Material and Environmental Science, Building Engineering, Biomedical and Bioinformatics Technologies

Selected, peer reviewed papers from the 2013 International Conference on Advanced Engineering Materials and Architecture Science (ICAEMAS 2013), July 27-28, 2013, Xi'an, Shaanxi, China

von H.W. Liu

1. Auflage

Trans Tech Publications 2014

Verlag C.H. Beck im Internet: www.beck.de ISBN 978 3 03785 808 0

Table of Contents

Preface

Preface and Organizing Committee

Chapter 1: Material Science and Engineering

The Composition and Uses of the Building Material Z.J. Zhang	3
Oxidation of CVD Growth Single-Layer Graphene	5
H. Gao and Y. Zhang	7
Microstructure and Corrosion Properties of Mg-Zn-Ca-Zr Alloy for Biomedical Application	
D.M. Jiang, T.S. Yu, D.H. Jiang, L. Guo and Z.Y. Cao	11
Changes of Natural Frequencies of Industrial Steel Hall due to Simplifications of Numerical	
Model J.M. Dulinska and P. Boron	16
Fabrication of PbO-Type Structure β -FeSe Superconductor Ceramics by Solid State	
Reaction Method Y.Y. Wu, J. Gao, T. Li and Z.Q. Hua	21
Preparation of Ti-Based Hybrid Membranes and its Application for the Removal of	
Copper(II) Ions from Water J.S. Liu and X.L. Zhou	25
Size-Dependent Piezoelectric Coefficient d ₃₃ of Nanoparticles	23
S. Zhang and L. Chen	29
Synthesis and Structure of a Two-Dimensional Metal-Organic Framework:	
$[\mathbf{Fe}(\mathbf{C}_7\mathbf{H}_3\mathbf{NO}_4)(\mathbf{H}_2\mathbf{O})_2]_n$ H.S. Wang and H.F. Suo	33
The Migration and Distribution Characteristics of the COD in the Enriching Process of	
HPF Coking Desulfurization Waste Solution G.Q. Li, Y.F. Zhang, Z.Z. Li, Y.L. Shi, Y.Z. Wang and L. Wang	37
Research on Cu(II) Transfer Using Supported Liquid Membrane	51
X.J. Yu, F. Zhang, L.Z. Huang, J. Zhao and J. Zhang	41
Study of Coating Binder Migration and Affected Parameters Z.H. Zhen and Z.S. Wang	45
Influence of Sintered Temperature on Spinel LiMg _{0.06} Mn _{1.94} O ₄ Synthesized by Flameless	
Liquid-Phase Combustion Method M.M. Chen, H.L. Bai, J.J. Huang, M.L. Yuan, X.Z. Huang, C.W. Su and J.M. Guo	49
The Experimental Study on the Fire Suppression Effectiveness of Water Mist with the FeCl ₂	
Additives C. Jian, X.Y. Ying and W. Na	53
Structure Studies on Order Assemblage of Manganese ^{II} Complexes	
Y. Liu, S.S. Zhang, J. Gao, T.Z. Yang and H.X. Tian	57
Equation of State of Detonation Products Based on Chemical Equilibrium Y.H. Zhao, H.F. Liu and W.W. Pang	61
Dynamic Fracture of Ductile Metals at High Strain Rate W.W. Pang, G.C. Zhang, A.G. Xu and P. Zhang	65
Cu ₂ S and AlN Precipitates in Fe-3%Si-0.5%Cu Steel Produced by Low Slab Reheating	
Technique Y. Wang, Y.B. Xu, Y.X. Zhang, F. Fang, X. Lu, Y.M. Yu and G.D. Wang	69
Application of Nanoscale Zero Valent Iron Combined with Impatiens Balsamina to	
Remediation of E-Waste Contaminated Soils Y.Y. Gao and Q.X. Zhou	73
Removal of Reactive Dyes from Wastewater by Magnesium Hydroxide Coagulation	, 5
Assisted with Ultrasonic S.Y. Liu and J.H. Zhao	77

