Nitrogen-Containing Compound	
Weichung Chen, Pocheng Chen, Chunchen Chung, Kannan Chen	31
Quick Startup of EGSB Reactor Seeded with Anaerobic Digestion Sludge for the Treatment of Domestic Sewage under Ambient Temperature	
Chunjuan Dong, Xiao Liu, Qingliang Zhao, Bingnan Lv, Haihui Wang	32
Impact of Methanol Concentration on the Expression of Recombinant Human Consensus Interferon- α Mutant by <i>Pichia pastoris</i>	
Wu Dan, Hao Yu-You, Chu Ju, Zhuang Ying-Ping, Zhang Si-Liang	33
A New proessing for Preparation of Chitin	
Yang Dan, He Lanzhen, Deng Chunmei, Liu Yi	34
Oxidation-extraction Desulfurization Proess for FCC Gasoline: Influence of the Extraction Solvent	
Daojie Ma, Chunhu Li, Liang Wan, Xiaobin Wei	35
Study on Dyeing Equipment in Supercritical CO ₂	
Gao Dawei, Zheng Laijiu	36
Simultaneous Saccharification and Fermentation of Pretreated Corn Stover to Ethanol With Mutated <i>Saccharomyces Cerevisiae</i> at High Temperature	
Deqiang Chu, Jian Zhang, Jie Ren, Zili Wang, Jie Bao	37
Study on Catalytic Cracking of Waste Oils and Fats Into Fuel Oil	
Dianmo Zheng, Yun Sun, Guangmei Li	38
Study on Catalytic Cracking of Waste Plastics With Waste Engine Oil to Fuel Oil	
Dianmo Zheng, Ming Liu, Shengda Wen, Lun Gui	39
Photocatalytic Oxidation Dibenzothiophene of Diesel Oil Using TS-1	
Zhang Juan, Zhao Dishun, Yang Liyan, Li Yongbo	40
Methane Production by Anaerobic Co-Digestion of Food Waste and Waste Paper	
Dong Li, Zhenhong Yuan, Yongming Sun, Yu Zhang, Mizhang Xiao	41
Study on Extraction and Characterization of Ergosterol in <i>Saccharomyces Cerevisiae</i>	
Li Ya-Li, Song Gong-Ming	42
Plasma Catalytic Conversion of Greenhouse Gases to Synthesis Gas	
Anjie Zhang, Zhen Huang, Xiaosong Li, Chuan Shi	43
The Effect of Aging and Rotational Speed on Stability of Super Light Weight Completion Fluids	
Badrul Mohamed Jan, Tang Fi, Bin Tang	44
A Highly Efficient Catalyst for Biomass Tar Steam Reforming Producing H ₂ -rich Fuel Gas	
C. S. Li, Y. Yamamoto, M. Suzuki, D. Hirabayashi, K. Suzuki	45
Annealing Effect on the Photocatalytic Activity of WO ₃ for Water Splitting	
Xin Gang	46
The Selective Reduction of Nitroarenes with Fe in Pressurized CO ₂ -H ₂ O Medium	
Ge. Gao, Shijuan. Liu, Bin. Zhao, Jingyang. Jiang	47
CO ₂ Reforming of Coke Oven Gas to Syngas over Coal Char Catalyst	
Guojie Zhang, Yongfa Zhang, Zhao Wei	48

Study on La ₂ O ₃ -promoted Ni/Al ₂ O ₃ -ZrO ₂ Catalysts Prepared via a Direct Sol-gel Method for CO ₂ Reforming of Methane to Syngas	49
<i>Hansheng Li, Jinfu Wang</i>	
Synthesis of Biodiesel from Soybean Oil and Methanol Catalyzed by Cationic Ion-exchange Resin in an Ultrasonic Reactor	50
<i>Yuan Hong, B. Yang Bolun, Shu Qing</i>	
Exploitation and Study on the Adsorbents in Treatment of Dye Effluent	51
<i>Wang Hongxun, Yan Keliang</i>	
Numerical Simulation of Flow and Heat Transfer in Connection of Gasifier to the Radiant Syngas Cooler	52
<i>Jianjun Ni, Qinfeng Liang, Zhenghua Dai, Guangsuo Yu, Zunhong Yu</i>	
Study of Liquid Droplets Impact on Dry Inclined Surface	53
<i>Jie Cui, Junjun Lu, Xuen Chen, Fuchen Wang, Zunhong Yu</i>	
Direct Conversion of Methane to Synthesis Gas Using Lattice Oxygen of Ce _{0.7} -Fe _{0.3} O _{2-δ} Complex Oxides	54
<i>Kongzhai Li, Hua Wang, Yonggang Wei, Mingchun Liu</i>	
Degradation of Nitrogen Heterocycles by a <i>Pseudomonas sp.</i>	55
<i>Li Li, Qing-Gang Li, Ping Xu</i>	
Effect of Sulfur Nutrition on Physiology Parameters of Crops under Water and Heavy Metal Stress	56
<i>Lina Zhou, Dong Qu</i>	
Effects of Physical Properties Estimation to Process Design: A Cyclohexanone Oxime Recovery Example	57
