Table of Contents

Preface and Organizing Committee

Chapter 1: Applied Mechanics Mechanical Engineering

Critical Force Analysis of a Cantilever Column Subjected to a Subtangential Follower Force and a Vertical Force	
Z.C. Su, Y.X. Xue and C.B. Du	3
Dynamic Analysis and Optimization of Automatic Tape-Laying (ATL) Machine for Cylinder Components	
H.F. Zhang, L.W. Guan and T.M. Li	9
Proposal of a Masticatory Robot for Analysis of Jaw Movements M. Cong, T.Z. Liu, H.Y. Wen and Z.B. Chang	15
Optimization of Plate with Partial Constrained Layer Damping Treatment for Vibration and Noise Reduction	
S.W. Hou, Y.H. Jiao, X. Wang, Z.B. Chen and Y.B. Fan	20
Numerical Simulation of Air Flow during Air Sparging Remediation J. Wang and L.M. Hu	27
Designing and Experiment Study on Front Impact Attenuator for Formula SAE Racecar J.H. Wang, D.S. Xi, S. Zhao and S.C. Wang	33
Distributed Control of Spacecraft Formation Using Improved Cyclic Pursuit with Beacon Guidance	
H.X. Yang, X.X. Yang and W.H. Zhang	38
Numerical Solution of Dynamic Responses of Moving Load on Ice Sheet K. Chen and X.F. Tong	44
On an Optimal Linear Control of a Chaotic Non-Ideal Duffing System F.R. Chavarette	50
Optimal Motion Planning for the Teaching Experimental Mobile Manipulator H.P. Zhou, P. Ge and Y. Fang	56
Analysis for a Support Structure of a Horizontal Axial Tidal Current Energy Conversion System	
L. Zhang, P. Ge, Y.G. Sun, F.M. Jin and X.H. Wang	62
Experimental Research on Force/Position Control of a Wire-Driven Parallel Rehabilitative Robot	
K.Y. Wang, F.C. Ma, M. Hao, L.X. Zhang and P. Liu	68
Influence of Attachment Rigidity on Stress Analysis Y.Q. Qian, F.J. Liu, Z.W. Ling and S. Kong	74
Numerical Model of Wave Flume Y.M. Lan, Y.G. Li and W.H. Guo	79
Numerical Simulation of Air-Modulated Speaker with a Time-Dependent Shape Vocal Tract Model	
H.F. Zhou and X.W. Zeng	85
Supercavitating Vehicle LSSVM Multiple Intelligent Control J. Song and X.Q. Qi	93
Numerical Simulation of Flow Field around Amphibious Vehicle Based on CFD T. Wang, W. Sun and X.M. Yao	99
Non-Linear Dynamics of a Flexible Multi-Rotor Bearing System with a Fault of Parallel Misalignment	
Z.G. Li and M. Li Collision Simulation Analysis for Space Flevible Broke Cone Declaing Mechanism	104
Collision Simulation Analysis for Space Flexible Probe-Cone Docking Mechanism W. Han, Y.Y. Huang, X. Zhang and X.Q. Chen	111
Research on a New Cooling System of Airborne Electronic Equipment X.Y. Chen, N. Zhao, Y.Z. Cai, Z.J. Yan and Y.Z. Wang	117

An Experimental Study on Rotational Coriolis Force upon Single Particle in Vertical Spiral	
Duct Z.W. Mu and Z.Y. Zhang	123
Energy-Based Inverted Equilibrium of the Axially Symmetric 3D Pendulum W.J. Lv and X.S. Ge	128
Discussion on Safety Criterion of Structural Response to Blasting Vibration H.X. Wei, T. Liu, J. Zhu and L.J. Tan	134
Ice Accretion Prediction for Single Airfoil and Multi-Element Airfoil Z.G. Sun, C.X. Zhu and C.L. Zhu	140
Analysis of Dynamic Load Level of High-Speed Heavy Vehicle Imposed on Uneven Pavement	
G.H. Guo, Y.F. Bai and T. Wang Effects of Torsional Stiffness and Preload on a Hopping Robot with Two-Segment Legs D.H. Shin and J.N. An	146 153
Study of Stiffness Design of Caliper for Reducing the Weight of an Electro Wedge Brake D.H. Shin and J.N. An	159
Computations of Homeomorphisms in the Contact Dynamical Systems D.W. Sun	163
The Application of Finite Element Methods to Study Force Transducer Anti-Deviated Load Characteristics	
