Table of Contents

Preface, Committees and Sponsors

Chapter 1: Materials Science and Engineering, Material Forming and Processing, Applied Mechanics

Effect of Excess Li$_2$CO$_3$ Addition on the Physical and Electrical Properties of Lead-Free Bi$_{0.5}$(Na$_{0.82}$K$_{0.18}$)$_{0.5}$TiO$_3$ Ceramics
C.H. Wang 3

Effect of Nanosilicon Dioxide on Structure and Properties of Poly(Vinyl Alcohol)/ Sodium Carboxymethylcellulose Blending Film
X.X. Zhang and L.X. Dai 7

Determination of Trace Mercury in the Titanium Dioxide by Ultrasonic Oscillation - The Suspension Solid Sampling GF-AAS
P. Yang and Y. Cheng 12

Compare of Impregnating Poplar with UF and PF Resin
J. Han, K.N. Liu and X.T. Gao 17

Elimination of EDTA in Aqueous Solution by Bimetallic Fe-Cu Process
X. Liu, J.H. Fan and L.M. Ma 21

The Research of Models for TKY Tubular Joint Welds in Ultrasonic Phased Array Inspection
M.H. Lu, H.L. Shao, J.J. Chang and X.F. Liu 26

Bulk Nanocrystalline Al 7050 Prepared via Cryomilling
J.L. Li, S.S. Li and Y.C. Xiong 34

Application of Thermoregulation Materials in Clothing Materials
M. Zhang and X. Wang 43

Performance of the Glass-Ceramic Coating Prepared by Slurry Spraying Technique

The Possibility of Using Oxide Cathode Materials of Spent Lithium-Ion Power Batteries for Carbon Dioxide Capture from Fossil Fuel Plant
G.J. Zhao, W.L. Wu and Y. Guo 52

High Temperature CO$_2$ Capture by Regenerable Calcium Aluminates Carbonates Sorbents

The Development Trend of New Garment Materials and the Application of Compounding Technology
X.Y. Wang and X. Wang 60

Special Wetting Behaviors on Canna Leaf and its Dependence with Microstructures
X.H. Yang, J.H. Xiao and J.F. Ou 64

Comprehensive Evaluation on Energy-saving Window Material Based on Weighted TOPSIS
J. Liu, Z.Z. Zuo, N. Liu and C. Chen 68

Metal Corrosion of Ballast Tank Caused by Electrolytically Treated Ballast Water
D. Kun, Y.X. Song and X.L. Zhang 74

Effects of Casting Temperature and RE Refiner on Microstructure of the Squeeze-Cast Al-Zn-Mg-Cu Alloy Drive Hollow Shaft
C.H. Fan, Y.B. Zhu and N. Yang 78

Study on Tension Model of Running Deviation for Strip Rolling

High Performance Ferrocement Laminate Strengthening Technology
S.P. Shang and L. Li 88

Study on Slag Corrosion of the Magnesia Lining during Ferrovanadium Smelting Process
L. Li, W.S. Ge, Y. Chen and Z.H. Sun 96

Study the Ferro-Surface Tension on Magnetization Degree of Ferrofluid
J.E. Ho and D.C. Chen 101
Hot Compression Deformation Behavior of AZ41M Magnesium Alloy  
S.R. Wang, Y.Z. Wang, B. Sun, Y.J. Wang and M. Wang  
105

Measurement of Radiation Heat Transfer within Porous Material  
X.J. Fan  
109

Study on Preparation of the High-Density Ammonium Polyvanadate  
Z.X. Wu, Z.H. Sun and T. Zhang  
113

Shrinkage Performance of Lime-Fly Ash Stabilized Crushed Stone  
X.Q. Ma, X. Xue and X.P. Cheng  
117

Study on Compressive Stress-Strain Relationship of Polymer-Modified Concrete  
X.L. Zhang, H. Cao and X.H. Guo  
122

Study on Fracture Behavior of Steel Strip under Cold Rolling Forming Process Based on GTN Damage Model  
J.J. Chen, Y.X. Yan, Q. Sun and H.L. Pan  
126

The Research of Center Shaft Bracket Stamping Simulation Technology Based on Dynaform  
M.H. Zhang, Y. Zhang, P. Lu, Z.K. Zhai and M.Y. Zhu  
130

Effect of Pullulan, Glycerol Blend on the Properties of Gelatin Based Edible Film  
X.Y. Liu, L.Q. Zhang, S.F. Zhao and X.F. Li  
136

Method to Determine Asphalt Film Thickness Based on Actual Measurement  
D.B. Lv, X.M. Huang and C.L. Guan  
140

Research on Properties of Recycled Coarse Aggregate  
Y.J. Qin, R. Liang, A. Yibulayin, J. Yu and L. Li  
144

Optimized Design of Plant-Mixed Recycled Materials with High Blending Ratio of RAP  
L. Bian, B.L. Zhu, T. Wang and D.X. Wei  
151

Kinetics and Thermodynamics Studies of Prodigiosin Dyeing on Polyester  
J.J. Shen and Y. Yang  
156

Hardness Test and Error Analysis of N80 Oil Casing  
D. Feng, Z.M. Li, H. Zhang, L. Shi, W. Ma and J. Yan  
161

Effect of Hydrogen Partial Pressure on Hydrocarbon Production from Deoxygenation of Stearic Acid  
165

Preparation and Properties of Wood Flour/HDPE Composites Using C5-g-MAH as Compatibilizer  
L. Cen, F.L. Chen, Y.M. Cao and H.X. Chen  
170

Preparation of Poly (dimethyl Diallyl Ammonium Chloride - Acrylamide) via Inverse Microemulsion Polymerization Process  
X.N. Wang and Q.Y. Yue  
174

Study of High-Density Zn-Doped Tungsten Trioxide Ceramic Targets  
182

Properties and Application of Semi-Flexible Material in Highway Engineering  
M.C. Zhang and X.J. Xu  
187

Molecular Cloning and Expression of ß-1,4-endoxylanase Gene from Chaetomium cupreum in Yeast Saccharomyces cerevisiae  
H.Y. Zhang, W.R. Li and M. Li  
191

Human Metallothionein Enhanced Tolerance and Biosorption of Cadmium when Expressed in Saccharomyces cerevisiae  
B. Liang, M. Li and J. Shang  
195

Synthesis and Characterization of Mesoporous Molecular Sieve Al-MCM-41 Using Kaolin as Raw Material  
M. Li, H. Wang, X.Q. Li and J.R. Liu  
201

Influence of Heat Treatment on Corrosive Property of 5083 Aluminum Alloy  
C.H. Li, C.M. Li and D.M. Chen  
205

Study on Gradation Fractal Cartesian Coordinate System of Asphalt Mixture  
L.P. Li, F. Zhang, J. Yu and F. Zhang  
212

Analysis of Crack Resistance for Hybrid Fiber Mortar  
Y. Li, J.X. Dong, S. Zhang and K.H. Tong  
222