Preparation of Hydrophobic Microporous Polypropylene/Isotactic Polypropylene Blending Membranes via Thermally Induced Phase Separation for Vacuum Membrane Distillation N. Tang, S. Zhang, L. Zhang, P.G. Cheng and J.J. Li	81
Anodic Behavior of Pb-Ag-Ca-Sr Alloy in Zinc Electrowinning X.T. Yuan, X.D. Lv, Y.G. Zhou, Z.Q. Hua, Y. Lei, L. Wang and T. Li	85
Effect of Extrusion Route on Grain Refinement during ECAP Process C.Y. Ban, H.T. Gao, C.Q. Li, D. Han and J.Z. Cui	90
Influence of Caustic Soda Flakes-Phosphogypsum on Activation and Microstructure of Carbide Slag-Flyash	
Q.R. Ding, Y.Y. Ma, X. Xiang, H. Cao and J. Xue	94
Study on the Performance of Mg/Al Composite Anode X. Liu, X.Q. Liu, M.L. Chen, L. Ou and B.R. Hou	98
Effects of Insolation on Optical Properties of Tricot Invisible Curtain W.L. Chen, D.H. Yi, L.Y. Wan and H.F. Li	102
Chapter 2: Civil Engineering, Building and Construction Materials and Technologies, Architecture and Geoengineering Applications	
Analysis of the Reinforced Masonry on Shear Capacity Y. Yu, X.J. Zhuang, Y.F. Zhang and Z.Q. Yuan	109
Comparative Analysis of the Reinforced Masonry Structure Bearing Capacity with Different Methods Y. Yu, L. Wang, Y.F. Zhang and Z.Q. Yuan	112
Experimental Study on Simply Supported Reinforced Concrete after Fire	112
X. Han, D.F. Zhao and Z.K. You Analysis of Crack Patterns of 500MPa Reinforced Concrete Beams	116
Z.H. Li and X.Z. Su	120
Study on Rain Water Drainage System Plan Based on SWMM B. Gao and B.Y. Zhuang	125
Study on Causes and Solutions of Cracks on Concrete Hollow Block Wall Q.S. Zhang	129
Three-Dimensional Numerical Simulation Analysis of Security of the Underground Diaphragm Wall Based on the Ring Beam Supporting System G. Zhou, K.S. Ding, S.J. Yi and Z.G. Fan	133
Discussion on the Site Selection of Handan History Settlements F. Wang, C.H. Yang and H. Chen	138
Research Status on Muddy Water Seepage Theory Z.F. Song and Q.H. Cui	142
Genetic Algorithm for Searching for Critical Slip Surface in Gravity Dams Based on Stress Fields	
J.Y. Chen, S. Wang, Q. Xu and J. Li	146
Normalized Soil Deformation Induced by Underlying Bedrock Fault Q.P. Cai, Y. Huang and F.Y. Meng	150
Finite Element Analysis of the Destroy of Pressure Reducing Cone's Column in the Cement Silo	
K. Hu and D.G. Kong	155
The Study on Heating Running Schemes of Solar Energy Combined with Municipal Heating Y.A. Ao, G. Li, W.X. Kong and Q. Feng	160
Influencing Factors and Control Measures of the Saturation Line of Tailing Dams Z.F. Song and Q. Wang	165
Experimental Study on the Rutting Deformation Mechanism of Asphalt Pavement Y. Ye and H.K. Chen	169
Experimental Study of Performance of Self-Stress Lightweight Aggregate Concrete Filled Steel Tubes after Exposure to Fire J.C. Xu, P.F. Ren, H.L. Tong and X.T. Wang	173
Study of Post-Fire Performance of Steel Fiber Reinforced Ceramsite Concrete Filled Steel Tubes	
P.F. Ren, J.C. Xu, J.Q. Lu and X.T. Wang	177