K.C. Hsieh, K.T. Chen, C. Kanjanaphachoat, C.W. Yeh and Y.Y. Chen	168
Subdivision Method for Mold Cavity Surface Based on the Improved Image Direction Information Measure Y.S. Zhai, X. Pan, Y.J. Cai and H. Shen	175
Effects of Fluid-Solid Interaction for Hydraulic Structure Seismic Response R.Q. Xi, X.D. Jiang, Y.S. He and S.H. Ban	181
Numerical Simulation of Coal Mining Excavation Based on Discontinuous Deformation Analysis	
Y.N. Gao, F. Gao, M.R. Yeung and Q.H. Jiang	187
Application Research on Elastomer Damper in Tracked Vehicle Suspension System Z.S. Xu, T.X. Su, G. Li and K. Wang	193
The Optimum Design of Composite Laminated Plate Based on Spline Finite Element Analysis	
F.X. You, F. Zhang and B.L. Zuo	199
Top-Down Modularization Using Extensible Skeleton Model P. Deng, M. Zhang, B.Z. Wu, J.Z. Gong and G.X. Li	210
Structural Response Analysis of Beijing Yin-Tai Center Building under Varying Ground Motions	
F. Wang, J.M. Ma, C.L. Li and Y.H. Chen	217
Computational Investigation of the Slat Blowing Control for High-Lift Airfoil P.Q. Liu, Y.X. Cui, L. Wang and Q.L. Qu	223
An Investigation of Drag Reduction on Gurney Flaps by an Three-Element Airfoil P.Q. Liu, S. Yang and Y. Tian	229
Folding Umbrella Framework Destruction Force Analysis Based on Virtual Prototype Q.H. Song, Y.M. Ma, Z. Xu, N. Jia, Y.P. Zheng and J.T. Yuan	234
Experimental Study on Optimization Design of Variable Diameter Pile-Raft Foundation W.Y. Wang and T. Zhao	240
The Harmonic Response Analysis of Engine Block Based on Modal Analysis Z.C. Zheng, Y. Gao, N. Liu, K.J. Zhang, H.O. Chen, X.B. Huang and J.H. Wang	246
Optimization Design of Double Wishbone Independent Suspension Based on ADAMS Y. Yang, H. Huang, Y.J. Wang, X.T. Liu and L.H. Zhao	252
A Finite Element Model to Evaluate Airport Flexible Pavements Response under Impact M. Buonsanti and G. Leonardi	257
Integral Slide Mode Variable Structure Control of the Machine Angular Position Servo System with Friction X.G. Wang and X.H. Li	263
Lie Symmetries for Discrete Electromechanical Dynamical Systems with Irregular Lattices G.L. Zhao, L.Q. Chen and J.L. Fu	267

Implicit Generalized Predictive Control of Hip-Joint Rehabilitation Training Device Driven by Pneumatic Muscle Actuator	
X. Li, F. He, X. Hong and T. Guan	273
Design and Experimental Research of Urethra Valve of Bladder Power Pump C.B. Liu, X. Li and T. Guan	279
Automatic Design of Gear Transmission Based on Visual Fortran and AutoCAD X.L. Bai, Y.H. Li and S.T. Zhou	285
Structural Study of Arch Bridge with a Span of 600m Part I: Trial Design Y.Z. Xie	289
Structure Study of Arch Bridge with a Span of 600m Part II: Measures to Improve Mechanical Performance Y.Z. Xie	294
Energy-Efficient Tracking Control for Automatic Guided Vehicle X.H. Yin, H. Zhao and C. Yang	299
The Numerical Simulation of the Solar-Air Dual-Source Heat Pump System C. Zhang, X.D. Zhao and G.H. Zhou	305
Research on Transmission Efficiency of Cycloid Cam Speed Reducer J.K. Yang and Y.J. Xu	310
Methods Determining the Weights of Characteristics in Mechanical Products Design on Case-Base Reasoning	215
A.M. Ji, K. Zhu and Q.S. Huang Fuzzy Interference Referee Model of Fault Diagnoses for Automobile Engine	315
Z. Wang, L.F. Kong and W.K. Wang The Study on Soft Starting of Belt Conveyor Using Two-Input-Outlet Fuzzy Control Model	321
B.Y. Chen Design of Dynamic Control on Underwater Vehicle G.D. Lun, Y.C. Liu, P. Yi and Y. Qu	327 333
Study on Integrated Framework of Mathematical Mechanization for NC Trajectory	333