<i>Loic Cadoret, Cheng-Ching Yu, Hsiao-Ping Huang, Ming-Jer Lee</i>	
Production of Diesel-like Hydrocarbon: Deoxygenation of Saturated and Unsaturated Fatty Acids	58
<i>M. Santikunaporn</i>	
Separation of Oil/ water Emulsion Under Non-Uniform Electrical Field	59
<i>Morteza Hosseini</i>	
Isolation of Atrazine Degrading Low Temperature Bacteria and Researching of Atrazine Biodegradation	60
<i>Liu Na, Zhang Lan-Ying, Zheng Song-Zhi</i>	
Removal of Fluoride Ion by Bone Char Produced from Animal Biomass	61
<i>N. Kawasaki, F. Ogata</i>	
Bioethanol Production from Enzymatically Saccharified Sunflower Stalks Using Steam Explosion as Pretreatment	62
<i>P. vaithanomsat, S. Chuichulcherm, W. Apiwattanapiwat and V. Punsuvon</i>	
NaAlH ₄ with Activated Carbon and Graphite as a Hydrogen Storage Material	63
<i>Yindee Suttisawa, Pramoch Rangsunwigit, Boonyarach Kitiyanan, Santi Kulprathipanja</i>	
A Lab-scale Study of Opposed Multi-burner Entrained-flow Gasifier	64
<i>Qin-Feng Liang, Guang-Suo Yu, Xiao-Lei Guo, Wei-Feng Li, Xing-Jun Wang, Zheng-Hua Dai, Zhi-Jie Zhou, Xue-Li Chen, Yi-Fei Wang, Hai-Feng Liu, Fu-Chen Wang, Xin Gong, Zun-Hong Yu</i>	
Experimental Study of Deflection Flame Impinged in the Opposed Multi-burner Gasifier	65
<i>Qinghua Guo, Qinfeng Liang, Guangsuo Yu, Zunhong Yu</i>	
Experimental Research on Adsorption Effect of Semi-char on Tar Derived From Biomass Pyrolysis	66
<i>Ruirui Xiao, Peng Li, Xueli Chen, Zunhong Yu, Fuchen Wang</i>	
Impact of Alkyl Methacrylate-maleic Anhydride Copolymers as Pour Point Depressant on Crystallization Behavior of Simulated Diesel Fuel	67
<i>Sheng Han, Yuping Song, Yuhong Wang, Tianhui Ren</i>	
Nutrient Removal of Static Lake Water by Constructed Biological Filter	68
<i>Shu-Yu Liu Fang Ma Ming-Hong Wu Xiao-jing Gu</i>	
Product Distributions of Benzene Alkylation with Propylene Estimation Using Artificial Neural Network (ANN)	69
<i>Li Jianwei, Sun Xiaoyan, Tang Yan, Li Yingxia, Chen Biaohua</i>	
Fluorescent Modification of Titanium Dioxide Nanotube and its Application in Nanobiology	70
<i>Wang Yanli, Chen Kai, Wang Jia, Zhang Haijiao, Jiao Zheng, Wu Minghong</i>	
Analysis of the Distribution Feature of Wuliangsuhai Lake Nutritious Elements –Nitrogen and Phosphorus and its Geochemistry Environment	71
<i>Li Weiping, Li Changyou, Shi Xiaohong, Wang Zhijie</i>	
Analysis About Mechanism of Pollution in Shallow Weedy Lakes in Arid Area	72
<i>Shi Xiaohong, Li Changyou, Li Weiping</i>	
Occurrence and Control of Sludge Baulking for BNR system in Low Temperature	73
<i>Yin Jun, Wang Xiao-Ling, Ye Long, Wu Xiang-Hui</i>	
Study on Surface Morphology and Crystal Structure of Precipitated Iron Catalysts of FTS for Reduction Conditions	75
<i>Xingjun Wang, Miao Gao, Bingqing Hong, Guofeng Shang, Ping Li, Yu Liu, Fuchen Wang, Zunhong Yu</i>	
Study on Gasification Property of Petroleum Coke with Black Liquor as Catalyst	76
<i>Zhan Xiuli, Gong Kaifeng, Liu Xin, Kang Wanzhong, Guo Wenyuan, Zhou Zhijie, Wang Fuchen, Yu Zunhong</i>	
Study on the Effect of Black Liquor on Petroleum Coke-water Slurry Property	77
<i>Zhan Xiuli, Gong Kaifeng, Liu Xin, Wang Fuchen, Yu Zunhong</i>	
The State of Water in the Series of Sulfonated Poly (Phthalazinone Ether Sulfone Ketone) (Spspek) Proton Exchange Membranes	78
<i>Xuemei Wu, Gaohong He Zhengwen Hu, Shuang Gu</i>	
Influence of Magnetic Field on Cr(VI) Adsorption Capability of Given Anaerobic Sludge	

Yan-bin Xu, Xiao-jun Duan, Sun-Yu Sun	79
Microencapsulation of Phytase in a Chitosan-Sodium Alginate Matrix	
Yingchao Dong, Tao Qi, Lina Wang, Junguo Li, Yi Zhang	80