Research of Post-Fire Mechanical Property of Steel Fiber Reinforced Ceramsite Concrete Filled Steel Tubes after Exposure to Fire H.L. Tong, T.H. Wang, J.Q. Lu and X.T. Wang	181
Study of Post-Fire Axial Compressive Behavior of Self-Stress Ceramsite Concrete Filled Steel Tubular Short Columns	185
J.Q. Lu, H.L. Tong, J.C. Xu and X.T. Wang Numerical Analysis of Fire Performance of a Spacial Pre-Stressed Steel Structure in Fire T.H. Wang, J.C. Xu, H.L. Tong and X.T. Wang	189
Analysis of FRP Chimneys Liners under Wind and Seismic Load A.X. Ding, A.Q. Ni and J.H. Wang	193
Mechanical Behaviors of Square Timber Columns Reinforced with AFRP under Axial Compression	100
S.C. Yuan, J.F. Dong and Q.Y. Wang The Effect of Human Activity on the Distribution of Soil Nitrate Nitrogen in Unsaturated	198
Zone H.Y. Gao, L.H. Yang, T. Li and Z.P. Guo	202
Wind-Induced Vibration Control of Benchmark Model with Damper H.N. Fan, Q. Lin and J.L. Zhang	206
Chinese Traditional Garden of Water and the Chinese Culture Y. Dong and Y. Zhou	211
Instantaneous Stochastic Optimal Control of Seismically Excited Structures Based on Time Domain Explicit Method	21.5
X.P. Li, C. Yu, J.Y. Zhang, J.J. Zhou and L.M. Zhang A Construction Technology for Buildings Horizontal Movement	215
J.M. Liu	219
The Different Pavement Combination Deflection Change Law Discuss J.H. Gao	223
Static Load Test of Frame-Structure Slab J.F. Su and Y.F. Xu	227
Application of the CRD Method in Construction of an Ultra-Shallow, Ultra-High Section and Large-Span Mined Tunnel J.F. Su and Y.F. Xu	231
The Engineering Geological Characteristics Evaluation of the Weak Soft Soil of the Xingheng Highway Test Section C.Y. Liu, J. Li, S. Shen and P.C. Zhang	235
Application of Superiority Evaluation Method in Engineering Bidding Evaluation Z.L. Guo and X.F. Yang	239
Dynamic Response Sensitivity Analysis of Asphalt Pavement to Moving Point Loads X.M. Zhang, Z.C. Sun, H.X. Xue and Y.D. Wang	243
Comparative Analysis on Seismic Performance of Steel Frame with Different Forms of Symmetric Enhanced Nodes	0.45
L.T. Dong and Y. Wang Innevertion of Utility Tunnel Nodel Design Toking Utility Tunnel in Leisusen as Example	247
Innovation of Utility Tunnel Nodal Design Taking Utility Tunnel in Laiyuan as Example F. Wang, L. Liang, H.J. Han and Y. Lu	252
Influence Analysis of the Incorrect Construction Sequence on Concrete Strength of Cast-in-Place Piles Z.Q. Zhu, J.X. Wang and Z.X. Feng	255
Heat Damage of High-Temperature Rock Tunnel by Weighted Residual Method in Tibet	233
Plateau L.N. Ma, S.H. Yan, R.L. Zhang and T.G. Li	259
The Technique for Simulation of Broken Defects in Model Pile Tests	_0,
C.H. Wang, C.L. Zhang, G. Wang and J. Su	264
The TBM and Space-Curved Belt Conveyor in Jinping-II W. Yuan and D.M. Zhang	269
Mathematical Analysis on Helicoids Architectural Form Z. Yi and C.Z. Yuan	273
Research on Application of Slow-Down Dome in Rural Highway Security Engineering Z.D. Guo, S.L. Liu and Z.Y. Wu	278