Planning H.B. Deng, W.J. Liu and E.Y. Gao	339
Dynamics Simulation of Spacesuit Mobility Measuring Manipulator Based on Matlab S.H. Xu and L. Zhou	345
Rock Burst Analyse in Qirehataer Diversion Tunnel J.F. Bian, J.J. Zhou and G.B. Zhao	352
Modeling and Analysis of the Supporting Force of Water Strider's Legs Q.C. Wang, X.D. Yang, G.R. Shang, Z.J. Yang, G.H. Cao and H.J. Xu	356
The Study on the Mechanical Property of the Top-Seat-Angle with Double Web-Angle Connection	262
W.J. Yang, Y.D. Yang and J.J. Tian Experimental Research on the Influence of Moisture Content on the Performance of	362
Desulfurization Plasterboard W.J. Yang, H.R. Liu and Y.B. Jiang	367
Finite Element Study on Influence of Door and Window Openings on Temperature Effect of Masonry W.J. Yang, Y.L. Zhao and H.D. Zhang	371
Numerical Simulation of the Water Entry of Two-Dimensional Body with Flow Separation Y.B. Li, Y.J. Li and Y. Wang	376
Reliability Analysis on the Key Components of High-Power Low-Speed Diesel Engine G.J. Chen, Z.M. Liu, T.T. Liu, S.H. Su, G.J. Yuan and Y.J. Cao	382
Principal-Component Calculation of Stray Light for Infrared Detection J.X. Niu and H.C. Li	387
Study on Noise Control of Fan with Air Suction L.J. Wang and Z.Y. Pan	391
Experimental Modal Analysis of Fan Vibration Frequency L.J. Wang and Z.Y. Pan	395
Mixed Method to Calculate the Sluice Plate on Complicated Foundation C.L. Dong and X.Y. Lu	399

Stable Nonlinear Control Allocation for Aircraft with Multiple Control Effectors H. Li, J.Y. Yu and Y.A. Zhang	404
The Solution of the Structural Reliability Index Based on SAPSO K.T. Liu and A.P. Tang	410
Setting the Model of Iced High-Voltage Transmission Tower-Line System and Research its Dynamic Characteristics Y.J. Liu and A.P. Tang	416
Design and Research of a New Highway Median Guardrail Based on ANSYS Y. Jin and J.G. Yu	422
Aerodynamic Design and Analysis of Propeller for Solar Powered Unmanned Aerial Vehicle H.J. Wang, J. Li and W.J. Fu	428
Dynamics Analysis of Multi-Degree-of-Freedom Motion Simulator Based on Hamilton Method Y.F. Zhou, F.L. Huang, Z.Y. Zhang and T.S. Song	434
Temperature Field of Multi-Wells Aquifer Thermal Energy Storage in Sanhejian Coal Mine Y. Zhang and D.M. Guo	442
Seismic Stratigraphy and Seismic Geomorphology: Insights on Characterization of a Carbonate Reservoir	
R.T. Duan, Z.K. Jin and C.H. Suo	447
Analysis on Flight Dynamics of Solar UAV with Multiple Propulsion Systems W. Xiao and Z. Zhou	453
Numerical Simulation and Analysis of Motion Process of Incompact Soil along Slope X.J. Ji and G.Q. Ou	459
The Secondary Development of Nonlinear Viscoelastic Constitutive Model Based on ABAQUS	4.6.6
L. Yi, Y. Peng, H.Q. Hong and Y.L. Li	466
Steady Air Injection Flow Control in Centrifugal Compressor I. Benhegouga and C. Yang	471
Fracture Mechanics Analysis of Hydraulic Cracks in Asphalt Pavement X.C. Zhang, F.M. Sun, Y. Wang and N. Zhang	478
Model Test Investigation on a J-Lay System Designed for Deepwater Pipeline Installation in South China Sea	
M.J. Li, M.L. Duan, F.F. Yu, H.H. Zhang, X.Y. Ren and C.X. Li	484
Study and Application of Seismic Attributes on Coal Seam Thickness Prediction C.H. Suo, S.L. Chang, S.M. Peng and R.T. Duan	492
Delay Independent Control of Bilateral Teleoperation Based on LMI R.Q. Wang, K.H. Li, H. Li and C.J. Xia	498
Mechanical Analysis of Filter Cylinder of Containment Sump Strainer G.Y. Lu and J.S. Ren	504
The Reanalysis Method of Weighted Generalized Inverse for Topological Modification of Plane Structures P. Liong and I. Weighted Generalized Inverse for Topological Modification of Plane Structures	510
