

# **Environmental Technology and Resource Utilization II**

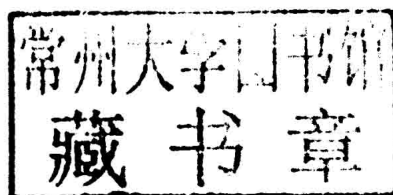
**Part 2**

Edited by  
Lanhe Zhang

# Environmental Technology and Resource Utilization II

## PART 2

Selected, peer reviewed papers from the  
2014 2<sup>nd</sup> International Conference on  
Renewable Energy and Environmental Technology  
(REET 2014),  
August 19-20, 2014, Dalian, China



*Edited by*

**Lanhe Zhang**

**TTP**

**Copyright** © 2014 Trans Tech Publications Ltd, Switzerland

All rights reserved. No part of the contents of this publication may be reproduced or transmitted in any form or by any means without the written permission of the publisher.

Trans Tech Publications Ltd  
Churerstrasse 20  
CH-8808 Pfaffikon  
Switzerland  
<http://www.ttp.net>

Volumes 675-677 of  
*Applied Mechanics and Materials*                      *3-part-set*  
*ISSN print 1660-9336*  
*ISSN cd 1660-9336*  
*ISSN web 1662-7482*

Full text available online at <http://www.scientific.net>

***Distributed worldwide by***

Trans Tech Publications Ltd  
Churerstrasse 20  
CH-8808 Pfaffikon  
Switzerland

Fax: +41 (44) 922 10 33  
e-mail: [sales@ttp.net](mailto:sales@ttp.net)

***and in the Americas by***

Trans Tech Publications Inc.  
PO Box 699, May Street  
Enfield, NH 03748  
USA

Phone: +1 (603) 632-7377  
Fax: +1 (603) 632-5611  
e-mail: [sales-usa@ttp.net](mailto:sales-usa@ttp.net)

printed in Germany

# Applied Mechanics and Materials

ISSN: 1660-9336, ISSN/ISO: Applied Mechanics and Materials

## *Editors:*

Publishing Editor: **Thomas Wohlbier**, 105 Springdale Lane, Millersville,  
PA 17551, USA, [t.wohlbier@ttp.net](mailto:t.wohlbier@ttp.net)

**Xi Peng Xu**, Huaqiao University, Ministry of Education Engineering Research Center for  
Brittle Materials Machining, Xiamen, 361021, China, [xpxu@hqu.edu.cn](mailto:xpxu@hqu.edu.cn)

## *Aims and Scope:*

Applied Mechanics and Materials is a book series specialized in the rapid publication of proceedings of international conferences, workshops and symposia as well as state-of-the-art volumes on topics of current interest in all areas of mechanics and topics related to materials science.

## *Internet:*

The periodical is available in full text via [www.scientific.net](http://www.scientific.net)

## *Subscription Information:*

Irregular: approx. 80-100 volumes per year. First volume in 2014: Vol. 440

The subscription rate for web access is EUR 1089.00 per year.

Standing order price for print copies: 20% discount off list price plus postage charges.

ISSN print 1660-9336 ISSN cd 1660-9336 ISSN web 1662-7482

## **Trans Tech Publications Ltd**

Churerstrasse 20 • 8808 Pfaffikon • Switzerland

Fax +41 (44) 922 10 33 • e-mail: [ttp@ttp.net](mailto:ttp@ttp.net)