Effect of Solvent on the Viscosity Changes of Coal-oil Slurry under High Temperature-high Pressure	
Ren Yingjie, Song Lei, Zhang Dexiang, Gao Jinsheng	81
Study on Acceleration of Old Landfill Stabilization by Using Leachate Recirculation and Air Infection	
Yuwei Xue, Jianguo Liu, Dongbei Yue, Rui Li, Yuanyuan Zhang	82
The Numerical Simulation of Opposed-multi-burner Pulverized Coal Gasifier	
Zhenghua Dai, Jiangliang Xu, Haifeng Liu, Xin Gong, Guangsuo Yu, Zunhong Yu	83
Particle Motion Behavior in Coaxial Opposed Jets	
Sun Zhi-Gang, Li Wei-Feng, Liu Hai-Feng, Yu Zun-Hong	84
Three-dimensional Temperature Measurement of Flames Based on the Image Processing in a Bench-scale Opposed Multi-burner Gasifier	
Zhuoyong Yan, Qinfeng Liang, Zhijie Zhou, Guangsuo Yu, Zunhong Yu	85
Study on Improving Light Stability of Hydrotreated Naphthenic Rubber Oil	
Chunfa Ouyang, Yuping Song, Zhongyi He, Sheng Han	86
Repeated Batch Operation for Very High Gravity Ethanol Fermentation Using a Flocculating Fusant Yeast Strain SPSC01	
Fan Li, Yu Shen, Xumeng Ge, Fengwu Bai	87
Study of the Kinetics Model of Coal Char Gasification with Steam-H ₂ and Steam	
Fan Yang, Fuchen Wang, Zhijie Zhou, Haifeng Liu, Xin Gong, Zunhong Yu	88
Study on the Hydrodesulfurization of Dibenzothiophene over Catalysts of Different Component and Support	
Liu Fang, Xu Shaoping, Chi Yawu, Xue Dongfeng, Liu Shuqin	89
A Novel Calcium-based Composite Dental Pulp Capping Agent	
Fangping Chen, Miaogen Yu, Yuhao Mao, Changsheng Liu	90
Development of Injectable Calcium Phosphate Cement Suspension with Different Particle Sizes	
Fangping Chen, Yuhao Mao, Changsheng Liu	91
Study on the Behavior of Sulfur Emission During Coal Briquette Combustion	
Guo Yanzia, Li Yingying, Yang Fengling, Liu Xiaowei, Cheng Fangqin Shanxi University, Taiyuan, 030006, in Shanxi, China	92
Study on Aluminum Oxide Extraction from Coal Gangue	
Fangqin Cheng, Li Cui, Liu Hailong	94
Effect of Treatment Time on Electrokinetic Removal of Chromium from Soils	
Chen Feng, Liu Xiaoli	96
Biosorption Treatment for Wastewater Containing Heavy Metals	
Fengyu	97
Transformation of Cu and Zn in Pig Manure and its Compost after Land Application	
Zhang Fengsong	98
Catalytic Pyrolysis of Biomass Over Different Zeolites	
Fengwen Yu, Shusheng Pang, Jianbing Ji	99
Combustion Properties of Coal and Garbage from Passenger Train	
Ren Fumin, Li Xiangfen, Gao min, Yu min, Ru Yihong	100
Combustion Properties of C-Rdf	
Ren Fumin, Li Xiangfen, Gao min, Yu min, Ru Yihong	101
Antioxidant Activity of Cornus Officinalis Health Wine	
Fuping Lu, Jianfang Yang, Wenyuan Gao and Mingyong Huang	102
Experimental Study on Desulfurization Characteristic and Mechanism of Alkaliferous Industry Waste at Median Temperature	
Zhao Gaiju, Shi Yongchun, Zhang Zongyu Chai Benyin, Lu Chun-mei, & Zhao Jianli	103
Field Trial of Underground Coal Gasification (UCG) in Zhong-liang-shan Coal Mine, China	
Z. T. Wang, G. X. Wang, V. Rudolph	104
Study on Performances and Storage Stability of Crumb Rubber Modified Asphalts	
Cheng Guoxiang, Shen Benxian, Zhang Jianfeng	105
Opposed Multi-Burner Gasification Technology of Pulverized Coal	
Guo Xiaolei, Dai Zhenghua, Gong Xin, Liang Qinfeng, Li Weifeng, Haifeng Liu, Chen Xueli, Wang Yifeng, Zhou zhijie, Yu Guangsuo, Wang Fuchen, Yu Zunhong	106
Reactive Adsorption of Sulfur Compounds from FCC Gasoline on NiO/ γ -Al ₂ O ₃	
Yin Haiyan, Li Chunhu, Wang Linxue, Feng Lijuan, Yu Yingmin, Hou Yingfei	107
Impact of Alkyl Methacrylate-maleic Anhydride Copolymers as Pour Point Depressant on Crystallization Behavior of Simulated Diesel Fuel	
Sheng Han, Yuping Song, Yuhong Wang, Tianhui Ren	108
