Table of Contents

Preface, Conference Organization and Committee

Chapter 1: Nano Materials Science and Technology

Absorption Spectrum of Carbon Nanotubes Q.H. Zhang, H.H. Sun and H.X. Wang	3
Cu-Ni Alloy Nanoparticles Supported on Multiwalled Carbon Nanotubes Composites with Pre-Treated Multiwalled Carbon T. Wang, Y. Yu, X.W. Zhang and D.Y. Zhao	7
Effect of Electrospinning Process on Electrospun Chlorinated Polyvinyl Chloride (CPVC) Nanofibers	
X.L. Cai, T.T. Jiang, C.M. Qiao, B.W. Cheng and W.M. Kang	11
Enhanced H ₂ Sensing of SnO ₂ Nanowires Functionalized with Pt and Pd Catalyst Nanoparticles	
Y.B. Shen, B.Q. Zhang, X.M. Cao, D.Z. Wei and L.J. Jia	15
Influence of Vacuum on Nano-Diamond Cathode Field Emission Characteristics Y.N. Yang, Z.Y. Zhang, W.X. Li, C.X. Zhai, Q.P. Liu and F.C. Zhang	21
Piezoelectric Effect of Quaic-Nanotetrapods ZnO Nanostructure B. Yin, Y. Chang, J.Y. Ji and L.Z. Hu	25
Preparation and Characterization of the Amidoxime-Modified Polyacrylonitrile (PAN-Amidoxime) Nanofibre Composite	20
M. Hu, Y.H. Ma, Z.J. Li, W.M. Kang and B.W. Cheng	30
Size Effects of Heat Conduction for Silicon Nanograins Y.F. Han and H.D. Liu	34
Viscosity of Al ₂ O ₃ Nanoparticles Dispersed in Ethylene Glycol B. Lou, X. Xu and W.L. Wang	38
Mechanical Properties of the Honeycomb Nanoporous Membranes F. Han, C.Q. Chen and Y.P. Shen	44
Bandgap Determination of Cubic Rocksalt AlN Film from Experimental and Theoretical Investigations	50
Q. Zhong, S.L. Huang, Y.C. Fu, X.M. Shen, J.M. Zeng and H. He Chapter 2: Metals, Alloys and Technology	52
January Comments of the Commen	
Comparative Analysis of Crack Growth Characteristics Based on Virtual Crack Closure Technique	
W.L. Liu, D.Z. Yu and Z.H. Jia	59
Effect of Iron Content on the Strength and Conductivity of Cu-Fe In Situ Composite K.M. Liu, Z.Y. Jiang, Y.H. Wang, Z.B. Chen, J.W. Zhao and D.P. Lu	63
Gas Sealing Performance Study of Metal W Shaped Seal Ring M.J. Xing, Q. Xue, S.F. Suo and C.Y. Liu	68
Mechanical Property Comparison Analysis of Two Kinds of Shape Memory Alloy Patella Claws Based on Finite Element Method	
X.Y. Gong, Z. Wu, D.P. Du, J. Xing and X.W. Miu	74
Mechanics Analysis of Protective Casing and Splicing Sleeve M. Jiang, J. Qin and Y.P. Qiu	78
Research on the Mechanical Properties and Corrosion Resistance of Mg-RE and Mg-Zn-Cu Alloys	
X.H. Xiong, D.M. Quan, J.L. Chen, Q.X. Zhang and Y. Chen	82
Study on Clinching of Titanium Alloy L. Zhao, X.C. He and Y. Lu	86
The Electrochemical Behaviors of HSn70-1A Brass in Polluted Freshwater G. Cao, D.S. Xia and L. Sun	90

The Red Electroluminescence of Iridium Complex at Different Concentrations and Host Materials W.G. Zhang, L. Qin and S.M. Zhao	94
Influence of Heat Treatment on Microstructure and Mechanical Properties of Die-Cast AZ91D Alloy with RE Elements	
J.W. Yuan, X.G. Li, K. Zhang, T. Li, Y.J. Li, M.L. Ma, G.L. Shi and M. Li	98