<http://www.ttp.net>

<http://www.scientific.net>

# **Environmental Technology and Resource Utilization II**

**PART 2**

Edited by  
Lanhe Zhang

# 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 2014 2nd International Conference on Renewable Energy and Environmental Technology (REET 2014, ICREET 2014) took place in Dalian, China, August 19-20, 2014. 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 and Processing Technology, Environmental Safety and Health, Environmental Planning and Assessment, Environmental Analysis and Monitoring, Environmental Restoration Engineering, Pollution Control Engineering, Waste Disposal and Recycling, Water Supply and Drainage, Hydrology, Water Resources Engineering, Soil and Water Conservation, Ecological Environment and Architectural Environment Protection, Forest Cultivation, Protection and Plant Protection, Geographic Information Science and Remote Sensing, Urban and Regional Planning, Land Resources Planning, Mineral Prospecting and Exploration, Mining, Mineral Processing and Metallurgical Engineering, Oil and Gas Well Development Projects, Agricultural Products Processing and Biological Pharmaceutical, Energy Saving, Environmental Protection, Low Carbon Ideas, and Sustainable, Environmental Protection and Economic Development, Global Climate Change and Carbon Emissions, Eco-Economy, Circular Economy, Low Carbon Economy.

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 Organizing Committee of REET 2014*

2014 2nd International Conference on  
Renewable Energy and Environmental Technology  
(REET 2014)

## **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. Dongming Ren, Energy Research Institute National Development and Reform Commission

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  
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 Chinese 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 University, 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. Lanhe Zhang, Northeast Dianli University, China  
Prof. Yong Li, Northeast Dianli University, China  
Prof. Yingjie Zhang, Northeast Dianli University, China

## **CHAPTER 7:**

# **Waste Disposal and Recycling**

# Table of Contents

Preface	xxi
Conference Organization	xxii

## PART 2

### Chapter 7: Waste Disposal and Recycling

<b>BiOCl<sub>0.8</sub> Br<sub>0.2</sub> Photocatalyst Preparation and Degradation of Dye Wastewater under Ultraviolet-Light</b> M.R. Zhang, A.J. Xu and G.L. Sa .....	661
<b>Challenge and Development of Sludge Treatment and Disposal in China</b> L.L. Zhu, L.P. Qiu, L.X. Zhang and S.B. Zhang .....	665
<b>Design and Analysis for Partition Plate of Gravity Oil-Water Separator</b> H.J. Liu, G.Z. Jia, Y.P. Cai and S.P. Chen.....	669
<b>Harmless Disposal Technology of Waste Drilling Fluid in Liaohe Oilfield</b> H.Y. Xu.....	674
<b>Methanogenic Performance of Pulp and Paper Mill Sludge Using Anaerobic Digestion Process</b> Z.M. Du, Q. Wu and X.Q. Zhang .....	680
<b>Optimization of Flow Deflector Quantities for Gravity Oil-Water Separator</b> H.J. Liu, G.Z. Jia, S.P. Chen and Y.P. Cai.....	685
<b>Recycling of Waste Toner and its Electrochemical Performances for Supercapacitor</b> J.Q. Mao and Y. Li.....	689
<b>A Design of Pyrolysis Test System Based on the Co-Processing of Municipal Waste with Rotary Klin</b> W. Cao, W.W. Zha and W.L. Ni.....	693
<b>A New Technology for Recovery of Metals from Waste Printed Circuit Boards</b> W. Liu, C. Liang, W.Q. Qin and F. Jiao .....	698
<b>Study of Industrial Leaching Process of the Steelmaking Zinc Dust with High Content of Silicon</b> Y. Li, W. Wang, Z.G. Ji and Y.X. Qiu.....	704
<b>Study on Bleaching Properties of Dark Chicken Feather</b> Y.L. Wang, D. Sheng, X.W. Xia, Q.W. Zhao and W.L. Xu.....	709
<b>Study on Comprehensive Utilization Status and Technical Route of FGD Gypsum from Coal-Fired Power Plants</b> B.J. Han, T. Yue, P. Jing, P.L. Zuo, C.L. Wang, S.F. Qi and Y.H. Ding .....	713
<b>Study on the Effect of Advanced Treatment of Pharmaceutical Wastewater by Coupling of Micro-Electrolysis-Catalytic Oxidation</b> S.L. Qin and Z.Q. Wang .....	718
<b>Synthesis of Zeolite 13X from Coal Fly Ashes and Properties of the Zeolite Products</b> W.W. Tu, Y.F. Zhang, J. Bai and W. Liu .....	724
<b>The Basic Characteristics of Gasification Slag from Texaco Gasifier and Shell Gasifier</b> H.D. Yuan, H.F. Yin, Y. Tang and H. Shuai .....	728
<b>Using Yeast to Treat Soybean Wastewater and Realize Resource Recovery</b> H.F. Lu, G.M. Zhang and J.J. Zhou .....	733