Autothermal Reforming of Ethanol Over Ir Supported on Lanthanum Oxides for Hydrogen Production	
Hongqing Chen, Hao Yu, Yong Tang, Mingqiang Pan, Feng Peng, Hongjuan Wang, Jian Yang	109
Enzymatic Hydrolysis of Food Waste and Methane Fermentation Using UASB Bioreactor	
H. C. Moon, I. S. Song, J. C. Kim, S. O. Chung, Y. S. Cho, Y. Shirai, D. H. Kim	110
Test Study on Removal of SO ₂ & NO _x in Gas Flue by Biotrickling Filter	

Wang Hengying, Sun Peish, Wang Jie, Yang Changliang, Yuan Ruijia	111
Synthesis of Biodiesel From Soybean Oil and Methanol Catalyzed by Cationic Ion-exchange Resin in an Ultra-sonic Reactor	
Yuan Hong, Yang Bolun, Shu Qing	112
Novel Technology for 1,3-Propanediol Fermentation With the Crude Glycerol from Biodiesel Production by-Product by Klebsiella Pneumoniae	
Hongjuan Liu, Jianan Zhang, Wei Du, Dehua Liu	113
Study on Catalytic Biomass Pyrolysis in Molten Salt Media	
Hongtao Jiang, Ning Ai, Dengxiang Ji, Min Wang, Jianbing Ji	114
Tri-Reforming of Methane to Syngas Over Ni-based Catalysts	
Hongtao Jiang, Huiquan Li, Yi Zhang	115
Research on Surplus Activated Sludge Disposal by One-stage Preheated Autothermal Thermophilic Aerobic Digestion	
Huang Shaobin	116
A Formula for Air Quality Assessment Based on Feedback Mutation Genetic Algorithm	
LinYing-Zi, Yu Bing-Hui, Yin Jun, Wang Shuang	117
Construction of Pyruvate Decarboxylase Gene Deleted Zymomonas Mobilis Strain	
Hui Yuan, Wenyue Huang, Yunfeng Bai	118
The Evolution of the Bio-Filter Layer for Manganese Removal and the Countermeasure	
Huiping Zeng, Dong Li, Xiaofeng Yang, Jie Zhang	119
Studies on the Cellulose Liquefaction Mechanism in Aqueous Condition	
J. S. Lin, M. H. Rei, Late S. S. Tsai, C. T. Yang	120
Expression, Purification and Activity of Ulp1 Active Fragment	
Jian Xiao, Xiaokun Li	121
The Parameters Control for Recirculation Treatment of Leachate	
Jiang Bao-Jun, Yin Jun, Zhang Li-Guo	122
Steam Reforming of Biomass Pyrolysis Tar for Hydrogen with Ni-Fe/ Attapulgite and Ni-Fe- Al/ Attapulgite Catalysts	
Jianhua Yu, Shaoping Xu, Xiaoqin Yang, Hongyan Yuan, Shuqin Liu	123
New Olefin Production Technologies in Sinopec Sript	
Jiawei Teng, Zaiku Xie, Weimin Yang, Yongsheng Gan	124
Research on Pulverized Coal Concentration Measurement and Its Influence Factors Via Capacitance Solid Mass Flow Meter in the Pipe	
Jinchao Zhao, Xiaolei Guo, Wanjie Huang, Yanjun Xiong, Haifeng Lu, Xin Gong	125
The CO ₂ Gasification Reactivity for the Entrained Gasifier Fly Ash Using Temperature-programmed Thermogravimetry	
Jing Gu, Shiyong Wu, Youqing Wu, Ye Li, Jinsheng Gao	126
Lipase Immobilization on Woollen Cloth in the Presence of Transglutaminase	
Jing Dong An, Steve McNeil, Md Monwar Hossain, Darrell Alec Patterson	127
Low-temperature flow property of biodiesel	
Yang Jingyi, Xu Wei, Xu Xinru, Zhang Beilei	128
A Mass Transfer Model of Complex-diffusion of Deferrization from hydrotreating raw oil	
Yang Jingyi, Cai Haijun, Xu Xinru, Zhang Beilei	129
Improvement of biodiesel production processes in packed-bed reactor with immobilized lipases	
Jong Ho Lee, Yoon Seok Song, Seong Woo Kang, Jung Soo Lim, Chulhwan Park, Seung Wook Kim	130
Isolation and characteristics of novel heterotrophic nitrobacteria from bio-ceramic nitrification reactor	
Su Jun-feng, Ma Fang, Zhang Jian-qi, Hou Ning, Wang Hong yu, Gao Shan-shan	131
Research on Enrichment Arsenic From Arsenic-containing Industrial Waste Water	
Bai Junzhi, Ling Guoliang, Guo Jiangyi, Chen Chaozhong, Liu Yi, Dong Jun	132
Dual Media Biofilm Reactor for Wastewater Treatment	
K. H. Chu, C. H. Ong	133
Preparation of metal monolithic catalysts and catalytic properties in oxidative coupling of methane	