The Reinforcement Research on Assemble Steel Truss Bridge  
Y.C. Zhang, X.S. Wan and L. Zhang  
226
Preparation and Characterization of Poly(L-Lactide-Co-ε-Caprolactone) Copolymer for Food Packaging Application
M.W. Yuan, Y.Y. Qin, J.Y. Yang, Y. Wu, M.L. Yuan and H.L. Li 231

Construction of Genome Library for the Toxic Gene of *Alexandrium minutum*
L. Wang, J.Y. Li, Q. Xu, Q.P. Zhong and Z.L. Liao 235

Novel Structures and Properties of Ni Nanowires
F. Wang, X.Y. Zhao and L. Cui 239

The Measurement of Composite Property Based on Bayes Formula

Low Temperature Synthesis of Nanoscale Magnesium Hydroxide under Normal Pressure
J. Zheng and W. Zhou 247

Membrane Separation Assisted One-Pot Synthesis of Hydroxyapatite Nanorods
J. Zheng and W. Zhou 251

Separation of Nickel in Manganese Sulfate Solution Soaked out from Low-Grade Pyrolusite with Pyrite and H$_2$SO$_4$
X. Zou and X.D. Qiu 255

Study on the Technology of Synthesis Dimethyl Ether with Bi-Function Catalyst by Phosphorus Modified
Y. Yin, L. Chen, S.L. Zhang, Y.M. Yan and Y. Li 259

Development and Performance Study on Sportswear Fabrics
Y.J. Liu and X.F. Feng 265

Dynamics Analysis in Materials on Solid Wastes Separation Sieve and Selection and Calculation of Kinetic Parameters
J. Jiang, Y.H. Xie, J. Han, S.Y. Liu and B.C. Wen 270

Study on Influence of Thermal Conductivity of Building Material on People's Physiology and Psychology
A. Zhao, G.C. Cui, Y.Z. Ding, T. Yu and J.C. Xu 278

Study on Magnetic Model and Magnetic Force of Magnetic Fluid in Pressure Difference Sensor
R.C. Hao, D.C. Li, W.M. Yang and H.G. Liu 282

Prediction of Soil-Cement Mechanical Properties Using EC2 Approach
J. Tinoco and A.G. Correia 286

Properties of Jute Blended Yarns Spun on Ring Spinning System
A.F. Zhang and Z.P. Xia 290

Action Mechanism of the Improvement of Printability for Eucalypt Bleached Kraft Pulp Pretreated by Cellulase
W.Y. Tang, L. Chen and Z.J. Zhang 294

Comprehensive Evaluation Research on the Properties of Sportswear Fabrics
Y.J. Liu and B.Y. Wei 302

Effects of Mg$^{2+}$ Doping on Performance of Anode Material Li$_4$Ti$_5$O$_12$
N.W. Wang, Z.C. Huang, X.M. Cui and Z.Y. Wu 307

Laboratory Evaluation of Warm-Mix Open Graded Friction Course Mixtures with Sasobit
Q.Y. Zhu, G.W. Hu, Y.M. Zhang and Y. Zhuang 311

Research on Frost-Resistant Durability of Recycled Concrete
X.N. Su 315

Using Control Chart to Detect Abnormal Changes in the Permeability
M.H. Shu, J.C. Huang, T.L. Nguyen and B.M. Hsu 319

River Soil & Sand Solidified Blocks as Ballast in Beach Protection
J.M. Mao and D.F. Gao 323

Effect of Beeswax on Batch Foaming of PLA

Experimental Research on Failure Modes of Specimen Containing Non-Coplanar Joints
P. Cao, W.C. Fan and K. Zhang 332

Electrospun La$^{3+}$-Doped ZnO Nanofibers with High Photocatalytic Activity for Rhodamine B Degradation
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesive Pressing Veneer Performance Study of Compound Sheet of Straw</td>
<td>343</td>
</tr>
<tr>
<td>Y. Zhao, J.Y. Pang and Z.G. Gao</td>
<td></td>
</tr>
<tr>
<td>Hot-Pressing Process of the the API Adhesivepressed Veneer Straw Composite Panels</td>
<td>348</td>
</tr>
<tr>
<td>S.C. Zhang, J.Y. Pang and Z.G. Gao</td>
<td></td>
</tr>
<tr>
<td>Finite Element Analysis of Axially Loaded RPC Filled Long Circular Steel Tube Columns</td>
<td>352</td>
</tr>
<tr>
<td>Z.G. Yan, J. Yang and H. Luo</td>
<td></td>
</tr>
<tr>
<td>Study on the Thixotropic Properties of Mastic Asphalt</td>
<td>356</td>
</tr>
<tr>
<td>Effect of Gallium Doping on the Properties of GZO Target</td>
<td>363</td>
</tr>
<tr>
<td>Experimental Research on the Characteristics of Bamboo Powder Model Sediment</td>
<td>368</td>
</tr>
<tr>
<td>G.B. Li, D.S. Song, H. Xu and J.F. Zhao</td>
<td></td>
</tr>
<tr>
<td>The Study of Dynamic Equations of ER Fluids Based on Multi-Field Coupling</td>
<td>375</td>
</tr>
<tr>
<td>S.S. Zhu, W. Yuan, X.P. Qian and T. Tang</td>
<td></td>
</tr>
<tr>
<td>Model and Simulaiton of Air Spring Stiffness Characteristics Based on van der Waals Equation</td>
<td>380</td>
</tr>
<tr>
<td>L.Q. Sun, Z.X. Li, X.F. Shen and H.W. Zhao</td>
<td></td>
</tr>
<tr>
<td>A Method of Tool Breakage Detection in CNC High-Speed Milling</td>
<td>384</td>
</tr>
<tr>
<td>Q. Gao</td>
<td></td>
</tr>
<tr>
<td>Preparation and Photocatalytic Properties of Bi₂WO₆ with Different Morphologies</td>
<td>390</td>
</tr>
<tr>
<td>Y. Chen, X. Wang, H. Song and H.L. Song</td>
<td></td>
</tr>
<tr>
<td>Theoretical and Experimental Study on Trans-Scale Properties of Soil Strength</td>
<td>394</td>
</tr>
<tr>
<td>Y.G. Fang, D.L. Feng, R.G. Gu and Z.W. He</td>
<td></td>
</tr>
<tr>
<td>Numerical Simulation of Internal Flow Drag Reduction with Triangular Riblet Surface</td>
<td>401</td>
</tr>
<tr>
<td>Z.G. Wei, Y. Li, Z.W. Ke and X.L. Li</td>
<td></td>
</tr>
<tr>
<td>Proprieties of Plain-Weave Fabrics Produced with Twistless Cotton Yarns Made by Reverse Twist Process</td>
<td>406</td>
</tr>
<tr>
<td>A.F. Zhang and Z.P. Xia</td>
<td></td>
</tr>
<tr>
<td>Temperature Field Numerical Simulation of Screwy Thin-Walled Part Cladded by Hollow Laser Beam</td>
<td>410</td>
</tr>
<tr>
<td>H. Lin and S.H. Shi</td>
<td></td>
</tr>
<tr>
<td>Design of Pressurized Vaulted Rectangular Conduits Using the Rough Model Method</td>
<td>414</td>
</tr>
<tr>
<td>B. Achiour</td>
<td></td>
</tr>
<tr>
<td>Soil Elastic-Plastic Rotation Gradient Theory Based on Grain Size Factor and its Finite Element Implementation</td>
<td>420</td>
</tr>
<tr>
<td>Y.G. Fang, J. Liu and Z.L. Dong</td>
<td></td>
</tr>
<tr>
<td>Model Analysis of Pressure Fluctuation in the Pressurized Submerged Combustion</td>
<td>425</td>
</tr>
<tr>
<td>X.L. Gong, Q. Feng, Z.L. Liu and W.J. Tang</td>
<td></td>
</tr>
<tr>
<td>Triaxial Test on the Construction-Aid Soil Stabilizer in Stabilizing Fine-Grained Soil</td>
<td>429</td>
</tr>
<tr>
<td>B.H. Shi, Y. Song, W. Ren, W. Xu and L.Y. Zong</td>
<td></td>
</tr>
<tr>
<td>Numerical Simulation of Reinforcement Effect and Settlement of Concrete Pile Composite Foundation</td>
<td>434</td>
</tr>
<tr>
<td>D.F. Wang, X.Q. Wang, N.T. Zhang and Y. Chen</td>
<td></td>
</tr>
<tr>
<td>Research on Influence Factors and Formulae for the Bearing Capacity of Angle Shear Connectors</td>
<td>439</td>
</tr>
<tr>
<td>Z.H. Zhang, S.A. Li, T.G. Ji and D. Dang</td>
<td></td>
</tr>
</tbody>
</table>