<b>Effects of Biogas Residue on Soil Improvement in Peach Orchard</b> S.L. Wang, J.S. Yang, R.L. Wang, R.Q. Li, S.T. Wang and K.F. Liu .....	738
<b>Effects of Ventilation on Sewage Sludge Composting</b> K. Zhao, Y. Zhang, Y.T. Zhang and Y.Y. Yin.....	742
<b>From the Perspective of Social Stratification: Social Assessment Research on Waste Incineration BOT Projects</b> A.Q. Gu, G.Q. Shi and Y.Q. Lou .....	746
<b>Influence of Sodium Hydroxide on the Properties of FGD Gypsum-Slag Composite Materials</b> F. Huang, B.L. Jiao and D.D. Wang .....	750
<b>Research on Porous Ceramics Synthesized by Industrial Waste Residues</b> T.Z. Li, X.Q. Zhu, X.T. Zhou, J.H. Chang, L.M. Chen and L. Chen.....	756
<b>The Environmental Problem of Household Hazardous Waste Generation and Treatment</b> M.G. Ryzhakova, V.I. Maslikov, A.N. Chusov and V.V. Korablev .....	761
<b>Application of Plackett-Burman Design in Screening the Significant Factors Effecting Denitrification of Salinity Wastewater by Biofortification SBR</b> J. Tang, S.S. Qu, K. You and J.X. Fu .....	770
<b>Assessment of Treating Laundry Wastewater Using Composites Based on Industrial Waste</b> Y. Liu, M. Yu and C.L. Ge .....	774

## **Chapter 8: Hydrology, Water Resources Engineering, Soil and Water Conservation**

<b>Agricultural Restructuring Based on the Water Resources Carrying Capacity in Shandong Province, China</b> Q. Huang, W.P. Wang and H.Y. Deng.....	783
<b>Analysis of Water Resources Carrying Capacity in Xianyang City under the Background of the Xi'an - Xianyang Integration</b> Y.L. Wang, R.P. Zhou, M. Zhang and M.N. Zhao .....	787
<b>Hydrologic Responses to Climate Change in Mountainous Watershed of Southwest China, 1980 to 2010</b> Y.Y. Liu and B.J. Liu.....	794
<b>Multi-Objective Ecological Operation Model for Reservoirs and its Application</b> L.N. Liu and W.L. Liu .....	801
<b>Numerical Modeling of the Tidal Current Movement of the Baima Port, China</b> X. Li and M.X. Xie .....	806
<b>Preliminary Research on Hydrodynamic Dispatch Method of Algal Blooms in Three Gorges Reservoir Bays</b> W. Yin, X.K. Xin and H.Y. Jia .....	811
<b>Smart Basin and its Application in Integrated Management of River Basin</b> Y.T. Ye, Y.Z. Jiang, H.H. Yang, H.L. Zhao and L.L. Liang .....	818
<b>Study on Ecological Effect of Urban Landscape Water in Jinan, Shandong Province</b> Q.Y. Xu, W.P. Wang and H.Y. Deng .....	826
<b>Study on Function Zoning and Evaluation of Shallow Groundwater in Jinjiang City</b> M.Y. Yu, S.Z. Chen and C.Y. Chen.....	830
<b>The Application of Strontium on Recharge of Shaizhudong Spring in the Central of Weibei</b> Z.Y. Ma, J.B. Li and L. Zheng.....	842
<b>The Evolution and Instruction of Strontium Isotope in the Geothermal Water of Basin Type</b> Z.Y. Ma, X.C. Li and H.J. Zheng.....	845