Kai Wang, Shengfu Ji, Jingjing Tang, Chengyue Li	134
Asymmetric Sulfoxidation Catalyzed by Horseradish Peroxidase in Hydrophilic Ionic Liquid	
Wang Kan, Ni Tianbiao, Wang Jufang	135
Upgrading and Fractionation of Brown Coal through Treatment in 1-methylnaphthalene at around 350°C	
Kouichi Miura, Ryuichi Ashida, Satoshi Umemoto, Akihiro Sakajo, Koji Saito, Kenjikato	136
Morphology Effect of Ceria on the Activity of Au-CeO ₂ Catalysts for the CO Oxidation Reaction	
Kun-Ming Jia Hui-Li Zhang, Wen-Cui Li	137
The Research of Utilizing Liquid Blast Furnace Slag for MSW Gasification and Melting	
Kun Lai, Ping He, Weng Guang Liu, Shan Qing	138
The Drying Kinetics of Chitosan-Gelatin Sponginess Wound Dressing	
He Lanzhen, Deng Chunmei, Yang Dan	139
The Study on SM Bituminous Coal Chars Activation by CO ₂ and Their Pore Structure	
Zhang Qiumin, Shi Lei, Guan Jun, He Demin, Zhao Shuchang	140
Oct-Md Technology Development and Commercial Applition for Fcc Gasoline Selective Hydrodesulfurization	

Zhao Leping, Fang Xiangchen, Guan Minghua, Duan Weiyu	141
Cell-immunosuppressive Mechanism of X5 from <i>Withania Coagulans</i>	
Lijuan Sun, Youjun Yu, Lihong Hu, Jianwen Liu	143
CpG ODN enhances anti-tumor activities of cocultured DC and CIK in vitro and in vivo	
Li Li, Lijia An	144
Study of anthracite oxygen-oxidation in alkaline medium	
PeiYong Li, Jun Guan, QiuMin Zhang, DeMin He, ShuChang Zhao	145
A coal policy against climate change	
Li Zhou	146
Study on the Environmental mineral materials to Purify Rainwater	
Guoliang lin, Zhongchuan xu, Yinjia jin, Duian, lv, Yingdian, he	147
Optimized Culture Medium and Fermentation Conditions for Lipid Production by <i>Mortierella isabellina</i>	
Li-Juan Ma, Yu-Feng Wen, Hui-Li Jiang, Dong-Hua Xue	148
Effect of Dispersants on the Viscosity and Stability of Lignite Char Water Slurry	
Yilong Fan, Haoquan Hu, Lijun JIN	149
Evolution Characteristics of Gases and Synergistic Effect of Macerals from Weak Reductive Coals during Pyrolysis	
Yunpeng Zhao, Haoquan Hu	150
Adsorption Characteristics of CH ₄ and H ₂ on Activated Carbon	
Yanna Liu, Jingyang Xu, Lijun Jin, Haoquan Hu	151
Synthesis and Modification of Zeolite SrA Adsorbents for Separation of Hydrogen and Methane	
Jingyang Xu, Yanna Liu, Yunming Fang, Haoquan Hu	152
Economical Butyric Acid Production from Cane Molasses with <i>Clostridium Tyrobutyricum</i> Immobilized in a Fibrous-bed Bioreactor	
Jiang Ling, Wang Ju-Fang, Xu Zhi-Nan, Liang Shi-Zhong, Cen Pei-Ling, Wang Xiao-Ning	153
Performance Evaluation of a Packing-type Microbial Fuel Cell Using Phenol as Fuel	
Haiping Luo, Guangli Liu, Renduo Zhang, Cuiping Zhang, Song Jin	154
Microwave-Irradiated Degradation of Methyl Orange Solution by Fenton-like Reagent with Chromium Compounds	
Liu Zuo-Hua, Tao Chang-Yuan, Du Jun, Sun Da-Gui, Li Bai-zhan	155
Study on the Preparation of Methanol -Palm oil-Diesel oil Micro-emulsion Fuel	
Wang Liying, Li Chunhu, Feng Lijuan	156
Using Ammonia Pretreatment to Enhance Enzymatic Hydrolysis of Rice Straw Waste Residue	
Lujie, Yangrifeng	157
Biological Treatment of Dairy Wastewater by Sequencing Batch Flexible Fibre Biofilm Reactor	
M. Abdulgader, Q. J. Yu, P. Williams, A. A. L. Zinatizadeh	158
Environmental Performance of process Changes in Efficient Use of Water Resource	
M. Y. Gunasekera	159
Notification of Process Industry Accident Data for Central Collection in Sri Lanka	
M. Y. Gunasekera, M. Malliyawadu	160
Study on Pyrolysis kinetic of coal and plastic	
LiMan Fan, Rui Yu, GuiHua Zhou, HanWei Zhu, XiYao Li, DeMin He, Jun Guan, QiuMin Zhang	161