Research of Anti-Extrusion Process for Cylinder of Spray-Formed Ultra-High Strength Aluminum Alloy S.H. Huang, Z.H. Li, B.Q. Xiong, Y.A. Zhang, X.W. Li, H.W. Liu, F. Wang and P. Sun	103
Deformation Behavior of Mg-7Gd-5Y-1Nd-0.5Zr Alloy during Hot Compression T. Li, K. Zhang, Z.W. Du, J.W. Yuan and X.G. Li	108
Experiment on Direct Smelting and Alloying Process between High-Carbon Ferrochrome and Molybdenum Oxide	116
H.M. Wang, X.J. Fan, G.R. Li, W.W. Chen, L. Cao and Y. Li Production of Fine-Grained and Weak Texture Structure in an Mg-7Gd-5Y-1Nd-0.5Zr Alloy by Multi-Axial Forging	116
T. Li, K. Zhang, Z.W. Du, J.W. Yuan and X.G. Li	120
Research on Crack Region's Electrochemical Corrosion Performance in Hot-Dipping Galvanizing	125
G. Luo, Y. Yuan, Y.Z. Liu, B. Huang, R. Zhang, S.N. Li, Z.M. Zhou and J.M. Zeng Study on Hydrogen Content of Solid Industrial Pure Aluminum	125
B. Huang, J.M. Zeng, L.H. Liang, W.K. Gan and J.B. Lu	129
Study on the Creep Properties and Microstructures of EW75 Alloy Y.J. Li, X.G. Li and K. Zhang	133
Study on Tribological Performance of Al₂O₃ Particle Reinforced the Al-Sn Bearing Alloy B. Sui, J.M. Zeng, P. Chen, L.H. Liang, W.K. Gan and J.B. Lu	137
Research on Fatigue Notch Factor of Aluminum Corrosion Pits D.F. Zhang, X.M. Tan, J.R. Qi and Y.L. Li	141
The Investigation of Dynamic Stress Equilibrium of Compact Tension Specimen Based on Hopkinson Tension Bar Device P. Wang, Y.W. Wang and G.P. Zou	145
The Phase Change Study of Titanium Concentrate during Heat Treatment S.Q. Wan, M. Zou, D.J. Lan, Z. Xu and G.Q. Ma	149
Chapter 3: Steel Materials and Applications	
Control Model of Steel Ladle Base on Overlap Time among the Different Casts B.F. Huang, X.L. Zhou, G.F. Zhang and Z. Shi	155
Development of Enameling Steel Sheet Used for Heat-Exchanger Y.F. Song, Y.Q. Tu, H.W. Yang, R. Du, H.P. Bai and Z.H. Lei	164
Effects of Different Microalloying and Controlled Cooling Technology on Microstructure and Properties of 500MPa High-Strength Rebars	160
W. Chen, J.C. Cao, Z. Shi, Y.H. Yang and Y. Zhao Numerical Simulation and Cold Model Experiments on Ladle Furnace by Ultrasonic S.M. Kang and M.G. Shen	168 176
The Effect of Air Knife Flow Rate on Coating Weight and Thickness for a Hot Dipping Process Simulator	170
F. Fang, L.X. Wang, S.Y. Zhou and J.W. Li	180
The Residual Life Prediction of High Temperature Low Cycle Fatigue of 30CrMnSiA Steel G.D. Gao, W.X. Zhang and W. Zheng	184
Thermodynamic Model of Calculation of Sulfur Distribution Ratio between B ₂ O ₃ -Containing Slag and Molten Steel X. Zhu, Y. Li, X.J. Fan, H.M. Wang and G.R. Li	188
Microstructure Evolution of Environmental Graphitized Hypoeutectoid Free Cutting Steel Y.Y. Yin, F. Fang, G.H. Luo and X. Yan	192
Study of the Solid-State Joining Process for Endless Hot Rolling Y.J. Dai and X.L. Zhang	192

Thermal Analysis on Solidification Behaviors of Hypoeutectic Grey Iron in Lost Foam Casting	
M.G. Xie, C.A. Zhu and J.X. Zhou	201
Study on Oxidation Behavior of Stainless Steels in Short Time X.W. Cheng, Z.Y. Jiang, G.Z. Luo, D.B. Wei and L. Hao	209