P. Liang and J. Wei Study on Rollover Security Based on the Bus Middle Body Frame Y. Lu, K.Y. Jiang, F.M. Zhou and C.F. Wu	516
A Novel Sliding Mode Motion Control for Parallel Mechanism of Virtual Axis Machine Tool	010
G.Q. Gao, H.B. Zheng and X.M. Niu	523
Determination of Critical Speed in Ice Breaking by Air Cushion Vehicle C. Wang, Z.H. Zhang, T. Miao, J. Yao, L.Y. Zhang and K. Chen	529
Aerodynamic Optimization Design of Compressor Cascade Based on Parallel Multi- Objective Genetic Algorithm and Artificial Neural Network L.H. Chen, Q.Z. Yang and J.H. Cui	534
Performance Research on the High-Altitude Valve of an Aero-Engine Ventilation System L.C. Su, Z.X. Liu and Y.G. Lu	540
Study of Eliminating Calculation Errors in Large-Strain Measurement with Strain Gauges D.W. Wang, H. Wang, Z.G. Liang, S.Y. Tang and Y. Li	548

Algorithm Establishment with Model Experiment for Continuous-Wave Functional Near- Infrared Spectroscopy	
T. Li, Z.L. Zhang and Y. Zheng	553
The Control Method for Positioning Bed of the Body Gamma Knife Based on the Breathing Sensors	
H.F. Liang and G.Y. Shan	560
Chapter 2: Material Science and Engineering	
A Technology Based on Image Processing for the Bridge Crack Measurement B. Xu, G.S. Yin and X.W. Liu	569
The Investigation of Temperature Effect on Dynamic Characteristics of Rubber Isolator D.B. Han	575
Cotton Fiber-Reinforced Polypropylene Composites T. Lin, Z. Wang and W.J. Guo	581
Experimental Study on Vibration Absorption Characteristic of Non-Obstructive Particle Damping Beam	500
W. Wang and Y.Y. Li	588
Application of Modal Analysis in Local Damage Diagnosis of Steel Beam Z.G. Gong, R.D. Gao and P. Zhao	592
A Method of Tool Breakage Detection in CNC High-Speed Milling Q. Gao	598
Test to Characterize the Machining Strength Property for the AISI 316L Steel N.L. Coppini, J.C. Dutra, E.A. Baptista, F.A.P. Da Silva Fortunato, F.A.A. Ferreira and D. Coccumazzo	604
Preparation and Characteristic Measurement of Born Doped Diamond Film Electrode on Tantalum Substrate and its Properties for Degradation of High COD Wastewater C.Y. Gao	612
The Design of the Multi Fitness Function Office Chair J.P. Ren and Y.G. Ye	618
TiCu-Based Bulk Metallic Glasses Exhibiting Large Compressive Plastic Strain X.F. Zhang, X.Q. Guo, K.B. Kim and S.H. Yi	624
Functionalized Ionic Liquids as Lubricants for Steel-Steel Contact L.Y. Zhu, L.G. Chen, X. Yang and H.B. Song	630
Acoustic Emission Study of Corrosion Fatigue and Fatigue for API 5L X70 Gas Pipeline Steel	
Z.H. Hanafi, N. Jamaludin, S. Abdullah, M.F.M. Yusof and M.S.M. Zain	635
Crack Paths in 2198-T8 Offset Hole SE(T) Plates with FSW Jointed under Fatigue Load Residual Stress Effects on Crack Growth in Nugget of Al-Li Alloy 2195-T8 Friction Stir	640
Welded Joints Y.E. Ma, L.N. Wang and B.Q. Liu	646
Damage Tolerance Properties of 2198-T8 Integral Fuselage Panel between Double Friction Stir Weld Joints	
Y.E. Ma, B.Q. Liu and Z.Q. Zhao The Dynamic Strength Calculation on the Reel Fulcrum Bearing and Gear Box Bed Plate of	651
Crane Based on ADAMS and Mechanical Property F.Q. Wu, H.X. Xu, X.Y. Tang and Z.J. Yu	657
Study on the Simulation Model and Characteristics of High-Speed Grinding for Ceramics Y.C. Yuan, B.Z. Li, Z.X. Zhou and Q. Zhang	662
The Liquefaction Risk Analysis of Fine Sand Filling Subgrade H.X. Zhang, Y.F. Bai and Y.J. Lv	668
Spline-Based Finite Element Analysis in Composite Laminates Mechanical Properties F.X. You, F. Zhang and B.L. Zuo	673