Research against the Effect of Inertia Loads on Dynamic Responses of a Simply Supported Beam	
X.M. Zhang and Y.D. Wang	283
The Influence of Lateral Fill on Foundation Bearing Capacity of High-Stacked Culverts W.L. Wang, S.J. Cui and J.P. Zhao	287
The Creep Impact on the Performance of Super-Long Reinforced Concrete Structures H.C. Wang, Z.T. Xu and W.T. Liu	291
Economic Analysis on Concrete-Filled Steel Tube Structure J.M. Liu	295
Numerical Analysis on the Influence of Joints Inclination on the Characteristics of Deformation and Stability of Tunnel X.S. Tang, Y.F. Wang and Y.R. Zheng	299
Experiment and Analysis on Influence of Moisture Content on the Mechanical Characteristics of Residual Soil of Granite H. Hu and X.X. Zheng	306
Macro-Mechanical Parameters Analysis of Rock Slope Based on the Partition Classification Method	
J. Wang and C.J. Peng	310
Effect of Temperature on the Quality of City Sewage Sludge Shale Brick Products B.Z. Huang, X.Q. Li, J.Z. Zhu, B.B. Huang, H.L. Wu and Q.Q. Guan	316
Research Progress of Self-Cleaning Architectural Coatings Z.Q. Zhang	320
A Study on the Change Law of Fundamental Frequency of Rigid Pavement X.M. Zhang, H.X. Xue, Q. Dong and Z.C. Sun	324
Design and Application of Long-Short-Pile Composite Foundation Z. Fan, Y.C. Zhang and H.K. Liu	329
Experimental Study of Strengthening of Reinforced Concrete Beams with Externally Bonded GFRP Sheets H.K. Liu, Z. Fan and Y.C. Zhang	333
Analysis on In-Plane and Out-Plane Instability Coupling of Steel Bowstring Arch Bridge with Box Section Single Rib	337
X.R. Wang, J.K. Jin and G. Yang A Thick/Thin Plate Element Based on the Area Coordinate Analytical Trial Functions L. Wang, Y.L. Lu, H.R. Lou, J. Wei and M. Zhu	341
Approximate Theoretical Analysis on Excavation Disturbed Zone of a Soft Rock Slope in Suining-Ziyang Expressway Engineering in Southwestern China	
X.S. Cao, Y.Y. Hu and S.X. Liu Stability Analysis on Surface Layer of an Expansive Clay Slope with Consideration of Expansive Pressure	347
X.Ŝ. Cao, Y. Zhou and S.X. Liu	353
Analysis on Calibration System of SBI Test for Building Materials K. Tian	358
Numerical Simulation for Progressive Collapse of Continuous Girder Bridge Subjected to Ship Collision Based on Three-Stage Simulation Method L. Tian and F. Huang	362
Research on Template Concrete Board Security of Early Removal Connection Attached Support-System	
F.L. Zhao, Y. Tian, Q.P. Li and X.L. Wang The Research of Innovative Expression on the Materials of Building Skin	367
W. Fan and W.J. Liu Experimental Study on Pand Characterization of Hybrid Panded EDP to Concrete	371
Experimental Study on Bond Characterization of Hybrid-Bonded FRP to Concrete Interfaces K. Liu	375
Study on Axial Force of Multi-Stage Fracturing String in Horizontal Wells H.Q. Zhang, B.K. Gao, X.Z. Han, X. Qin and W. Wang	381
Analysis of the Impact of City Construction Load on City Geology Security Z.H. Dai, M. Yu and X.R. Zhao	386