**Chapter 2: Traffic and Transportation Engineering, Civil and Mechanical Engineering**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Optimized Model for Runway Takeoff Scheduling</td>
<td>445</td>
</tr>
<tr>
<td>J. Lu, Y.Q. He and G.S. Xia</td>
<td></td>
</tr>
<tr>
<td>Study and Application of Traffic Flow Forecast Based on PSO-WLSSVM</td>
<td>453</td>
</tr>
<tr>
<td>F. Xu, Y.Z. Shi and K. Wang</td>
<td></td>
</tr>
<tr>
<td>Automatic Waring System of Tunnel Monitoring and Application</td>
<td>457</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Investigating Impact of Speed on Traffic Safety using Collision Prediction Model</td>
<td>Z. Tian</td>
</tr>
<tr>
<td>Investigating Impact of Speed on Traffic Safety using Collision Prediction Model</td>
<td>Z. Tian</td>
</tr>
<tr>
<td>Feasibility Investigation on Reduced-Power Take-Off of MA600</td>
<td>L.Z. Ao and Y. Miao</td>
</tr>
<tr>
<td>A Method for Determining Length of Freeway Work Zone Based on Classification of Service Level</td>
<td>K.M. Wu and L.D. Zhong</td>
</tr>
<tr>
<td>Electrostatic Discharge Generator Circuit Model and its Simulation</td>
<td>J.S. Wang</td>
</tr>
<tr>
<td>Ship Electric Propulsion Simulation System Based on MATLAB</td>
<td>X. Qu and W.G. Zheng</td>
</tr>
<tr>
<td>The Compilation and Study of Design Case for Railway Passenger Car</td>
<td>Y.S. Feng, D. Jing, S. Wei, K. Liang and X.Y. Shi</td>
</tr>
<tr>
<td>Research about Model of Vehicle's Fuel Consumption on the Highway</td>
<td>B. Peng and S.L. Ma</td>
</tr>
<tr>
<td>Molecular Simulation of the Adsorption of Cold Start Hydrocarbons Emission from Diesel Engines in Zeolite</td>
<td>Y.W. Deng, W. Han and L. Yin</td>
</tr>
<tr>
<td>Abnormal Events Detection in Traffic Data</td>
<td>X.B. Hu</td>
</tr>
<tr>
<td>Rail Short Wave Irregularities Restoration Algorithm Based on Digital Inverse Filter Technology</td>
<td>X.J. Mao, Y.D. Xu and Y. Zhou</td>
</tr>
<tr>
<td>Analysis of Settlement Caused by Tunnel Underneath Existing Railway after Construction</td>
<td>Z.P. Xu and X.B. Li</td>
</tr>
<tr>
<td>Effect of Cross Passage Construction on the Structural Safety of Collapse Reinforcement Segment of Existing Tunnel</td>
<td>K.J. Shen, S. Wan and X.C. Zhang</td>
</tr>
<tr>
<td>Reliability of Road Network Layout and Optimization Methods Based on the Connectivity</td>
<td>X.N. Sun, S. Chen, Y.Y. Mai and X.G. Wang</td>
</tr>
<tr>
<td>Application of the Pre-Stressed Concrete Box-Girder with Corrugated Steel Webs in Bridge Engineering in China</td>
<td>S.Q. Li and S. Wan</td>
</tr>
<tr>
<td>Design and Stabilization Analysis of the Parabola-Type Assistance Characteristic of Electric Power Steering System</td>
<td>G.Q. Geng</td>
</tr>
<tr>
<td>Isolated Intersection Traffic Signal Timing Problem: A Fuzzy Control Approach and a Case Study</td>
<td>H.S. Han and J. Yu</td>
</tr>
<tr>
<td>Study on Lateral Vibration Offsets of Speed Increased Freight Cars on the Tangent Track</td>
<td>H.S. Han, M. Han and X.X. Wang</td>
</tr>
<tr>
<td>Experimental Study on the River Engineering Model of Tunnel across Yangtze River about Line No.8 of Track Traffic in Wuhan</td>
<td>H. Zhang, Y.H. Zhu and L.H. Gu</td>
</tr>
</tbody>
</table>
Optimization Design of Gasoline Engine Intake Based on CFD
B. Zhou 592

Design of a New Multifunctional Motorized Wheel for Urban Electric Vehicle
W.H. Yang, Y.R. Li, Z.F. Fang and K.D. He 598

Prediction for Sound Radiated Power from Submerged Double Cylindrical Shells Based on Measuring Vibration of Inner Shell
C. Zhang, D.J. Shang and Q. Li 602

Simulation Analysis on Wheel and Groove Rail Contact Position
R.Y. Chen, K. Wei and Y.D. Xu 607

Highway Tunnel Ventilation Technology Energy-Saving Assessment Based on Matter-Element Model
C.Z. Chu, C.Z. Zhu and Y. Wang 611

Resistance and Strength Analysis of Three Hulls with Different Knuckles

Research of Effect on the Levee by Drawdown of Caisson Foundation of the North Anchorage of Maanshan Yangtze River Bridge
Y. Liu, Y.H. Yang and F.Q. Ji 619

A Professional Safety Consultant Mode for Engineering Construction and its Application in Taizhou Bridge
X.Y. Liu, E.Q. Zhang, Y.M. Hu and H. Han 626

Study on Soft Foundation Settlement Analysis and Treatment of Bridge-Head
H.L. Zhao, Z.J. Hui and J. Lin 632