Study on Pyrolysis Kinetics of Bituminous and Brown Coal and PE and PP	
LiMan Fan, Rui Yu, GuiHua Zhou, HanWei Zhu, XiYao Li, DeMin He, Jun Guan, QiuMin Zhang	162
The Application of Compound Refuse Derived Fuel in Railway Passenger Waste Incineration	
Yu Min, Ren Fumin, Li Xiangfen, Gao min, Ru Yihong	163
Research on Co-slurry Ability of Blue-green Algae and Shenfu Coal	
Li Ming, Li Wei-Dong, Li Wei-Feng, Liu Hai-Feng, Yu Zun-Hong	164
Sludge Start-up of SH-A process for Mature Landfill Leachate Treatment	
Cui Liping, Shan Mingjun, Zhou Yanan, Kou Lihong, Cao Tianyu	165
Removal of Basic Nitrogen Compounds from the Diesel Oil Using Room-temperature Ionic Liquids	
Author names: Minghui Hou, Zhenghong Jiang, Li Shi	166
Room-temperature Ionic Liquid as Catalyst for Removal of Trace Olefins from the Aromatics	
Author Names: Minghui Hou, Zhenghong Jiang, Li Shi	167
Pretreatment and Properties of Lignite by Mild Condition and their Effect on Slurry Ability of Coal Water Slurry	
Zhang Qiumin, Song Binbin, Guan Jun, He Demin, Zhao Shuchang,	168
Research on the Large-scale Installation's Potential of Compound Bed Reactor Using for Low Pressure Methanol Synthesis	
Bingqing Hong, Xingjun Wang, Miao Gao, Guofeng Shang, Ping Li, Yu Liu, Fuchen Wang, Zunhong Yu	169
Extraction of Proanthocyanidins from Fermented Grape Seeds	
Danjie Hu, Minghua Cao	170
Influence of the Pore Structures of Nanocast Mesocarbons on the Capacitive Performances for Supercapacitors	
Gu-Zhen Nong, Hua-Wang, Wen-Cui Li	171
Synthesis and Properties of Sulfonated Poly(Ether Ketone)s Containing 3,5-Dimethyl Phthalazinone Moieties as Proton Exchange Membrane Materials	
Juan Zhou, Shouhai Zhang, Xuehua Mei, Xigao Jian	172

Pretreatment and Properties of Lignite by Mild Condition and Their Effect on Slurry Ability of Coal Water Slurry	
Zhang Qiumin, Song Binbin He Demin, Guan Jun, Zhao Shuchang	172
Feasibility and Strategy of High Efficiency Fermentative H_2 Production from Corn Stalk Lignocellulose	
A. Wang, L. Gao, N. Ren	174
Study on Pyrolysis Kinetics of Coal with PE and PP	
LiMan Fan, Rui Yu, GuiHua Zhou, HanWei Zhu, XiYao Li, DeMin He, Jun Guan, QiuMin Zhang	175
Devopement of $LiBH_4$ for Hydrogen Storage: Effect of Ti and MgH_2	
P. Sridechprasat, Y. Suttisawat, P. Rangsunvigit, B. Kitiyanan, S. Kulpathip Anja	176
Simulation of the Drop Coalescence and diameters in Locally Isotropic Turbulent Dispersions	
Shuibo Yu, Zongchan Zhao, Caoyong Yin	177
Proess Simulation on the Ethanol Production from Lignocellulosic Material Using Aspen Plus	
Siyi Wang, Xiao Liu, Xianyou Zhang, Shihui Zhu, Xiaoxi Zhang, Zhanchun Yu, Jie Bao	178
Performance Improvement in <i>Rhizopus oryzae</i> IFO4697 Whole Cell-catalyzed Biodiesel Fuel Production	
Ting Sun, Xinyi Liu, Wei Li, Wei Du, Dehua Liu	179
Synthesis and Study of Pyrene Derivate Azine Fluorescent Probes	
Zhang Tongyan, Sun Shiguo, Fan Jiangli, Peng Xiao	180
A Mechanism Study of Pour Point Depressant on Wax Precipitation	
Wuhua Chen, Zongchang Zhao, Caoyong Yin	181
Research of Temperature Distribution of Vertical Pipe in the New Type Scrubbing-cooling Chamber	
Liu Xia, Wang Yi-Fei, Zhao Xiao-Hui, Gong Xin, Yu Zun-Hong	182
Biotransformation of Corn Straw to High Optical Purity L-lactic Acid by <i>Bacillus Coagulans</i>	
Chang Limin, Lu Jie, Zhao Changxin	183
Numerical Simulation of Aggregation in Macroporous Microcarriers-Cells Complex	
Mei Yang, Zhou Yan, Tan Wen-Song	185
Electrolyte Effect on the Catalytic Performance of Ni-based Catalysts for Direct Internal Reforming Molten Carbonate Fuel Cell	
Z. -L. Li, H. Devianto, S. P. Yoon, J. Han, T. -H. Lim, H. -I. Lee	187