Research on Surface Overpressure and Deformation of Underground Frame Beam under	
Internal Blast Loads T. Li and Q.Y. Jiang	391
Surface Overpressure Distribution and Dynamic Response of the Retaining Wall of the Underground Structure Subjected to Inner Explosion L. Tian and P. Deng	396
Study of Grouting Reinforcement to Disturbance Soft SOIL Caused by Large Diameter Slurry Shield Construction J.M. Zhu and H.F. Cheng	401
Stury of Post-Failure Constitutive Relation Based on SMP Criterion J.M. Zhu, Z.X. Wu, Q. Zhao and C. Yang	405
The Research on Earth Pressure behind Inclined Retaining Wall Considering Arching Effects J.M. Zhu and Q. Zhao	410
ANSYS Analysis of Early Removal Template Support-System Security F.L. Zhao, X.L. Wang, Q. Ran and Q.P. Li	414
Axial Force Analysis of the Single Pile Based on FLAC3D C. Chen, L. Zou and H.B. Shen	418
Chapter 3: Transportation and Traffic Engineering, Environmental Engineering, Urban and Landscape Planning	
Characterization of Heavy Metals in the Surrounding of Municipal Solid Waste Incinerator (MSWI) and Health Risks Assessment via Inhalation in Shenzhen Nanshan, China H.L. Zhang, Y.H. Chen, J.Y. Qi, B.G. Lin and J.D. Fang	425
An Explorative Study on Landscape Design of Urban River Channels Based on Ecological Restoration M. Lu and J. Zhou	429
Characteristics Analysis of Solar Radiation Distribution in Hefei Region C.X. Liu	433
On the Water Environment of Kaifeng City of the Northern Song Dynasty H.Q. Li and Z.Y. Song	437
Evaluation of Health Effects of Fine Particulate PM _{2.5} : A Review C.M. Bu, L.P. Wang, L.Q. Huang and J. Tang	441
Research of Agricultural Non-Point Source Pollution and Prevention Measures P.P. Shen, L.H. Yang, Z.P. Guo and H.C. Liu	445
Queue Spillback in Braess's Paradox Considering Dynamic Traffic Assignment H. Wei and J.F. Dai	449
Uncertain Factors and their Effects that Need Considering in Fire Engine Routing: A Short Review	454
J. Wang, H.M. Zhou, M. Liu and Y.E. Ge Study on Risk Factors for Transport Crashes Involving Fatigued Professional Drivers	454
W.S. Fan and J.P. Xu The Research on Mineralization of Desalinated Water by Dissolving Ore for Entering into Municipal Water Supply Network	458
N. Tang, W. Wang, L. Zhang, P.G. Cheng, J.Q. Gong and G.H. He Influences of Biochar Aging Processes by Eco-Environmental Conditions L.L. Kong and Q.X. Zhou	463 467
Research on Relationship between Air Permeability and Structure Parameter of Basalt Woven Filter Fabric W.L. Chen, W.D. Sui, H.F. Li and L.Y. Wan	471
Long-Term Carbon Sequestration and Environmental Immobilization of Biochar: A Review	4/1
M.M. Wang and Q.X. Zhou	475
License Plate Location Based on Texture Analysis and Projection Approach J. Liu, J. Xiang and F. Liao	479