Crew Qualification Comprehensive Evaluation of Shipping Enterprise Based on Multi-Level Fuzzy Evaluation Method
L.Y. Zhu, M.D. Hou and J.G. Li 636

Application Effect Analysis of Magnetic Gradients Data Continuation from Undulate Surface to Plane
H.X. Li, H.L. Yu and X.L. Zhang 643

Research on Approaches for Low-Carbon Transportation Strategy from both Supply and Demand Sides
P. Peng and Y.H. Qin 647

The Processing Technology and Dynamic Balancing of Turbocharger Rotor Parts
H. Gan 651

Rail Profile Wear on Curve and its Effect on Wheel-Rail Contact Geometry
K. Wei, R.Y. Chen and Y.D. Xu 655

Rail Pre-Grinding on Shanghai-Nanjing PDL and its Effect on Wheel-Rail Contact Geometry
K. Wei, X. Xiao and Y.D. Xu 660

Structure Fatigue Life Analysis of a 1.5MW Smart Yaw Slewing Bearing
Y. Feng, J. Chen, X.D. Huang and W. Wang 664

Research on the Modal Damping Ratio for Stay Cable with Viscoselasticity Damper in Cable-Stayed Bridges
S.S. Chen and D.S. Wang 671

Parameter Identification of the Non-Linear Rolling Damping Based on PLS Regression Technique
L.P. Sun and W.B. Sun 675

Discussion on the Calculation and Analytic Method of the Surrounding Rock of Tunnel on the ADINA
H. Wang, L. Liu and X. Liu 680

Methodology for Evaluation of Lighting Standards at an Expressway Tunnel Threshold Zone
J.B. Hu, R. Li and J. Tsai 685

Study and Application of High-Speed Railway Real-Time Dynamic Response Based on Running Simulation
Y.C. Cai, H. Pu, W. Li, J. Li, X.A. Long and H.F. Zhao 695

Bidirectional Dynamic Programming Approach for Highway Alignment Optimization
W. Li, H. Pu, H.F. Zhao and W. Liu 700

Study on the Ignition Factor of Piston Kerosene Engine
S.H. Li, Y. Jin and K.S. Ni 705
The Solution of Directed D-Axis Current for the Bearingless Induction Motors
Y.J. Yu and X.X. Liu 711

Simulation and Optimization of Turbine Blade Shape Modification
F. He 716

Application of Grey-Markov Model in Predicting Container Throughput of Fujian Province
C.P. Chen, Q.J. Liu and P. Zheng 720

Study on Extenics Evaluation of the Safety for Urban Road Intersections
W. Cheng, M.R. Yuan and J.J. Zhao 724

Analysis and Prediction of Ground Vibration Induced by High-Speed Train
K.X. Zhang, J.W. Yao and Z.P. Zhao 731

Study and Design of Integrated System of Electromagnetic and Frictional Brake of Car
J. Shi, R. He and X.D. Gu 739

Applicability Analysis for the Reconstruction Model of Automobile Two-Dimensional
Eccentric Collision Accidents
Y. Cao, H.Z. Xu and Z.Y. Zuo 747

The Long Highway Tunnel Disaster Prevention Research
Z.W. Li, B.P. Xi, Q.H. Guo and J.B. Tian 752

Dynamic Response Analysis of Small Oil Tanker Based on AQWA

Research on Preventive Management of Freeway Traffic Accident
B. Li and J.X. Liu 763

Wharf Risk Assessment Based on AHP&D-S Evidence Theory
Y. He, Z.L. Jiao and F.C. Jiang 769

Tunnel Waterproofing Board Construction Process Analysis
D.Q. Ke, X.X. Zhong and D.H. Guo 774

Research a New Automatic Detective Method of Highway Traffic Statement Based on the
Information From the License Plate Data
H.J. Zhang, X.P. Jin and P. Zhang 779

The Current Situation Analysis of Parking in Baotou Urban Center District and
Countermeasures
J.F. Yu, N.N. Wang and X.J. Zhang 784

MOTION - A Developing Urban Adaptive Traffic Signal Control System
P.P. Jiang, A. Poschinger and T.Y. Qi 788

Real-Time Monitoring School Buses Safety and Information Query System Design
M.M. Jin, C.C. Liu and C. Hai 792

Simulation Research of Flow and Speed on Urban Expressway Interchange Entrance
L. Wang, Y.J. Wang and L.Y. Wang 796

A New Method on Calculation of Vessels Stopping Distance and Crash Stopping Distance
L. Ming, J.X. Liu and S. Yang 800

Study on Traffic Congestion Pricing for Large Scale Multimodal Networks in City
W.L. Kang, X.M. Liu and L.Y. Li 805

Valve Cam Profile Design of High-Speed Diesel Engine Based on MATLAB
Y. Li, P.L. Ren and S.H. Liu 810

Research on the Modeling Methods of the Service Network Meeting the Requirements of
Passenger Flow Assignment in Urban Rail Transit
J. Yu, X.C. Zhang and B. Xu 815

A Study on Mathematical Model of Servo Valve Torque Motor
C.H. Liu and H.Z. Jiang 821

The Research and Development of Filtration Media Materials for Application in Water
Filtration Treatment Systems
B.L. Zhang, J. Lu, W.L. Wu, Y.S. Xie and Y.Z. Sheng 825

Analysis on Traffic Characteristics of Passenger Cars with more than 7 Seats on Megacity's
Freeway Network Using ETC Data
N.L. Zhao, P.P. Jiang and T.Y. Qi 831