<b>The Natural Vacuum Desalination Technology in Seawater Desalination</b>	
X.H. Liu, X.C. Zhang, Y.Q. Fang and M.M. Zhu.....	851
<b>Tracer Test of Fracture-Karst Aquifer Recharge with Roofwater in Jinan of China</b>	
H.Y. Deng, W.P. Wang and Q. Huang.....	856
<b>Transformation of the Raindrop Speed Base on Diameter about Soil Erosion Similar</b>	
Z.Z. Shen, W.W. Li, Y. Wu, Z.G. Zuo, L. Fu, E. Yang, J.N. Chen, L.L. Kang, H.Z. Bao, C.G. Wang, L. Li, J. Huang, F.F. Dong, L. Chen and R.M. Chen.....	860
<b>Water and Sediment Exchange between the Yangtze River and the Poyang Lake, the Largest Freshwater Lake in China</b>	
H. Wang, D.P. Song, T. Xu and R. Yang.....	865
<b>Water Quality Change and Control Measures of Landscape River on West Campus of University of Jinan, China</b>	
H.Y. Deng, W.P. Wang and Q.Y. Xu.....	871
<b>A Study on Surface Evaporation in Liaoyang Based on Grey Theory</b>	
J.L. Chen.....	875
<b>An Integrated Model for Simulating and Evaluating Water Resources Sustainability at Laoshan Region</b>	
J.J. Yang and J. Zhou.....	880
<b>Analysis on Distribution Trends of Affecting Red Tide Factors in the Beibu Gulf Inshore</b>	
X. Xie, L.H. Yang, P. Xian and Q.H. Jiang.....	886
<b>Countermeasure Research of Urban Water Resources Protection and Tourism Development and Utilization of Wuhan</b>	
X.Z. Peng, Q. Yu and C. Yuan.....	892
<b>Research on Sustainable Exploitation of Groundwater Resource in the Riverside Well Field</b>	
C.Y. Zhang.....	896
<b>Research of the Underground Water Level Prediction Model in Deep Foundation Pit Engineering</b>	
H.P. Li.....	901
<b>Study on the Basin Water Pollution Control and Optimization of Network</b>	
L.K. Qi and H.W. Zhou.....	905
<b>Study on Characteristics of Hydrodynamic and Pollutant Transport of the Tributary Estuary in the Three Gorges Reservoir Area</b>	
Z. Wang, Y. Liu, C.H. Qin and W. Zhang.....	912
<b>Effects of Different Organic Materials on Contents and Morphologic Changes of Mn in Black Soil</b>	
Z.Y. Yang, J.G. Wu, C. Chen and N.N. Feng.....	918

## Chapter 9: Water Supply and Drainage, Filtration

<b>Hydraulic Calculation Principle and Todini Formulation Algorithm Analysis</b>	
X. Zhao, Q.F. Li, J.J. Xu, L.F. Song, L.H. Zhao, J.L. Zhao and L. Zhang.....	927
<b>Pollutants Removal Performance of Subsurface Wastewater Infiltration System under Different Hydraulic Loading Rates</b>	
S.Y. Song, J. Pan and Y. Zhang.....	934
<b>Start-Up Characteristics of Biological Aerated Filter with Composite Steel Slag Media for Nitrogen and Phosphorus Removal</b>	
Z. Liu, L.P. Qiu and L.X. Zhang.....	939
<b>Study on Management System of Drainage Network</b>	
H.R. Li.....	943