The Ranking of Optimization Schemes of Public Traffic Line Network Based on Set-Pair and Entropy Analysis L. Hong and S.Y. Qu	484
Based on the Tropical Island of Hainan Land Use Types IDRISI Spectral Characteristics K. Zhang, H.F. Wang and Z. Li	488
Cultural Planning for Urban Spaces: Cultural Turn of Contemporary Urban Planning L. Huang and W.M. Zhao	492
Research on Designing for Low Carbon and Liveable Residence in Subtropical Region (Southern Guangxi Province in China)	
L. Wang, J.M. Chen and Q.S. Zhu The Practice of the Symbolic Significance in Landscape Design	497
Y. Li	502
Overview of Space Synergy of Urban Building Complex Z.D. Wang, Y. Zhang and Y.R. Liu	506
Public Bicycle System Station Deployment and Scale Prediction J.F. Dai, X.L. Zhao and J.X. Lin	510
Research on the Critical Attributes of Travel Mode Choice Utility Function Q. Zhang and W.T. Wu	515
Chapter 4: Biomedical, Bioinformatics, Biology Systems and Medical Informatics	
Effect of Three Major Polyphenols in Red Wine on Sodium Channel Current in Mouse Dorsal Root Ganglia Cells Y.L. Wu, Y.P. Ding and Y. Tanaka	525
Determination of the Content of Imperatorin in Radix Angelicae Dahuricae and Evaluation of the Measurement Uncertainty in Using High Efficiency Liquid Chromatography M. Zhang, J.Y.X. Qin and S.L. Yang	530
AAM Based Facial Feature Region Segmentation in Traditional Chinese Medicine Complexion Diagnosis	
J.J. Wu, J.J. Yan, F.F. Li, Y.Q. Wang, R. Guo and G.P. Liu Effects of Solvents and Extraction Methods to Extraction of Fructus Leonuri	535
L. Tan, Z. Ming, S. Ye, L. Gang and S. Xin	539
Study of SMA as Protective Colloid on the MF-Resin Micro-Encapsulation Z.H. Zhen and C.H. Dong	542
Diatom Distributions in the Eastern Yangtze River and the Main Lakes, Jiangsu Province, China, and their Significance for the Forensic Diagnosis of Drowning Y. Zhou, Y.Z. Wang, J.W. Huang, H.P. Wang, S.L. Hu, C. Liu, J.F. Wen, X.T. Zhang, S.C. Wang and W.L. Dai	546
Biological Effects of p53 Mutation W248 and H175 on MCF-7 Cells X.Y. Zhou, Y.J. Liu and D. Li	550
Microwave Extraction of Triterpene Glucoside from Fructus Leonuri L. Gang, Z. Ming, S. Ye, L. Tan and S. Xin	555
Study on the Antimicrobial Effect of the Extracts of Fruits of Herba Leonuri S. Ye, Z. Ming, L. Gang, L. Tan and S. Xin	558
Mitotic Catastrophe Induced by Chelidonine on Human Gastric Carcinoma SGC-7901 Cells Z.Y. Qu, X. Zou, J.W. Zhao and Y.B. Ji	562
Population Genetic Data of 21 Autosomal Loci in Guangdong Han Population S.L. Li, C. Liu, H. Liu, C.H. Liu and W.X. Weng	566
New Wound-Dressing Coaxial Electrospun Nanofibers Dressing F. Cheng, J. Gao, L. Wang, Y.H. Yao and C.L. Zeng	570
Interference Elimination of Sulfide Determination by Iodometry L. Wang, G.Q. Li, Y.F. Zhang, Z.Z. Li, Y.L. Shi and Y.Z. Wang	575
A RS/GIS-Based System for Monitoring Malaria Epidemic L. Sun and Z.S. Zhu	579
An Images-Fusion Method of Malaria Epidemic Remote Sensing L. Sun and Z.S. Zhu	583