Research on Utilization Characteristic and Management Issue of Asphalt Pavement of
Airfield Runway on Highway
W.Y. Huang, B.H. Shi, Y.M. Zhang, B.B. Huang and W. Zhou 836
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance and Evaluation Index for Asphalt Pavement of Airfield Runway on Highway</td>
<td>840</td>
</tr>
<tr>
<td>Analysis on Requirement and Prediction of Feeder Airport Resources Based on TDM</td>
<td>844</td>
</tr>
<tr>
<td>Model Test and Numerical Simulation for Directional Pressure Relief Blasting</td>
<td>848</td>
</tr>
<tr>
<td>Thermal Management System Analysis of Underwater Vehicle Fuel Cell Propulsion Unit</td>
<td>857</td>
</tr>
<tr>
<td>Study on the Berthing Capability of Pontoon Bases</td>
<td>861</td>
</tr>
<tr>
<td>Tourism Highway Traffic Demand Forecasting of Tourist Attractions: A Case Study of Xingkai Lake, China</td>
<td>868</td>
</tr>
<tr>
<td>Research on Assessment of Urban Transportation Low-Carbonization Development</td>
<td>872</td>
</tr>
<tr>
<td>Bus Passenger Origin-Destination Matrix Estimation Using Available Information from Automatic Data Collection Systems in Chongqing, China</td>
<td>878</td>
</tr>
<tr>
<td>Experimental Study on Longitudinal Sliding Friction Coefficient of Sedan Braking</td>
<td>890</td>
</tr>
<tr>
<td>Automatic Identification and Optimization Algorithm of Existing Railway Planar Feature Points</td>
<td>894</td>
</tr>
<tr>
<td>3D Numerical Simulation of Current and Sediment Transport in Estuary and Coast</td>
<td>899</td>
</tr>
<tr>
<td>The Impact of Plateau Airport's Environment on Air Traffic Controller's Situation Awareness</td>
<td>903</td>
</tr>
<tr>
<td>Research and Development of Unmanned Aviation Vehicle System for Disaster Countermeasures</td>
<td>908</td>
</tr>
<tr>
<td>The High Speed Influence on Inherent Frequency of Motorized Spindle</td>
<td>916</td>
</tr>
<tr>
<td>Determination Analysis of the Torsion Beam Suspension FEA Model and Fatigue Strain Based on Road Test</td>
<td>921</td>
</tr>
<tr>
<td>Study on Driver’s Reaction Time of Emergency Braking</td>
<td>925</td>
</tr>
<tr>
<td>Research on Tunnel Interior Zone Luminance Evaluation Method and its Application</td>
<td>929</td>
</tr>
<tr>
<td>Experiment and Study of Light Truck Longitudinal Braking Friction Coefficient</td>
<td>935</td>
</tr>
<tr>
<td>Safety Evaluation of Freeway Alignment Case Analysis</td>
<td>939</td>
</tr>
<tr>
<td>Study on the Length of Speed-Change Lane in Freeway Trumpet Interchange</td>
<td>946</td>
</tr>
<tr>
<td>Design of Freeway Traffic Block Multi-Dimensional Data Warehouse</td>
<td>954</td>
</tr>
<tr>
<td>Study on Key Factors in Piston Transient Temperature Field</td>
<td>958</td>
</tr>
<tr>
<td>Study on Unsteady Temperature Field of Diesel Engine Piston</td>
<td>965</td>
</tr>
<tr>
<td>Multi-Objective Optimization and Parameter Tuning for Turbine PID Controller</td>
<td>971</td>
</tr>
<tr>
<td>Research on Drop and Pull Transportation Cost of Entire Car</td>
<td>977</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>The Method of Selecting the Key Freight Transport Industries Based on Weaver-Thomas Index</td>
<td>X.Z. Xu and S.D. Liu</td>
</tr>
<tr>
<td>Location Optimization of Airport Emergency Firefighting System</td>
<td>C.C. Zhou and D.D. Hu</td>
</tr>
<tr>
<td>The Major Problems Needed to be Resolved in the Development of Electric Vehicles at the Present Stage in China</td>
<td>Y.P. Yang, Y.S. Chen, X.J. Wang and R.S. Yin</td>
</tr>
<tr>
<td>Research on Nozzle Geometry Measurement with Synchrotron Radiation X-Ray Phase Contrast Imaging Technique</td>
<td>C.S. Xu, Q.Y. Luo, J. Ma, F. Qi and Y.F. Xu</td>
</tr>
<tr>
<td>Analysis of Operation Load Parameters in the Process of Container Transportation</td>
<td>R.H. Qian, J. Zhang and H. Cong</td>
</tr>
<tr>
<td>Characteristic Extraction of Fatigue Driver's EEG Signals Based on Wavelet Entropy</td>
<td>N.N. Zhang and Q. Zhang</td>
</tr>
<tr>
<td>Simulation Research on Plain 2-D Numerical Value of Submerged Spur Dike</td>
<td>H. Xu, G.B. Li and Q.Q. Shang</td>
</tr>
<tr>
<td>Research on the Model of Road Traffic Safety Evaluation Based on Synergetics Theory</td>
<td>F. Chen, S.L. Chen and Y.Y. Cheng</td>
</tr>
<tr>
<td>Green Transportation and Land Use Planning</td>
<td>C.N. Li and C.W. Lo</td>
</tr>
<tr>
<td>Inefficiency of Stackelberg Stochastic Traffic Network with Tax Scheme</td>
<td>M.H. Zeng, X.Y. Huang, N. Dong and X.G. Yang</td>
</tr>
<tr>
<td>Experimental Study on Transporting Concentration of Pulverized-Coal Using ECT</td>
<td>J. Liu, Z. Du, S.S. Chen and M. Sun</td>
</tr>
<tr>
<td>Path Optimization Design of Multimode Combined Transport Based on the Linear Programming Method</td>
<td>M.J. Zhu and J.W. Zhang</td>
</tr>
<tr>
<td>Real-Time Evacuation Path: Unexpectedly Increased Numbers of Evacuees in Source Nodes</td>
<td>J.P. Zhu, Y.L. Wang, X.X. Dong and C. Song</td>
</tr>
<tr>
<td>Port Service Efficiency Model Based on Optimization of Supply Chain Logistics System</td>
<td>N. Meng, J. Wang, L.X. Shen, S.J. Li and X.L. Li</td>
</tr>
<tr>
<td>Study on Analysis and Preventive Measures for Damage of Durability of Reinforced Concrete Bridges</td>
<td>J.Y. Sun and C.H. Huang</td>
</tr>
<tr>
<td>Introduction to Rural Road Greening</td>
<td>Y. Pang and W.F. Zhang</td>
</tr>
<tr>
<td>Importance of Road Network Layout and Optimization Methods Based on the Reliability</td>
<td>X.G. Wang, X.N. Sun and M.W. Wang</td>
</tr>
<tr>
<td>The Development of Automatic Girth Welding Machine with Dual-Arm for Automobile Axle</td>
<td>J.H. Song</td>
</tr>
<tr>
<td>A Design Scheme of the Automatic Obstacle-Avoidance Car</td>
<td>G.C. Qiao and D.B. Qiao</td>
</tr>
<tr>
<td>Development of Automobile Drive Shaft Automatic Welding Machine</td>
<td>T.W. Bu</td>
</tr>
<tr>
<td>The Brake Guards against Holds the Dead (ABS) Teaching Laboratory Bench the Development</td>
<td>B.H. Zhong</td>
</tr>
<tr>
<td>The Automobile Brake Guards against Holds the Dead (ABS) Laboratory Bench Wheel Hydraulic Pressure Actuation System the Development</td>
<td>B.H. Zhong</td>
</tr>
<tr>
<td>A Methodology of Side Impact Sled Test in MADYMO</td>
<td>Z.X. Ma, L.P. Dong and X.C. Zhu</td>
</tr>
<tr>
<td>Ice Resistance Model Test Technology for 110K Tanker Adopting FSICR Ice Class IA</td>
<td>J.N. Zhang, Y.C. Shang and L. Zhang</td>
</tr>
</tbody>
</table>
Evaluation of ESD/LU Reliabilities by Different SCR Layout Types in a 0.35μm 3.3V CMOS Process
S.L. Chen and C.J. Lin

Structure Characteristics and Improvement of Oil Seal of Turbo-Supercharger
H. Gan and K.Y. Yang