<b>Study on Production Process of New U-Shaped Canal</b>	
J.L. Sun, S.J. Zhang, B. Zhang and L.J. Liu .....	947
<b>The Influence of Bromate Formation by Chlorination in Drinking Water</b>	
L. Fang, Q. Zhu and J.H. Xu .....	951
<b>The Research of Anti-Frost Technology of Rural Water Purification Construction in Severe Cold Regions - Taking the Example of Water Supply Plant of Wanfang of Zhaoyuan in Daqing</b>	
L. Bai, Y. Wang and X.L. Liu .....	955
<b>The Establishment of Principal Component Analysis Assessment Model for Drinking Water Quality of City Resource</b>	
L.F. Sun, Q.J. Qi, X.L. Zhao and R.F. Li .....	960
<b>Flocculation of Chitosan and the Application in Water Treatment</b>	
Y.Q. Xu, S.L. Liu and H.J. Zhao .....	964
<b>Performance of Micro-Polluted Source Water Treatment by Biological Aerated Filter with Lava Media</b>	
B. Wang, L.P. Qiu, L.X. Zhang and K. Xie .....	968
<b>Emergency Dispatch System Research and Development for Urban Water Supply</b>	
F.X. Chai, D.M. Chai and H.R. Dai .....	972
<b>Research on Industrial Water Demand Forecasting Model and its Application in China</b>	
Q.R. Zou and X.L. Liu .....	976

## **Chapter 10: Ecological Environment and Architectural Environment Protection**

<b>A Logit Model Based Study on the Influencing Factors on Farm Household's Adoption of Soil Testing and Formula Fertilizing Technology: A Case of Four Towns</b>	
L.X. Yang .....	985
<b>A Study on Topographic Differentiation of Small-Watershed Landscapes in the Loess Hilly Region Based on Ecological Restoration Measures</b>	
Y. Shi, S. Geng and W.B. Mi .....	989
<b>Brief Analysis on Green New Deal of Iron &amp; Steel Industry and PM<sub>2.5</sub> Pollution Control Countermeasures in China</b>	
C.Y. Jiao, G. Ren, T.B. Xu and Q.H. Liu .....	1001
<b>Distribution Disciplines and Cause of Harmful Elements in Copper Tailing Sand</b>	
X.Q. Liu, S.B. Xia, H. Yuan and Z.L. Cai .....	1005
<b>Phytoremediation on PAHs in Soils and Laboratorial Technics</b>	
Z.H. Lei and Y.X. Wu .....	1012
<b>The Formation of Iron Plaque on the Roots of <i>Carex cinerascens</i> in Poyang Lake and its Effect on the Lead Accumulation</b>	
C.Y. Liu, X.F. Gong and J.Y. Yang .....	1018
<b>Space Effectiveness Analysis of Urban Natural Ecological Network</b>	
X.Y. Gu .....	1024
<b>Study on Information Needs for Promoting the Development of Circular Agriculture</b>	
H.Q. Wang, H. Li and X. Wu .....	1028
<b>Study on Interspecific Coordination Effect within the Entrepreneurship Ecosystem</b>	
X.L. Guan and B. Gao .....	1032
<b>Study on New Urbanization Construction and Ecological Environmental Protection</b>	
S.B. Zhang .....	1036
<b>Study on the Distribution of Land Value-Added Income Based on Ecological Compensation</b>	
L. Sun and S.F. Yuan .....	1040

<b>Study on the Ecological Environmental Problems of the Big Sport Events in China</b> X.J. Kou and K.Y. Shen .....	1044
<b>The Environmental View of Thoreau's Walden: The Interpretation of the Relationship between Human and Nature</b> L.L. Zhang .....	1048
<b>The Invasive Species Risk Assessment and Prediction System Based on GIS</b> X.H. Wang, Y.J. Liu and L.N. Guo .....	1052
<b>Thoughts on Developing of Jujube Industry in Southern Xinjiang under Ecological Fragility</b> Y.P. Guo and Y. Luo.....	1058
<b>Analysis on Cultivable Fungal Community Structures in Farmland Soil in Different Latitudes of Heilongjiang Province</b> J.H. Wang, M. Wang, J.F. Guan, W.T. Gu, X.Q. Zhou and X.P. Zhang .....	1062
<b>The Value Assessment of Ecosystem Service Function in Lingang Wetland Park</b> L.Y. Lv, H.Y. Li and J.N. Yang.....	1067
<b>On the Water Ecological Civilization Construction and Strategic Measures of the Sustainable Utilization of Water Resources in Shiyang River Basin</b> S.W. Zhang, P.J. Shi and H. Li .....	1072