Design and System Level Simulation of Double-Mass Silicon Micro Gyroscope Q. Shi, A.P. Qiu, S. Yan and R. Feng	681
Research on Dynamic Characteristics of Gear in Ultrasonic Gear Honing Y.Z. She, M. Lv and S.Y. Wang	687

Natural Boundary Integral Method for Irregular Plate Problems L.L. Du and X.H. Wu	693
Fourier Cosine Differential Quadrature Method for Beam and Plate Problems W.T. Shao and X.H. Wu	699
Green Quasifunction Method for Bending Problem of Clamped Orthotropic Trapezoidal Thin Plates on Winkler Foundation S.Q. Li and H. Yuan	705
Studies on Dynamic Mechanical Properties of Glass Fiber Reinforced Silica Aerogel H.J. Wu, D.L. Li, S.R. Zhu and F.L. Huang	709
Study on Quick Changing Device of Power Battery of Electric Vehicle C.X. Cheng and J.H. Yan	718
Application of Modern Emission Spectrography in Oil Monitoring B.J. Yu, X.N. Li and X.F. Jiang	723
Investigation and Simulation on Amorphous Formation and Growth N. Li and W.Z. Chen	727
Microstructure and Hardness of the ZrO ₂ /Ni60A Composite Coating Formed by Feeding Powder Laser-Clad on Circular Surface B.S. Ouyang and R.J. You	732
A Finite Element Model of Roll-Over Protective Structures for Wheel Loader Frame Z.G. Wei, X.F. Cheng and J.H. Liu	737
Experimental Modal Analysis of Large Vibrating Screen with Hyperstatic Net Beams Structure	
X.M. He and C.S. Liu Numerical Simulation of B-Pillar's Hot Press Forming Process and its Shape Optimization A. Long, R. Ge, Y.S. Zhang and X. Wei	743 749
Research on the Warm Deep Drawing of AZ31 Magnesium Alloy Sheet Based on DYNAFORM	
X.Q. Cao, J.W. Wang, Y. Liu, C.Z. Chi, L.C. Li and H.X. Wang Application of Finite Element Method in Submarine Cable Fiber Excess Length Analysis H. Huang and X.C. Dong	754 759
Numerical Analysis on Short-Circuit Force Parameters of Windings for Power Transformer J.J. Liu, J.M. Wang, C.Y. Jing, C.Z. Fan and Y. Zhai	764
Numerical Investigation of Type IV Shock Interaction and its Active Control D.K. Wang and Y.J. Hong	770
3D FEM Simulation Analysis for the Residual Stress to GTAW Welded Joints Based on Adscititious Magnetic Field Q.L. Zhong, S.Y. Jiang, H.M. Chen and P. Liu	775
Study on the Trial-Manufacture of a Large Discharge Emulsification Pump's Crankshaft Z.B. Zhou, J.L. Zhang, N.N. Zhu, H.Z. Liang and Q.H. Zhou	780
A Grey Correlation Model for Analyzing Ultimate Bearing Capacity of Large Diameter and Super-Long Pile	706
J.W. Tu and A.P. Tang The Analyses for Natural Frequency of Laminated Plate Using an Improved Higher-Order Theory	786
J.W. Wu and L.Z. Huang Research on the Vibration Attenuation of Heavy-Duty Machine Tool Based on Non-	793
Obstructive Particle Damping (NOPD) W.Q. Xiao, D.P. Duan, H.C. Bian, W. Li and L. Deng	799
Research on Modeling and Simulation of Sonar Performance Using Simulink K.H. Li, J.Y. Yu and J.W. Lei	804
Effect of Fiber Diameter on Fatigue Strength of Fiber Reinforced Concrete and its Design P.J. Chun and M. Ohga	810
Tensile Behavior Prediction of Steel Plates with Pitting Corrosion P.J. Chun, D. Yoshii, J.M.R.S. Appuhamy and M. Ohga	816
On Studying Surface and Nanomechanical Properties of Ti-O Films by Alkali Treatment F. Wen, Y. Cao and Y. Zhou	821

Effect of Niobium Addition on the Mechanical Properties of Ti Stabilized Interstitial-Free Steel	
R. Ge, H. Xue, A. Long and L.B. Pan	826
Low Cycle Tension-Tension Fatigue Properties of 316L Stainless Steel Thin Sheets Y.J. Liu, Q.Y. Wang, R.H. Tian and X. Zhao	832