Research on Regulation Scheme of Yaojian Reach in the Yangtze River
Q.Y. Li

Design of the Motorcycle Engine Fuel Supplying System Based on the Ultrasonic Atomization
M.R. Zhang, Z.W. Fan, Y. Liu, M.H. Liang and X.W. Wen

Sediment Transport and its Effect on Navigation in Long Tailrace of Hydropower Station
X.X. Feng, J.B. Li and L. Zhang

Waterway Regulation Effect of the Letianxi Reach between the Three Gorges Project and Gezhouba Project
L. Pi, X.X. Feng and R.H. Zhang

Park and Ride Facility Location Research of Rail Transit Based on Bi-Level Programming Model
X.G. Wang, Z.G. Liu, Y.Y. Mai and X.N. Sun

Risk Assessment and Risk Control for Navigation Environment of Dock Waters Adjacent to Fairway
X. Yu

Diversion Scheme for Yuliang Hydro-Junction Project of Youjiang River in Construction Period
J.T. Li and X. Wang

Numerical Simulation for Pile Group in Water Flume of 2-D Tidal Flow
J.N. Wang, S.F. Tang and C. Ma

Magnifying Drivers of City Transformation through System Dynamics Models
T. Simelane, K. Duffy and B. Pearce

Study on the Deep Foundation Effect on the Adjacent Underground Structures during a Metro Station Construction
K. Wu

Simulation Research of Auto Disturbance Rejection Control System for Mineral Inverter Source
Q.J. Yang and H.Y. Liu

Research on the Characteristics of Steel Frame Node under Explosive and Impact Load
Z.Y. Xie, J.K. Tan, H. Yang and J.Y. Pan

Modeling of a Compressor's Performance Map by Fitting Function Methodology
H. Tu and H. Chen

The Impaction of Traffic Rights Opening on the Optimization of the Regional Industrial Structure Evolution
H.Y. Tang

Time-Space Diagram Analysis of Urged Acceleration CA Model
R. Kang, C.Y. Huang and K. Yang

Fault Analysis of Switching Regulator Induced by the Diode Turn-On Time
Z.D. Wang

Chapter 3: Environmental and Energy Engineering, Sustainable and Green Industry, Geoengineering Applications

Acid Volatile Sulfide (AVS) and Simultaneously Extracted Metals (SEM) in Surface Sediments of Chaohu Lake, Anhui Province, China

Utilization of the By-Products for Simultaneous Purification of Sulfur Dioxide and Nitrogen Oxide in Bio-Trickling Process
W.B. Zhou, P. Zou, P.S. Sun, X.Y. Bi, Y.Y. Mao and X.Y. Zheng

Three-Dimensional Flow Numerical Simulation of Wuhan Yangluo Waterways
X.D. Liu, L.W. Huang, H.L. Sun and Y.T. Fan
Analysis of Phytoplankton and Eutrophication in Xinlicheng Reservoir
C.L. Xiao, Y.Q. Li, L.L. Zhao, X.J. Liang and D.J. Shang 1230

Molecular Weight Distribution of DOC in Effluent of Petrochemical Wastewater Treatment Units
M.R. Liu, H.B. Xi, Y.X. Zhou, X.M. Chen, G.Q. Song, Y. Yue and J.L. Zhou 1234

Study on Absorption of Cu²⁺ and Cd²⁺ in Wastewater by Modified Bentonite
X.Y. Zhou and F. Huang 1238

The Influence of Organic Loading Rates on Hydrolysis and Acidification Rates of Fruit and Vegetable Waste Anaerobic Fermentation
D. Han, M.Y. Zheng, M.X. Zheng, Q.H. Wang and K.J. Wang 1242

Dynamic Variation Analysis on Tibetan Lake Wetlands Based on RS
X. Xu 1246

Temporal Variation and Meteorological Dependence of Polychlorinated Biphenyls in Atmospheric PM₁₀ of Jinan, China
J. Luo, Z.J. Cui, S.Y. Du and G.L. Fan 1250

Resource Recycling of Waste Slag of Aluminum Factory

Baseline Values for Heavy Metals in Soils on Ny-Alesund, Spitsbergen Island, Arctic: The Extent of Anthropogenic Pollution
Z.L. Hao, F. Wang and H.Z. Yang 1260

The Effect of Relative Humidity on Physiological Equivalent Temperature in Hot Environment

Research on Assessment Model for the Indirect Economic Benefit of Solid Waste Sanitary Landfill
G.X. Shao and L. Wang 1272

Research on Urban's Planning and Construction of Ecological Corridor around City in Guizhou Areas, Southwest of China
L. Zhao, W. Tang, Y.C. Zhang and Q. Zhang 1276

Research and Application of Similarity Criterion in Advance Water Flooding in Low Permeability Reservoir
J.G. He 1281

Assessment of Aquifer Salinization Beneath an Offshore Industrial Park Based on Solute Transport Calculation

Effect of Adding Fillers on Rubbish Degradation and Leachate Yield and Water Quality
B.J. Jiang, Z.J. Tian and J.M. Jiang 1289

Research of Anaerobic Fermentation Hydrogen Production Process by Continuous Flow from Contained Sugar Wastewater
Y. Li, B. Huang, Y. Yin, Y.M. Yan and J.C. Xu 1298

Experimental Study on Oil-Degradation Microbial Consortium from Oil-Contaminated Soil by Different Enrichment and Domestication
Z.R. Wang, Y.N. Li, X.Y. Zhu, W.L. Wang and J.L. Wang 1304

Sustainable Utilization of Regional Water Resource in Yin Chuan City Based on Fuzzy Matter-Element Model
L. Tang and W.B. Zhang 1309

Investigation of the Roadside Forest Based on "Carbon Neutral"
X.L. Zhu and C. Zhao 1314

Research on Sustainable Development Mechanism of Renewable Energy Using System Theory
C.Y. Diao and J.F. Li 1320

The Application of BIM in Updating the Thermal Environment Design of Traditional Residences in Mountain Region - A Case of Chongqing
J.Y. Wang, X. Sun and X.D. Zeng 1324

River Landscape Health Diagnosis - Frame and Method
C.Y. Hsu and S.J. Ou 1328

Semi-Supervised Discriminant Projection for Plant Leaf Classification
S.W. Zhang, Y.J. Shang and Y.L. Zhang 1332
An Discussion of Vegetables Freezing Rates of Vacuum Cooling and Refrigerator Cooling
K.C. Yu, J.S. Yang and S.M. Tsai

The Pollution Assessment on the Heavy Metal of Fish in the Huan River
Y.M. Yan, M.S. Yang and L. Chen

Hydraulic Loading on Test of Nitrogen and Phosphorus Removal from Rural Sewage by Subsurface Constructed Wetlands-Ponds Composite System
L. Li and Q.J. Wang

Elman's Recurrent Neural Network Applied to Forecasting Algal Dynamic Variation in Gonghu Bay
H.Y. Wang and X.C. Yang

Research on Influence of Flow Velocity Regime and Sediment Deposit before Underground Hydroelectric Station, Three Gorges Project
J.C. Huang and F.Y. Min