## Chapter 11: Forest Cultivation, Protection and Plant Engineering

<b><i>In Vitro</i> Induction and Identification of Tetraploid in Watermelon [<i>Citrullus lanatus</i> (Thunb.) Matsum and Nakai]</b> N. Zhang, J. Ren, W.S. Cheng, H.X. Zeng, X.F. Shi, Y.H. Li and Y.H. Sun .....	1079
<b>Effect of Root Zone Aeration on the Growth of Film-Mulched Tomato in Greenhouse</b> H. He and X.H. Yi.....	1087
<b>Improved Efficiency of Microspore Culture of <i>Brassica campestris</i> Ssp. <i>pekinensis</i> (Chinese Cabbage)</b> Y. Han, X.L. Ye and H. Feng.....	1091
<b>Landscape Plants' Regional Research and Conservation</b> C. Li, M. Yuan, Y. Gong and G. Zhang.....	1097
<b>Regenera of Tartary Buckwheat Seedlings</b> H.M. Li, Y.L. Li, J.J. Hu, J.S. Bian and F. Shan.....	1101
<b>Research on Hierarchy Distribution of Vegetation in Ten-Li Strand Artificial Wetland Park</b> C.Y. Diao and W.S. Tai .....	1107
<b>Study on Response of Alpine Timberline in Taibai Mountain to Climate Changes</b> P.X. Li, H.Y. Bai and H. He .....	1111
<b>The Correlations Dimension of <i>Lilium regale</i> Spatial Patterns</b> Z.S. Yang .....	1120
<b>The Spatial Patterns of <i>Lilium regale</i> Population</b> Z.S. Yang and Y. Can .....	1125
<b>Analysis of Coexpression Genes in <i>Oryza sativa</i> L. Treated with Low-Energy Ion-Beam</b> W.G. Chen, Y.Z. Zhang, Y.W. Cheng and H.Y. Ya.....	1129
<b>Identification and Analysis of the Heat Shock Transcriptor PsHsfB1 in Tree Peony</b> Y.Z. Zhang, Y.W. Cheng, H.Y. Ya, K. Gao and J.M. Han.....	1133
<b>Research on the Biological Properties of <i>Scatella tenuicosta</i> Bennison in Seedling Production</b> J.G. Peng, N. Zhang, Q.Y. Li, M.B. Zhou, X.F. Shi, M. Tang, Y.S. Zhu and Y.H. Sun .....	1137
<b>The Influence of High Voltage Electric Field for Barley Seed Germination and its Mechanism</b> M.F. Shi, J.J. Fan, S.J. Li, X.L. Yu and X.M. Liang.....	1142