Comparison Study on the Corrosion Resistance of Stainless Steel and Copper Tubes in LiBr Solution in Heat Pump	
S.H. Liu, L. Liang, J.L. Zhang and Y. Zhao	215
Chapter 4: Resin, Rubber and Polymer Materials	
Crystallisation and Dynamic Mechanical Relaxation Behavior of High Density Polyethylene/Isotactic Polypropylene Blending Monofilaments W.W. Yu, J.G. Shi and L.M. Wang	221
Effect of Processing Aids on the Performance of High Filled Polypropylene Y.P. Cao, Y.Z. Tu and J. Li	230
Mesoscale Simulations of the Polymer Blends Based on the Mesoscopic Dynamic Method M. Zhang, G.F. Zhang and Y.X. Jia	234
Research on Static Mechanical Properties of Metal Rubber by Wire Mesh H.Z. Cheng, P. Wang and G.P. Zou	238
Research on Vibration Characteristic of Metal Rubber by Wire Mesh H.Z. Cheng, S.Y. Hu and G.P. Zou	242
Synthesis, Characterization and Anticorrosion Performances Study of Different Acid Doping Polyaniline	
H. Wang, E.L. Huang, M. Gong, D. Liu and L. Wang	246
Modeling and Actuation Performance Analysis of Conically-Shaped Dielectric Electroactive Polymer Actuator Y.L. Zhu, H.P. Zhou and H.M. Wang	250
Study on Preparation of Biodegradable Polyurethane Foam C.L. Zhou, Y.F. Li and S.Q. Wan	257
Research Progress of the Polyurethane-nTiO ₂ Self-Cleaning Coating L. Wang, Y. Shang, X. Xiao, B. Mu and G.W. Zhang	261
Design of Discontinuous Fiber Reinforced Injection Molded Polymer Matrix Composite Parts Z. Major and M. Reiter	266
Molecular Dynamic Simulations on the Compatibility of PP/PA12 Blends	200
M. Zhang, G.F. Zhang and Y.X. Jia	270
Chapter 5: Optical/Electrical/Magnetic Materials and Technology	
Numerical Studies to Signal Characteristics with the Metal Magnetic Memory-Effect Based of Cast Iron	
Y.B. Peng, S.F. Pan and C. Lu	277
The Study on Growth Interface of Floating Zone Silicon Crystal Y.J. Wang, L. Qiao, X.N. Zhang, L.L. Wu, S.L. Gao and H.P. Shen	284
Study of Annealing on Fluorescent Derivatives Y. Liu, Y.M. Dai and X.D. Hu	288
Hydrothermal Synthesis, Photoluminescence and Room Temperature Ferromagnetism of Co-Doped Rod-Like ZnO Particles L.M. Hang and Z.Y. Zhang	292
Measurement and Evaluation of Ferrite Surface Crack S.M. Wan, W. Zhao, G.Y. Li and S. Chen	296
Preparation and Electromagnetic Properties of Ferriferrous Oxide/Polyaniline Composites L. Wang and B. Geng	302
Synthesis and Luminescence Properties of Na ₃ YSi ₂ O ₇ :Sm ³⁺ , Eu ³⁺ Phosphor J.Y. Sun, L. Han, Q.M. Di and Q.G. Xu	306

Synthesis and Properties of Naphthalimides Schiff Base Fluorescent Probe for Ag ⁺ J. Liu, W. Yuan, C. Mi and C.C. Li	310
Synthesis and Photophysical Properties of Charged Iridium(III) Cyclometallates Based on Hole-Transporting Carbazole Unit G.P. Tan, H.B. Fan and W.Y. Wong	314
Experimental Research of Damage Occurred on Large Cross-Section Conductor by Different Patterns of String Pulley	