Plant Performance in Wastewater Sludge Ecological Stabilization	
Y. B. Cui, Zh. Q. Guo, H. J. Sun	188
The Beneficial Effect of Mycorrhizal Fungi Inoculum	
M. S. A. Safwat	189
Study on Attrition resistant Catalysts for One-step Dimethyl Ether Synthesis from Syngas	
Bai-Chuan Yang, Hai-Peng Zhang, Wei Li, Wen-De Xiao	190
Numerical Simulation of Gel Formation from Waxy Oils under Static Condition	
Caoyong Yin, Zongchang Zhao, Wuhua Chen	191
Studies on Steam Reforming of Light Hydrocarbon over Ni-based Catalysts	
Dae Hyun Kim, Jung Shik Kang, Byung Gwon Lee, s. p. Mirajkar, Myung Jun Kim, Suk In Hong and Dong Ju moon	192
Phenols and Distribution of Phenols in Lignite Tar from the Pyrolysis Proess	
Zhang Qiumin, Tong Lanying, Guan Jun, He Demin, Zhao Shuchang	193
The Study of Fluidization Fast Pyrolysis of Straw Based on the Biomass Entrained Flow Gasification	
Dong Li, Dailin Hao, Qiang Guo, Xueli Chen, Zunhong Yu	194
Production of Carbonaceous Materials from Waste Fibre	
F. Ogata, N. Kawasaki, K. Kakehi	195
Solid State Proton Conductor $(NH_4)_2Si_{1-x}Ti_xP_4O_{13}$ for intermediate temperature fuel cells	
Haibo Wang, Kelong Huang, Liquan Chen, and Ulrich Stimming	196
One Step Synthesis of Dme in Fluidized Bed Reactor	
Hai-Peng Zhang, Bai-Chuan Yang, Wei Li, Wen-De Xiao	197
Study on Removing Trace Olefins in Aromatic Hydrocarbons with HPMo-loaded Y-zeolites	
H. p. Zeng, L. Shi	198
The Effect of Al Addition to Prevent Ni Sintering in Steam Reforming of Bio-ethanol	
H. Devianto, Z. -L. Li, S. P. Yoon, J. Han, S. W. Nam, T. -H. Lim, H. -I. Lee	199
Performances and Emission Characteristics of a Small Si Engine Operated with LPG	
Guo hui, Wu Xun-Cheng, Liu Xin-Tian, Zhang Zhen-Dong	200
Treatment of Swine Wastewater By a Combined Proess of Anaerobic Digest and Duckweed-cultured System	
H. Huang, X. Sun, W. Yang, J. Huang, Y. Xu	201
Study on Fret Ebullated Bed Hydrotreating	
Changlu Hu, Jiankun Liu, Tao Yang	202
Transient Gene Expression of Soluble VEGFR2: I - IV	
Jun Li, Xiaoping Yi, Yuanxing Zhang, Xiangming Sun	203
A New Proess for Producing Formic Acid by Alkaline Hydrothermal Reaction of Biomass-derived Carbohydrate	
Jun Yun, Fangming Jin, Guangming Li, Ashushi Kishita, Kazuyuki Tohji, Heiji Enomoto	204
Preparation of Modified Chitosan-Mycelium Adsorbent with Poly(Vinyl Alcohol) (PVA)	
KaiLan, Haijia Su, Tianwei Tan	205
Anaerobic Co-digestion of Cow-manure and Kitchen Waste	
Feng Lei, Bernhard Raninger, Li Rundong, Li Yanji	206

Factors Impacting PAHs Biodegradation in Proess of Household Organic Waste Composting <i>Feng Lei, Bernhard Raninger, Li Rundong, Li Yanji</i>	207
New Model Two-Stage Gasification and its Potential Application in the Polygeneration Technology <i>Li Qiang, Yifei Wang, Dalin Tian, Fu Wei, Yingying Xia, Zunhong Yu</i>	208
A Oxidative Desulfurization System for Diesel Fuels with hydrogen Peroxide in the Presence of Solid Acid Catalysts <i>Liang Wang, Chunhu Li, Yingfei Hou, Hongyang Zhou</i>	209
Sulfur Removal of FCC Gasoline by Selective Adsorption over Activited Semi-cokes <i>Wang Linxue, Li Chunhu, Yin Haiyan, Feng Lijuan, Yu Yingmin, Hou Yingfei</i>	210
Study on Dense-Phase Pneumatic Conveying of Pulverized Coal with CO ₂ Carry Gas <i>Haifeng Lu, Xiaolei Guo, Wanjie Huang, Zhuwei Cao, Yanjun Xiong, Haifeng Lu, Xin Gong</i>	211
Study on Catalytic Performance of Fe-Co-K/SiO ₂ Based Catalysts in Fischer-tropsch Synthesis <i>Miao Gao, Xingjun Wang, Bingqing Hong, Guofeng Shang, Ping Li, Yu Liu, Fuchen Wang, Zunhong Yu</i>	212
Production of a Hydrogen-rich Gas by Catalytic Coal Gasification at Low Temperature <i>Minquan Jiang, Yihong Yao, Jianqin Cao, Jie Wang</i>	213