A Study on the Aerodynamic Safety of Skirt Board Structure on Maglev Train Z.Q. Liu, W.H. Ma and S.H. Luo	836
Material Flow Behavior during Friction Stir Welding of Copper and Steel C.P. Huang, W.L. Chen, L.M. Ke and H. Lu	842
Plasma Assisted Flame Holding of a Propane Jet L.W. Duan and Y.J. Hong	848
Characterization of Friction Stir Welded Joints in TA15 Titanium Alloy Plates F.F. Xie, C.P. Huang, C.L. Dong and L.M. Ke	852
Active Control of Sound Transmission Trough a Double Wall Structure Q.B. Mao	858
The Analysis of Matching Detection Based on Dielectrophoresis Effects L. Han and G.Q. Yang	864
Three-Dimensional Virtual Assembly of Automatic Fuel Measuring Device of Diesel Engine Test Bed Based on VRML	070
P.G. Jiao, S.F. Shan and Q.H. Miao Preliminary Research on the Aerothermoelastic Behaviours of Sweptback Wing	870
W. Zhao, X.L. Han and Q.G. Fei Numerical Simulation on the Infrared Radiation Characteristics of Ejector Nozzle Based on	874
RMCM L.H. Chen, Q.Z. Yang and J.H. Cui	879
Research on Mesh Generation Effecting Resistance Calculation R. Deng, D.B. Huang, G.L. Zhou, H.W. Sun, L. Chang and C. Ma	886
Comparison of Resonance Characteristics for Two Metal Nano-Optical Antennas Z.H. Yuan, D.D. Zhu and H.R. Wang	894
Enhanced Cellular Function of Human Vascular Endothelial Cell on Poly (ε-caprolactone)/Gelatin Coaxial-Electrospun Scaffold M. Yan, K.D. Xu, X.X. Zheng, Z.J. Chen and H.L. Jiang	900
Preparation and Characterization of Mn _{0.5} Zn _{0.5} Fe ₂ O ₄ @Au Composite Nanoparticles and its Anti-Tumor Effect on Glioma Cells Y.T. Li, J. Liu, L. Wang, J. Zhang, Z.Y. Wang, Y.J. Zhong, D.S. Zhang and Z.Q. Gao	907
Production of Microbial Oils Fermented by Two-Strains with Corn Stalk	
X.S. Li, B.S. Lu and H.R. Jiang Design and Implement of Computer Aided Instruction System for Statistical Quality	914
Control Based on Artificial Intelligence Technology C.L. Wang	920
Chapter 3: Chemical and Biomedical Engineering	
Studies on Optimum Conditions of Synthesizing Theaflavins by Using Bio-Enzyme Method W.P. Fang, L.P. Wang, J. Yu, P.X. Yue, X. Jiang, W.Y. Feng, Y.Q. Chenzhou and X.H. Li	929
Comparison of Two Protein Extraction Methods for Tea Residues X. Chen, H.Y. Luo, J. Yu, P.X. Yue, L. Zhou, Y. Ren, Y.H. Wang, W.P. Fang and X.H. Li	933
Patient-Specific Finite Element Model of a Spinal Tumor for Thermal Ablation J.L. Ding, Q. Nan and Y.J. Liu	937
Microinjection Molding of Polymer Micromixers for Biomedical Application C. Yang, X.H. Yin, L. Li, J.M. Castro and A.Y. Yi	941
Analysis of Soluble Fraction with Carbon Disulfide/tetrahydrofuran of Erdos Coal by FTIR and GC/MS Y. Zong, Y.B. Sun, Y.L. Zhao and X.Y. Wei	946
Study on Fluidization Characteristics of Chinese Herbal Medicine Waste in a Fluidized Bed	, .0
Reactor T. Mi and X.M. Yu	952

Experimental Study on Pollution Emissions of the DLN Combustor X. Li and K. Liu	958
Study on Combustor Outlet Temperature Field of Gas Turbine K. Liu and L. Xu	962
EEG Characters Research to Different Personality People J.Q. Peng and P.D. Wu	967
Chemical Constituent and Antimicrobial Activity of Essential Oil from Fragrant Loquat and Common Loquat	
Y.P. Hong, B.S. Lin, H.Y. Ca and S.Q. Lin	974
Effects of AOC and Phosphorus on Bacterial Growth under Oligotrophic Condition (1) D.L. Jiang, G.W. Ni and Y.M. Zhang	981
Effects of AOC and Phosphorus on Bacterial Growth under Oligotrophic Condition (2) D.L. Jiang, Y.M. Zhang and G.W. Ni	988
Purification and Concentration of C-Phycocyanin from Spirulina platensis Using Aqueous	