F. Peng, H.Y. Zhou, M. Jiang and G.R. Tang First-Principles Calculations of Energy Band for Wurtzite ZnO under Uniaxial Loading along [0001] Direction L.X. Li, J.L. Zhao and X.M. Guan	320 324
Determination of 1,2-Benzisothiazolin-3-One in Paper for Food Packaging by Fluorescence Spectroscopy	
J.Y. Sun, Q.M. Di, Q.G. Xu and L. Han Fluorescence Study on the Direct Detection of Octylphenolin Plastic Food Packaging Materials	329
J.Y. Sun, Q.G. Xu, Q.M. Di, L. Han and Y.X. Zhang Research Progress on Magnetorheological Fluid	333
Y.L. Li and X.Q. Shen Hydrothermal Synthesis of SrSO ₄ :Eu ²⁺ Microcrystals with Different Morphologies and its	337
Luminescence Properties J.Y. Sun, Q.M. Di, L. Han, Q.G. Xu and C.L. Ma	341
Chapter 6: Ceramic Materials and Technologies	
A Study on the Green Design of Ceramic Products in the Era of Information H. Huang and J.J. Liu	347
Ceramic Product Design Based on 3D Printing Technology C. Dong	351
Effect of La ₂ O ₃ Addition on the Microstructure and Mechanical Properties of TiC-Based Cermets J. Xie, D.K. Li, L.C. Wang and Y. Xi	355
Important Components Analysis of Ceramic Rapid Molding Machine X.D. Gong, Z. Wen and J.L. Zhang	360
Microstructure Analysis of Al ₂ O ₃ Ceramic Coatings Composite Steel Plate Prepared by Self-Propagating High-Temperature Synthesis J.P. Wang, Y. Zhang, H.J. Ni and Y. Zhu	364
The Development Trend of Modern Ceramic Products on the Humanized Design H. Huang and J.J. Liu	368
A Ceramic Crack Test Method Based on the Maximum Variance Ratio of Inter-Class and Intra-Class	270
B.X. Liu, F.Q. Wang and C.L. Yu	372
Chapter 7: Composite Research and Applications	
Advances of Study on the Developments and Physical Properties of Composite Materials A.Y. Zhang and C.Y. Li	379
Experimental Research on Medium Leakage of CFRP Laminates after Impact A.Y. Zhang and D.X. Zhang	383
Experimental Study of a Certain Type of Aircraft Structure Repair Adhesive Y. Huang and L. Tian	387
Impacts of Temperature on Mechanical Properties of FGMs W.G. Liu and C. Yan	391
Influence of MgO Coating Layer on Properties of MgO-CaO Refractories Z. Guo, B.K. Liu and X.L. Tian	396

Investigation of Impact and After-Impact Properties of Carbon Fiber/Epoxy Composites Modified with Multi-Wall Carbon Nanotubes	
N. Li and X.X. Zhang	400
Research in New Technologies and New Materials in the Sports Industry S.Y. Bai	404
Natural Aging Test for CF3011/BA9916-II Composite in Marine Environment X. Liu, L. Wang, W.J. Huo, Y.L. Chen and Y.L. Lei	408
Thermal Behavior, Mechanical Property and Microstructure of Low-Density Polyethylene Filled by Diatomite	
K.Y. Wang, Q.J. Sun, Y. Liu and J. Lu	413
Preparation of MFI Membrane on Mesoporous-Layer-Modified Macroporous Al ₂ O ₃ Substrate by Secondary Growth Method and its Permeation Property Z.L. Cheng, Z. Liu and S. Wang	417
Study on Microstructure Formation of TiAl Based Micro-Laminates Deposited by EB-PVD G.P. Wang and L. Ma	422
Mechanical Properties of Fumed Silica / HDPE Composites J. Zhao, D. Wu, J.Y. Han and Z. Jin	427