The Role of Beclin1 Gene in Autophagy and Apoptosis Induced by Ionizing Radiation in MCF - 7 Cells	
Y.L. Qi, Y.J. Liu and D.L. Zhao	587
Effects of Ginkgo Biloba Extract on Liver Protection for Type 2 Diabetic Rats X.S. Li, R.Y. Wu, W.M. Pan and Y. Hu	590
Effect of Chelidonine on the Expressions of Cdk1 and CyclinB1 Proteins in SGC-7901 Cells Z.Y. Qu, X. Zou, J.W. Zhao and Y.B. Ji	594
Antibacterial Activities of Chemical and Biological Food Preservatives towards Food Spoilage <i>Bacillus</i> among and within Species	
X.T. Yang, J. Wang, Y.H. Liao, I. Kaleem, C. Li and X.H. Zhou	598
Study on Apoptosis of Human Promyelocytic Leukemia HL-60 Cells Induced by Fucosterol via Death Receptor Pathway Y.B. Ji, D.X. Song and C.F. Ji	607
Study on Apoptosis of Human Promyelocytic Leukemia HL-60 Cells Induced by Fucosterol via Mitochondrial Pathway	C11
C.F. Ji, Y. Li and Y.B. Ji EEG-EMG Signal Processing and Analysis for the Neuromuscular Activity Patterns with	611
Three Motion Modes under Two Time Intervals N.N. Li, T.C. Zhai, S. Liu, A.S. Fu, R. Xu, S. Qiu, P.H. Li, Q. Xu, P. Zhou, L.X. Zhang, B.K.	
Wan, X.J. Jiao, S.G. Chen and D. Ming	615
Colorimetric Detection of Melamine Based on Poly-Thymine Stabilized Gold Nanoparticles C. Jin, H.M. Zhao, M. Liu, J.P. Tian and X. Quan	619
An Integrated Clustering Algorithm and its Application in Surgical Navigation S.J. Yan	623
Chapter 5: Automation Methods in Industry and Manufacture, Modelling and Analysis	
Study on the Application of Video Surveillance System of Expressway Construction Based on 3G Y. Xiao, J. Xiang and Y.F. Chen	629
Development of Floating Offshore Wind Turbine and the Mooring System X.L. Zhao and W.M. Gong	634
Analysis on Dynamic Response of the Foundation Pit Supporting Structure under Vehicle Loads	051
H.Z. Qiu, J.M. Kong and Y. Zhang	638
Research of Small and Medium-Sized Motor Yacht Form Design Based on Imagines Acknowledge Theory	(42
M.Y. Zhou, G.L. Dai, J.X. Cheng and Y. Hu	643
Dynamic Analysis of the Wind Turbine Tower C. Chen, H.B. Shen and M. Wang	651
Modal Analysis of Wind Turbine Blades Based on ANSYS Modeling C. Chen, M. Wang and L. Zou	655
A Bearing Fault Diagnosis Method Using Fusion of Lie Group Classifier and GA S.Y. Zhao, W. Tao, G. Xin and Y. Liu	659
Chapter 6: Computing and Information Science	
Study of High Dimensional Orthogonal Vector-Valued Wavelet with Scale 4 W.Q. Yang	665
Study and Application on Airport Clearance Based on Secant Method in Gauss Projection Algorithm for Inverse Solution	
X.M. Zhang, Y. Liu, G. Li and F. Xia	669
Prediction of Detonation Velocity of Aluminized Explosive by Artificial Neural Network Y.Q. Jiang, Y.G. Liu, X. Tian and G.B. Li	673
Plate Character Segmentation Algorithm Based on Projection Feature and Prior Knowledge J. Liu, J. Xiang and C.L. Xu	677

Accelerative Genetic Algorithm-Based Parameter Optimization in Storm Intensity Formula Z.L. Guo and R. Zhang	682
Experimental and Numerical Study on the Suppression of Pool Fire with Water Mist C. Jian, X.Y. Ying and W.Y. Sheng	686
Research on the Distribution Route Optimization of Agricultural Product Logistics Based on Particle Swarm	
J. Liu, J. Xiang and G.L. Zou	690
The Experimental Study on Extinguishing Aircraft Cabin Fire by Water Mist C. Jian, X.Y. Ying and T.Z. Jie	697
Chapter 7: Management Engineering Corporate Strategic Choice Basing on Externality Internalization S.L. Pi and H.L. Lan	703
Evaluation the Environmental Awareness of Listed Companies by FAHP S.M. Chen and M. Bu	707
Tourism Marketing Strategies for Chongqing University City Y.L. Jiang and E.F. Tang	712
A Study on Incentive Mechanism for Star Hotel Employees against the Background of IT Application	716
D.H. Li	716
The Whole Process Tracking Audit of Municipal Engineering Cost Y.T. Ma and C.J. Ma	720
Approaches and Processes of the Project Management H. Xie and A.Y. Zhang	724