<b>The Study on Key Factors of Soil Seed Bank in Vegetation Restoration</b> M.X. He and H.Y. Li .....	1146
 <b>Chapter 12: Geographic Information Science and Remote Sensing</b>	
<b>A Study on Selecting Segmentation Object of Object-Oriented Inversion Based on Hyperspectral Chlorophyll-A in Chaohu Lake</b> X.J. Hou, J. Liu and W. Cui .....	1153
<b>Band Selection of Hyperspectral Chlorophyll-A Concentration Inversion Based on Parallel Ant Colony Algorithm</b> C. Tang, Y. Wu and J. Huang .....	1158
<b>Forest Vegetation Spatial and Temporal Pattern Analysis Based on NDVI in Jiuzhaigou</b> Y.S. Qiu, J. Gao and Q.L. Zhan .....	1163
<b>Landscape Spatial-Temporal Evolution and Ecological Effects in Kunming City over the Past Twenty Years</b> H. Yu, J. Ma, S.J. Ni, A.N. Li, G.B. Lei and H.D. Zhang .....	1171
<b>Research on Three-Dimensional Visualization System for Landslide and Mud-Rock Flows Based on Direct3D and SPH Methods</b> J. Gao, Q. Zhou and T.T. Meng .....	1179
<b>Risk Assessment and Management of Geological Disaster Based on Risk Period Analysis and GIS in Loess Areas</b> W.S. Pan, Y.D. Lu and J.Y. Guo .....	1184
<b>Study on the Inversion of Atmospheric Aerosol Depth in Tianjin Based on the HJ_1_CCD Satellite Products</b> Y. Xu and Q.G. Jiang .....	1192
<b>Temporal and Spatial SST (Sea Surface Temperature) Distribution and its Impact on Chlorophyll - A Concentration in Southern Ocean during 2002-2012</b> C. Zeng and H.P. Xu .....	1197
<b><i>Ulva prolifera</i> Monitoring Study in the Yellow Sea from Multi-Temporal Remote Sensing Images</b> Y. Zhou, B. Zhou and Y.Y. Gai .....	1201
 <b>Chapter 13: Urban and Regional Planning, Land Resources Planning</b>	
<b>Allocation of Land Value Increment from TDR Perspective</b> Y. Cao and C.F. Wu .....	1209
<b>Empirical Research of Demonstration Effect on Consolidation and Readjustment of Rural Land: A Case Study in Haiyan County</b> J.B. Xue, Y.J. Jing and K.J. Jia .....	1218
<b>Geographical Concentration of Industries in China</b> L.L. Chen and F.J. Jin .....	1222
<b>Numerical Simulation on Cooling Effects of Greening for Alleviating Urban Heat Island Effect in North China</b> C. Chen, Y. Yue and W. Jiang .....	1227
<b>Review on Promoting the Sustainable Development of Rural Tourism from the Angle of Community Participation</b> B. Han and X.M. Sun .....	1234



<b>Study on Households' Willingness in Farmland Transfer: A Case of Tengtou Village, Fenghua in Zhejiang Province, China</b> S.F. Yuan, F. Li and X.C. Wang.....	1238
<b>Study on Urban Land Increment Mechanism: A Case of Hangzhou, China</b> S.F. Yuan, X.C. Wang and F. Li.....	1242
<b>Sustainable Development Strategy Research of Historical Village Environment - Take Huaiyin Village of Zhenjiang as Example</b> J. Huo and R. Han.....	1246
<b>The Characteristics and Sustainable Development of Ancient Villages Located in the Northeast of Jiangxi Province - Experiences from the Panxi Village, Jingdezhen City, Jiangxi Province, China</b> Z.Y. Nie and Q.Q. Chen.....	1253
<b>The Infrastructure Security Evaluation of China's Big Cities</b> Y.H. Xiang, C.Y. Li, P.C. Li and T.T. Zhang.....	1257
<b>The Residential Area Planning for the Sustainable Development</b> L.M. Bai and J.M. Hou.....	1262
<b>Advantages and Strategies of Tourism Landscape Development in Harmony with Traditional Calligraphy Art - The Hometown of Confucius and Mencius as an Example</b> G.H. Zhu.....	1266
<b>Color a City - The Study of Yichang's Urban Color</b> S. Liu and G.Y. Li.....	1271
<b>On Development and Innovation of Tourism Resources of Historical and Cultural City in Jingdezhen</b> J.B. He and Z. Wang.....	1275
<b>Research on Influencing Factors of Urban Color - Taking Changsha as an Example</b> S. Liu and S.Y. Zhu.....	1279
<b>Empirical Study on Utilization Benefit of Cultivated Land in Changsha</b> J.H. Tang, Y.H. Li and H. Li.....	1283
<b>A Structural Equation Model of Urban Forest Recreationists' Satisfaction</b> L. Zhou and S. Tang.....	1288
<b>Theoretical Analysis on Modern Park Landscape Design and Evaluation</b> T.Q. Tang.....	1295