Two-Phase System W.J. Wang, X.L. Zhang, C.B. Xu and H.Y. Cheng	995
Determination Method of Organophosphorus Pesticide Residues in Fishs by GPC-GC-PFPD	
B. Li, F.G. Zeng, W.F. Ma, Q.C. Dong, H.T. Fan and C.F. Deng	1002
Chemical Modification of β-Cyclodextrin-g-Chitosan and its Adsorption on Pb ²⁺ S.L. Lai, Q. Chai, W.J. Han and B. Wang	1007
Effects of Light-Initiation Agent on Mechanical Properties of Light-Cured Nano- Hydroxyapatite Composite for Dental Restoration	
Q.S. Wang, Y. Wang, R. Li, M.M. Zhao, J.J. Sun and Y. Gao	1012
Extrusion Process Optimization for Soluble Dietary Fibers Production from Agrocybe Cylindracea Using Response Surface Methodology G.Y. Lv, Z.F. Zhang, H.J. Pan and L.F. Fan	1017
Determination and Evaluation of Aluminum Contents in Flour Products	1017
X.L. Xu and Q.J. Jiang	1022
Enhancement Effect of CTAB in Dye Wastewater Treatment by Bentonite J. Qi, J.F. Ma, D.L. Li and J. Dai	1028
Solubilities Prediction and Partial Molar Volume Calculation for 2-Butanol and CO ₂ Binary Mixture at High Pressure	
L. Zheng, Y.Q. Wang, K.X. Chen and L. Wang	1032
The Co-Metabolic Biodegradation Kinetic Models of a Chlorinated Alkene with Mutagenicity, Carcinogenicity and Teratogenicity by Two Strains of Aerobic Bacteria H.T. Shang, Q. Yang and Y. Zhang	1040
Study on Eliminating Three Nitrogen of Recycling Aquaculture Using the New-Style	
Incorporated Aquarium L.L. Dong, J.G. Huang and M. Sun	1050
Theoretical Study on the Antioxidant Activity of Alkannin and its Derivatives	
R.F. Jin	1056
A Contact-Free Monitor of Human'S Vital Signs G.H. Lu, F. Fang, X.J. Jing, X. Yu and J.Q. Wang	1063
Co-Immobilized Lignin Peroxidase and Manganese Peroxidase from Coriolus Versicolor Capable of Decolorizing Molasses Waste Water	1067
Y.H. Ran, Z.F. Che and W.Q. Chen Study on Synthesis and Properties of Phenols Polymer Syntan Catalyzed by Enzyme	1007
S.H. Lv, R. Gong and Y.F. Ma	1072
The Impact of Tetrahydropalmatine on ⁹⁹ Tc ^m -MIBI Uptake of Human Breast Cancer MCF-7 Cell	1070
J. Yun, L. Wang and J.Y. Yuan Effect of Etching Temperature on the Growth of Silicon Nanowires	1078
Y.L. Liu and J. Zhang	1082
Preparation of Dextran Modified Superparamagnetic Iron Oxide Nanoparticles Based Immunoprobes	
W.T. Niu, L.Y. Zhang, M. Pan and Y.Q. Chen	1089

Sleep Stage Classification Based on EEG Signals by Using Improved Hilbert-Huang Transform	
X.L. Shen and Y.L. Fan	1096
Comparative Study of Droplet-Nuclei with Pathogen and CO ₂ Distribution in Infectious Isolation Room	1102
Y.Z. Ji, X.J. Wang and Y.P. Wang Disodium Salt of 2-(5-phenyl-1, 3, 4-oxadiazol-2-yl) Phenyl Phosphate as a Fluorescent Probe for Determination of ALP	1102
Probe for Determination of ALP Y.J. Lei, O.Y. Jie and M. Ding	1109
Heart Sound Clustering Based on Supervised Kohonen Network X.H. Yang, W.J. Fu, Y.T. Wang, J. Ding and C.Z. Wei	1115
Humidity Sensor Based on ZnO Nanorods Assembled by Dielectrophoresis R.B. Ai and F.J. Miao	1121
Preparation and Characterization of Electrochemical Glucose Sensor Based on Nickel Electrodes Supported by Silicon Microchannel Plates B.R. Tao, F.J. Miao and Y.J. Zheng	1126
In Silicon Cloning and Bioinformatics Analysis of an Eukaryotic Initiation Factor 4E Gene from <i>Grimmia pilifera</i> W. Sha, L. Wu and X.H. Song	1132
Synthesis of Juglone and its Derivatives	
J.L. Wang, Z.J. Yang, J.J. Wang, W.X. Tang, M. Zhao and S.J. Zhang Production of Fermentative Hydrolysate with Antioxidative Activity of Extruded Corn Gluten Meal by Bacillus nato	1139