CFD Simulation of Pressure Drop, Mass Transfer Efficiency and Temperature Distribution in a Structured Packing <i>M R Khosravi Nikou, M R Ehsani, M. Davazdah Emami</i>	214
Proposal of a Semi-empirical Parameter Groups Model of Organic Solid Waste Gasification <i>Ningbo Gao, Aimin Li</i>	215
An Experimental Study on Waste Water Treatment by more Spots Divisional Influent of Anaerobic Baffled Reactor <i>Peng Ju-Wei, Wang Hong-Zhe, Han Xiang-Kui</i>	216
Study on the Adsorption Capacity of Biomass Char <i>Peng Li, Ruirui Xiao, Xueli Chen, Zunhong Yu, Fucheng Wang, Qiang guo, Dong Li, Dailin Hao</i>	217
Thermal Properties and Biodegradability Studies of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) <i>Q. FEI, L. Shang^{a,b}, D D Fan, H N Chang</i>	218
Conceptual Design and Simulation Studies of Thermochemical Recuperative Combined Two-stage Gasification <i>Li Qiang, Yifei Wang, Dalin Tian, Yingying Xia, Fu Wei & Zunhong Yu</i>	219
Experimental Study of Acoustic Characteristics of Jet Flame with Air-blast Atomizing Burner <i>Shisen Yan, Qinfeng Liang, Guangsuo Yu, Zunhong Yu</i>	220
Deoxygenation of Oleic Acid over NiMo and NiMoS Catalysts <i>S Luckanahasaporn, S Trakarnroek, S Jongpattiwut, S Osuwan, S Butnark, Daniel E. Resasco</i>	221
On the Applications of Neuro-fuzzy in Fault Detection and Diagnosis System: A Review <i>S A. Syed Ab Rahman, M Z. Abu Bakar, and Z. Ahmad</i>	222
Effect of Coagulation and Activated Carbon Adsorption on Removing DOM Fractions of Bio-treated Sewage Effluent <i>Tong Liu, Xian-Bo Sun, Yong-Di Liu</i>	223
Biohydrogen Production in an Improved Cuboid Microbial Electrolysis Cell (MEC) by Reducing Internal Resistance <i>A. Wang, W. Liu, N. Ren, H. Cheng</i>	224
Study of Reactor Design on Liquid Reforming for Hydrogen Production <i>Fu Xian-Wen, Luo Nian-Jun, Cao Fa-Hai</i>	225
Spectrophotometric Method for Determination of Content of Cetyltrimethyl-ammonium Bromide in Water Solution with Methyl Orange <i>Hu Xiao-Meng, Zhou Yan-Bo, Hong Li-Yun, Lu Jun</i>	226
Oxidation of Unsaturated Carboxylic Acids in Subcritical Water <i>Xiaokun Duan, Ying Gao, Fangming Jin, Yalei Zhang, Jianglin Cao</i>	227
Study on the Pyrolysis and Co-pyrolysis of Shenmu Bitumite and Plastics <i>Zhang Qiumin, Li Xiyao, Guan Jun He, Demin Zhao, Shuchang</i>	228
Modification of HY Zeolite by La ₂ O ₃ on Olefin Alkylation Thiophenic Sulfur in FCC Gasoline <i>Xue-dong Zheng, Hong-jun Dong, Xin Wang, Li Shi</i>	229
Recovery of Light Hydrocarbon from GTL Vent Gas by Integration of Membrane Technology <i>Y F Chai, G H He, X H Ruan</i>	230
Design and Simulation for the Production of Hydrogen by WGS Reaction in Coal Gasification System <i>Yun Ju Lee, Dae Jin Sung, Dong Ju Moon, Suk In Hong, Jong Minlee and Sang Deuk Lee</i>	231
Grindability of Chars Produced from the Pyrolysis of Mallee Biomass under Various Conditions <i>Hanisom Abdullah, FuJun Tian, Yun Yu, Chun-Zhu Li nd Hongwei Wu</i>	232
Hydrolysis of Cellulose in Hot-compressed Water under Continuous-flow Reaction Conditions <i>Yun Yu, Hongwei Wu</i>	233
The Effects of Various Alkaline Catalysts on the Hydrothermal Conversion of Glycerin into Lactic Acid <i>Zheng Shen, Fangming Jin, Yalei Zhang, Atsushi Kishita, and Tohji Kazuyuki, Hisanori Kishida</i>	234
Slow Pyrolysis Characteristics of Wood Biomass in a Fixed-bed Reactor <i>Zhenya Wang, Jianjin Cao, Jie Wang</i>	235
Formation of Nitrogen Compounds during Entrained Flow Gasification of Coal Water Slurry <i>Chen Zhong, Yuan Shuai, Liang Qin-Feng, Wang Fu-Chen, Yu Zun-Hong</i>	236