Effect on Marine Ecological Environment of COD Emission of Wastewater
Y. Wang, C. Ma, G.Y. Zhang and N. Xu

Analysis of Bioretention Cell Design Elements Based on Fourier Amplitude Sensitivity Test (FAST)
H.W. Wang, Y.F. Mao, Y. Gao, J.H. Fan, S.F. Zhang and L.M. Ma

The Storm Deposits Sedimentary Formation in Upper Ganchaigou Group of Youshashan Oilfield in Qaidam Basin
R. Tang, Y.B. He, J. Tang, Y. Hou, Y. Zhang, C. Liao and J.L. Wei

A Comparison Study of Trace Elements along Two Transects in Tidal Mangrove Marsh at Dongzhaihong, Hainan, China
Q.N. Guo and H.L. Li

Potassium Permanganate and Chlorine Reactions with Natural Organic Compounds in Algerian Surface Water
S. Achour and S. Guergazi

Measuring Biomass Energy Flows of a Rural Energy Engineering
X.L. Xie

Effects of Gangue on Pyrolysis of Municipal Solid Waste

Water Environmental Regulations Pertaining to Urban Moats: An Example from the Qinhuai River, Nanjing
L. Zheng and Y. Si

Study on the Low Carbon City of Guangzhou by Energy Model
P. Wang, B.B. Cheng and D.Q. Zhao

Research and Application of Real-Time Remote Monitoring and Early Warning System of Source Water Quality
S.Y. Li, J.H. Tao and L. Yu

Effects of Seepage Channel Features on Stress Sensitivity of Carbonate Reservoirs

The Prediction of Thermal Conductivity of Agricultural Residues from Straw for Biomass Energy
L. Lu, L. Jiang, Q. Feng and H.P. Wang

Research of Compound Fuzzy Controller in Temperature of Air-Conditioning Room
S.B. Geng and Y. Lin

The Effect of the Fracture Surface for Stress Sensitivity in Shale Reservoir
J.G. He, K.P. Song, J. Yang, S. He, L.Y. Sun, D. He and X. Zeng

A Review on Biomass Fast Pyrolysis Oil Properties and Applications
Y. Xie, C.S. Xu, D.H. Fang, Q.Y. Luo and J. Ma

The Individual WTA Changing Analysis for Eco-Compensation Construction in Water Source Conservation Area
B. Yu and L.Y. Xu

Sand Mining Monitoring and Analysis of the Yangtze River Based on Multi-Beam Bathymetry
X.Q. Han, C. Xing and Y. Tan

Groundwater Vulnerability Fuzzy Evaluation in Qujing Basin
X.L. Zhang, F. Li and H.Z. Liu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geothermal Geology Characteristic and Origin Analysis of Shilin Basin in Yunnan Province</td>
<td>1449</td>
</tr>
<tr>
<td>Soil Erosion and Preventive Measures in the 3rd Expansion Project of Xiaolongtan Power-Station</td>
<td>1453</td>
</tr>
<tr>
<td>The Porous Medium of Ultra-Low Permeability Reservoir has an Effect on Oil Recovery</td>
<td>1457</td>
</tr>
<tr>
<td>Study on Sediment Reduction Effect by Soil Retaining Dam with Different Storage Capacity Allocation Proportion in Dali River Watershed</td>
<td>1462</td>
</tr>
<tr>
<td>Energy Saving from Traditional Settlement – A Case Study on Environmental Ideology of Traditional Settlement in Fujian, China</td>
<td>1468</td>
</tr>
<tr>
<td>Summer and Cold Winter Region Residential Energy-Saving Strategy</td>
<td>1472</td>
</tr>
<tr>
<td>Influencing Factors Analysis of Carbon Dioxide Emissions of Liaoning Power Consumption Based on Kaya Model</td>
<td>1476</td>
</tr>
<tr>
<td>Derivation and Verification of the Breakage Rate Coefficient during Flocculation Process Based on Shear Strength</td>
<td>1482</td>
</tr>
<tr>
<td>Study on Sudden Cadmium Pollution Emergency Treatment Tests of Drinking Water Source of Cities</td>
<td>1490</td>
</tr>
<tr>
<td>Evaluation of Heavy Metal Contamination to Planting Base Soil in Shenyang, China</td>
<td>1494</td>
</tr>
<tr>
<td>Pulsed SBR Treatment of Municipal Sewage Denitrification and Experimental Research</td>
<td>1500</td>
</tr>
<tr>
<td>Investigation on Present Status of Environmental Quality of Mt. Longhushan Scenic Area and Analysis on Optimization Measures</td>
<td>1505</td>
</tr>
<tr>
<td>Potential of Mixotrophic Cultivation of Chlorella sorokiniana for Biodiesel Production</td>
<td>1509</td>
</tr>
<tr>
<td>Relationship between Phytoplankton and Nutrient Dynamics in the Enclosed Waterbody, Dianchi Lake</td>
<td>1514</td>
</tr>
<tr>
<td>Pretreatment of Seawater by PAC/PAM Coagulation-Photocatalytic Oxidation Process</td>
<td>1518</td>
</tr>
<tr>
<td>Research on Regulation Thoughts for Shoal at Confluence of Xinzhou Channel in the Middle Reach of the Yangtze River</td>
<td>1522</td>
</tr>
<tr>
<td>A Rapid In Situ Monitoring System for the Determination of Total Phosphorus in Waters</td>
<td>1526</td>
</tr>
<tr>
<td>Distribution of Available S in the Soil Environment of Yunnan Plateau</td>
<td>1532</td>
</tr>
<tr>
<td>Analysis on Bank Collapse Mechanism of Typical Reaches in Middle and Lower Yangtze River</td>
<td>1537</td>
</tr>
<tr>
<td>Based on Low Carbon Economy under the Environment of Green Car Terminal Returned Logistics is Analysed</td>
<td>1543</td>
</tr>
<tr>
<td>The Removal of Deinking Wastewater Using Neutralization, Activated Carbon, and Hydrogen Peroxide Oxidation</td>
<td>1547</td>
</tr>
<tr>
<td>Evaluation of Human Settlements Environment Suitable for the Nujiang Canyon Based on AHP and GIS</td>
<td>1552</td>
</tr>
</tbody>
</table>
Environmental Problems and Protection Measures on Wastewater Treatment from Hardware Tool Plant in Danzao Town
C.Y. Sha, G.X. Chen and X.A. Ning 1557

Development of Parallel Program of Two-Dimensional Flow-Sediment Mathematical Model for Long River Reach
J.J. Wang 1562

The Green Comprehensive Evaluation of Electric Power Project

Canopy Water Content Estimation for Typical Emerged Plant Community from Simulation Worldview-2 Data: A Case Study in Wild Duck Lake Wetland, Beijing
C. Lin, Z.N. Gong and W.J. Zhao 1571

The Effect of Trade Liberalization on the Environment: An Empirical Analysis in Zhongshan City
L. Ma 1576

Spatial and Temporal Distribution of Inhalable Particulate Matter Pollution in Beijing City during 2007-2012
Q.L. Xiong, W.J. Zhao, Z.N. Gong and W.H. Zhao 1580