Constitutive Equation for Elevated Temperature Flow Behavior of Fe-Cr-Ni Preform Reinforced Al-Si-Cu-Ni-Mg Aluminum Composite L.Z. Zhou, L.M. Yang, Y.J. Peng and X.R. Zhu	431
Chapter 8: Fiber Materials and Textile Materials	
Analysis Based on Impact Resistance of Motorcycle Clothing Fabric Performance Y.X. Yan, L. He, J. Jin and J.W. Tao	439
Double Face with Pattern Effect Design of Thermal Jacquard Based on Three-Layer Weave Structure	
Z.M. Jin, J.Q. Xu, J.H. Wu and Y.X. Yan	443
Fuzzy Comprehensive Evaluation of the Wearability of Shapewear Fabric Made of PTT Filament Y.X. Yan, Y.N. Feng, J.W. Zhao and X.H. Luo	447
Study on Properties of Ultrasonication Treated Pulp Fiber Q.X. Liu and D.X. Li	451
Study on Static and Dynamic Pattern Transformation Glowing Optic Fiber Scene-Like Jacquard Wall-Mounted Fabrics	
J.N. Xu, Z.M. Jin, Y.N. Qi, Z.W. Sun and X.Q. Wang Study on Wearing Characteristics of Sorona/Cotton Blended Seamless Knitted Fabric	455
Z.M. Jin, X. Li, Y.X. Yan and J.W. Tao	460
The Research for the Properties of the Outlast/Viscose Blended Yarns R.P. Jin, Z.M. Jin, X.Q. Wang, Y.X. Yan and J.W. Tao	464
Graft of Bis-QAC to Cotton Fiber and its Antibacterial Characteristics F. Zhou, W. Lu, Z. Zhang and J.L. Meng	468
Characterization and Hydrolization of Acetate Fiber by Sodium Hydroxide X.M. Hu	472
Design and Development of Cool Multifunctional Composite High-Grade Fabrics S.M. Guo, D.M. Yu, Y.T. Liu, Z.F. Wang, C.Y. Zhu and H.X. Zhang	476
Study on Preparation of Modified Cotton with Collagen H.Y. Zhang	480
The Design and Development of Apparel Fabric in Thin Jacquard Trim Process P.X. Jiang, Y.J. Wang, R. He, S.X. Zhang, Z.F. Wang and H.X. Zhang	484
Chapter 9: Chemical and Energy Materials and Technologies	
Catalytic and Regenerative Properties of Nickel-Based Zeolite Catalysts L.Y. Qin, E.C. Jiang, Y. Sun and S. Li	491

Synthesis and Electrochemical Performance of K-Doped Li ₄ Ti ₅ O ₁₂ as Anode Material for Lithium-Ion Batteries	
X.B. Huang, H.H. Chen, S.B. Zhou, Y.D. Chen, B.P. Liu and X.G. Zeng	495
Synthesis of Lanthanum Oxide Using Lanthanum Chloride by Hydrogen-Oxygen Flame Pyrolysis Route	
S.F. Xue, W.Y. Wu, X. Bian, Z.F. Wang and Z.R. Yang	499
Preparation of a New Biomass-CWS with Soluble Sylvite Y. Guo, Q.L. Chen and D.P. Wei	504
Effect of Assets of Silicon Film Passivation Layer on the Performance of Silicon Nanowire Solar Cells	
P. Yang, X.B. Zeng, X.D. Zhang and Z.G. Wang	509
Investigation of 4-Methoxysalicylaldehyde Thiosemicarbazone as Inhibitor for Carbon Steel in Sulfuric Acid Solution H.H. Zhang, Y. Zhang and Z.N. Yang	513
Comparison Study of PVDF-HMn ₂ O ₄ and PES-HMn ₂ O ₄ Membrane-Type Adsorbents for	313
Lithium Adsorption/Desorption S.S. Yang, X. Liu, J.N. Shen and C.J. Gao	517
The Study of Terahertz Time-Domain Spectroscopy of Benzoyl Peroxide Z.L. Zhou, X. Chen, L. Han, Q.H. Zhang and X. Li	521
Classification of Tight Sandstone Reservoir Based on the Conventional Logging X.L. Xiao, J.L. Cui, Y.P. Zhang, X. Zhang and H. Wu	526