X.Q. Zheng, X.L. Liu and Z.S. Liu Assessing Soil and Plant Pollution by Abandoned Rural Waste Dumping Sites in Ningbo, China	1142
Y.D. Guan, Y.H. Du, Z.D. Li and A.C. Luo	1149
Optimization on Extraction Technique of Soluble Soybean Polysaccharide H.R. Li, L.B. Yuan, M.S. Xv and W.B. Zhang	1156
Research the Equilibrium Distribution of Puerarin in Aqueous Two-Phase Combine with Temperature-Induced Phase Separation EOPO/ K_2HPO_4 /Water Systems X.M. Gu, Q. Huo and Q. Lin	1162
Cloning and Expression of TLR4-EGFP Fusion Protein in HT-29 Cells and the Visualized Interaction between TLR4 and Enteropathogenic <i>E.coli</i> Q.X. Gao, L.L. Qi, J.B. Wang, Q.C. Zhuang, S.J. Chen, X. Xu and Z. Zheng	1168
The Anti-Inflammatory Activity of Pentacyclic Triterpenes In Vitro L.M. Bai, F.X. Meng, L.J. Zhao and M. Zhao	1174
Biomedical Imaging and Visualization Model of Mitochondrial Dysfunction and Oxidative Stress in Alzheimer Disease	
C.J. Lin, H.C. Huang, W.J. Liu and Z.F. Jiang Optimization of Xylanase Production by <i>Trichoderma reesei</i> JL-1 Using Response Surface Methodology and the Enzymatic Properties	1179
M.Q. Liu, X.J. Dai, G.F. Liu and R.F. Guan	1183
Extraction and Antimicrobial Activity of Total Flavones from <i>Zanthoxylum nitidum</i> X.S. Li and J. Hou	1190
Production of a Fibrinolytic Enzyme from <i>Coprinus comatus</i> YY-20 X.L. Liu, X.Q. Zheng and J.K. Zhang	1195
Synthesis, Characterization, and Antibacterial Activity of Quaternized of N-Aromatic Chitosan Derivatives Y.P. Han and Q. Lin	1202
Enhanced Production of Mycelia by the Medicinal Mushroom Cordyceps militaris Using Plackett-Burman Design and Response Surface Methodology X.Y. Liu, F.X. Meng, Y.B. Zhang, H. He, W. Han, W. Juan and L.R. Teng	1209
Transparent-Component-Decimation Method for Studying the Optical Transmission of One Kind of Aperiodic Superlattices X.B. Hu and J.F. Li	1215
Advances on the Pharmacology Research of Active Component in Humic Acid	
X.P. Zhou, X.M. Fan and Y.C. Zhang	1221

New Progress in Medical Research of Bio-Humic Acid X.P. Zhou, Y.C. Zhang, S.W. Zhang, W.J. Ban, W.F. Yu and Z. Zhang	1228
P2P Incentive Mechanism Based on Static Game of Incomplete Information X. Liu, J. Liu and C.Y. Zhu	1234
Research on Chinese Regional Environmental Management Efficiency Based on DEA and Malmquist Index	1239
J.Z. Wang, T.M. Chen, T.D. Wang and W.Y. Zhang Ultra-Precision Machining Technology Based on Dynamic Minimum Thickness of Cut for Machined Single Crystal Materials	
J.C. Kuai Surface Texture Evaluation of Micro-WEDM Z.H. Zhang, L.B. Guo, H. Cui and B. Zhang	1246 1251
Experimental Investigation of the Mold Surface Roughness Effect in Microinjection Molding	
C. Yang, X.H. Yin, J.M. Castro and A.Y. Yi Laser Smoothing Device for Airborne 3-D Focal Imaging LiDAR X.Y. Ge, S.Y. Chen, Y.C. Zhang, H. Chen, P. Guo, W.B. Chen, Z.C. Bu and S.Z. Chen	1258 1263
Study on Fractal Elastic Damage Constitutive Law for Concrete Material under Static Load M. Xie and S.S. Zheng	1269
Study on Theoretical Elasticity and Plasticity Model of the Stock Price Based on Material Distortion Theory S. Zhang, Z.Q. Zhang, X. Wu, X.Y. Li and R. Zhu	1274
Effects of Sb ₂ O ₃ Addition on Dielectric Properties of Barium Strontium Titanate Based Ceramics C. Zhang and Y.F. Qu	1280
A New Method for Multi-Models Estimation Y.Y. Yu and Z.J. Wang	1288
The Preliminary Study on Air-Jet Spinning Spun X.Z. Wang	1294
Complex Mechatronic System Reliability Optimization Using Hybrid Genetic Algorithm J.C. Wang, H. Qiu, J.M. Chen and G.D. Ji	1296