Analysis of Water Diversion Way and Suitable Discharge Based on Water Environment Improvement Goal in the River Network
W.X. He, C.Q. Li and D.Y. Chen 1588

Water Environment Monitoring System Based on Data Extraction - Transmission and Processing
Y.C. Gong, Y.X. Zhang, F. Ding, W.C. Gao and Y.F. Wang 1592

The Application of Principal Component Analysis in Comprehensive Evaluation of Liaohe River Water Quality
L. Zhu and M. Li 1596

Comparison Study on Adsorption and Removal of Antimony from Acidic Aqueous Solution by Activated Carbons and Machine-Made Charcoal
M. Jia, J.W. Hu, J. Luo, S.M. Duan, Z.B. Li and C. Liu 1600

Evaluation of Site Selection for National Strategic Reserve Depots of Refined Petroleum Products
Y.J. Niu, X. Mu, C.J. Zhao and H.Q. Wang 1607

Research on Characteristics of New Water and Sediment of Yichang Station after Impoundment of the Three Gorges
Y.H. Yang, X.Q. Liu and H.Q. Zhang 1613

Improved Fuzzy Equilibrium Average Type Comprehensive Evaluation Method in the Application of Water Quality Evaluation
J. Pan, B.Y. Li and M.C. Jiang 1619

Lime-Mediated Sewage Sludge and Gas Ash use as Metallurgy Sintering Ingredients
C. Hong, Y. Xing, Y.X. Si, Z.Q. Wang, G.W. Yu, C.S. Yue, Y. Li, X.Q. Tian, F. Zhao and A. Alexeev 1623

Effect of Dissolved Oxygen on Nitrogen and Phosphorus Removal Rate in Biolak Process
Y.K. Ju, H.L. Wang, Q. Zhang and J.L. Xing 1629

Correlation between the Avian Community and Habitat Type during the Wintering Period in Zhalong National Nature Reserve, China
Q.M. Wu, J.Z. Ma and H.F. Zou 1634

Problems and Countermeasures on Urban Infrastructure Construction of Shenyang
L. Zhao 1639

The BIM 'Families' Based Environmental Performance Design Research
F. Yuan, L. Han and Y.H. Hu 1643

Navigational Environmental Risk Evaluation of Breakwater Based on the Analytic Hierarchy Process

Preliminary Analysis of the Hydrodynamic and Siltation Characteristics Downstream of Sheyanghe Sluice
X.M. Wang, X.Z. Zhang, T.L. Li and X.Y. Gao 1654

Parameters Effect on Photocatalytic Reduction Kinetics of Bromate in Aqueous Dispersion of TiO₂
R.S. Zhu, F. Tian, L.L. Zhang and L.M. Yu 1658
The Level of Zn in Guiyang Street Dust and its Different Particle Size Fraction Contributions
X.Y. Li and B.D. Li

Experimental Study on Wastewater Treatment Containing Copper with Electrodeposition Method
X. Chen, H. Lin, H.Y. Ren and J.L. Xing

Application of Immobilized Fungi *Phanerochaete chrysosporium* in Removal of Heavy-Metals from Wastewater

Effects of Nutritional Conditions on the Stable Carbon and Nitrogen Isotope of Microalgae
H.X. Wang, Y. Liu, L. Liu, H.M. Bao and B.Z. Liu

Chapter 4: Data Processing and Information Technologies, Computer Methods, Management, Logistics and Network Applications

Efficient Storage and Retrieval of XML Documents Using XQuery

Research on Wavelet-Based Image Target Detection & Recognition Technology
A.M. Wang, Y. Gao, F.H. Wang and S.X. Guo

An Algorithm of the Rough-ISM Analysis Method

Compaction Management: Results of a Demonstration Project
M. Parente and A.G. Correia

The Studies of Stability of Non-Interval Gray Verhulst Model
X.S. Fan and X.C. Shi

Forecast Method Study on Track Longitudinal Level Irregularity Based on Most Possible Similarity Model
C.Y. Zhong and Y.D. Xu

A Novel Fault Tree Analysis Theory
Y.L. Huang and J.Q. Zhong

Design and Implementation of Long Range Active RFID Technology
Y.J. Shiau and Y.B. Chiu

RGB Primary Color LED Backlight System Based on MCU
C. Wang

Bloom Filter Routing Protocol for Wireless Sensor Networks
J.W. Zhou

E-Book Reader Research Based on Kansei Engineering
Y. Li, X.F. Liu and Z.B. Qu

An EEG Investigation of the Impact of Noise on Attention

The Research on Emergency Supplies Dispatching under the Circumstance of Unconventional Emergency
Y.H. Chen, S. Zhang and Q.Q. Chen

Research and Application of Decision Tree Technology in Retinopathy
X. Zeng

3PL-HUB Supply Chain Logistics Cost Simulation Study Based on System Dynamics
J. Zou and L. Shan

Research on Time Management for Project Cluster Development
J.W. Zhang, C. Zhang, R.Z. Ye and Z.X. Zhong

Purchase Research on Supply Chain for EPC Project
J.W. Zhang, F.S. Wang, R.S. Zhou and B. Liu

Introduction to Partial Least Square: Common Criteria and Practical Considerations
K.H. Lee and S.C. Che

The Study on Blind Unmixing for Hyperspectral Imagery
Z.W. Huang and Y.J. Huang
How to Apply the Principle of Projection Transformation to Deduce the Segment’s Real Length in the Right-Angled Triangle

Comprehensive Evaluation on the Development of Industry Cluster Circular Economy
J. Zhang, N. Wang and J. Hong 1777

Color Gray Research of Software Interface Design Based on Optical Display Equipment
F.J. Ma, F.H. Song and Y. Liu 1781

Sustainable Logistic of Raw Materials Used by a Zootechnical Firm. Focus on CO₂ Emission Reduction through the Creation of a Local Suppliers Network
C. Ceppa and G.P. Marino 1785

GMSPPF for Magnetic Ellipsoid Tracking with a Magnetic Gradiometer Tensor
Z.D. Wu, S.H. Zhou and H.X. Zhang 1789

Super Exponential Iteration Adaptive Minimum Entropy Blind Equalization Algorithm Based on Quantum Artificial Fish Swarm Optimization
Y.C. Guo, W. Huan, L.F. Wu and K.C. Leng 1793

A New Detector for Impulse Noise Removal
T.S. Liang and D.J. Zhou 1797

Design and Implementation of the Steel Enterprise MES Based on CICS
P.P. Liu and L. Li 1801

Optimization Study Based on the Mileage-Saving Method of Oil Distribution
M.J. Zhu and J.W. Zhang 1805

The Security Mechanism Research of PACS
X. Zeng 1809

The Achieve Method of the Panorama Field Geological Image Web Shared
W. Cheng, L.F. Xue and W.Q. Li 1813

Data Compression Method for Road 3D Scene Real-Time Network Transmission
W. Li, H. Pu, H.F. Zhao and Y.C. Cai 1817