Chapter 10: Biomedical and Biomaterials, Applied Research	
Effective Components of Hepatoprotective Drugs L. Ting, L. Juan and Y.J. Qiong	533
Emulsification of Water and Pyrolysis Oil by Sorbitol Derivative Surfactants P. Kittipoomwong and M. Narasingha	537
Microporous Polypropylene Hollow Fiber Membrane Application in Membrane Oxygenator Model	
L. Ni, Y.F. Zhang and H.M. Zhao	541
Improved Dynamic System of Microbial Continuous Fermentation and its Parameter Identification H.L. Xiao, L.Z. Chong, F.L. Hang and W. Yong	545
Extraction of Nanocellulose from Sugarcane Bagasse	
Q. Wang and Y.H. Zhang Impact of Fillers on Mechanical Properties of Biomass Composites	550
X.H. An, P. Liu, Q. Meng, C.G. Su and S. Zhao	554
Effects of Polysaccharides from <i>Radix astragali</i> on Oxidative Stress Induced by Exhaustive Swimming Exercise in Liver and Muscle of Mice	
M. Wu, D. Han, C.F. Ma, Z.W. Wei, J.H. Li and L.Q. Guo	558
Electrosprayed PVP/Shellac Composite Medicated Microparticles for Providing Biphasic Drug Release Profile	
Y.H. Wu, D.G. Yu, Q. Su, C.L. Cai, J.A. Zhang and J.T. Zhang	562
Chapter 11: Manufacturing Materials Processing, Coating and Surface Engineering, Testing and Monitoring Technologies	
3D Printing Technology and the Adaptability of Printing Material X.C. Wang, J. Wei, X.B. Yi, J. Zhang, K. Shang and Q. Wang	569
A Hybrid Neural Network for Prediction of Surface Residual Stress in MQL Face Turning X. Ji, A.H. Shih, M. Rajora, Y.M. Shao and S.Y. Liang	574
A Hybrid Neural Network for Prediction of Surface Roughness in Machining M. Rajora, A.H. Shih, P. Zou, B.Z. Li and S.Y. Liang	579
Bonding Performance of Wood Treatment by Oxygen and Nitrogen Cold Plasma H.Y. Wang, G.B. Du, Q. Li, R.Y. Xu and S.F. Yuan	583

Calculation of Axial Rolling Torque in Radial-Axial Ring Rolling Process T. Wang and Q. Wang	589
Comparison for the Test Methods of Fatigue Life of Welded Structures Y.Y. Ma and L.Y. Xie	593
Comparison of Properties on Withdrawing and Refill Friction Stir Spot Welding Joints X.J. Wang, X.L. Wang, Z.K. Zhang and W.X. Jing	601
Conventional Localized Instability Criterion of Sheet Metal Forming and its Application in FLD	
J. Li and L.F. Yang	607
Current Status and Future Focuses of Typical Pre-Hole Riveting W.J. Li and L.F. Yang	611
Development of Cutting Strategy in Ultra-Precision Raster Milling of Freeform Surface S.J. Wang, S.E. To, X. Chen and J.Q. Liu	615
Ductile Fracture Criteria Based on Mesoscopic Void-Damage of Metals under Plastic	
Forming D.F. Tang and L.F. Yang	620
Ductile Regime Grinding Aspheric Surface of Hot-Pressed Zinc Sulfide B. Chen, B. Guo and Q.L. Zhao	624
Effects of Die Temperature on Microstructure Evolution of 7A85 Aluminum Forging J.L. Hu, Y.P. Yi and S.Q. Huang	628
Effects of Phase Matching Pattern on Pulse Laser-Arc Hybrid Welding Process L.M. Liu, C. Song, Q.P. Song and G. Song	634
Error Identification and Compensation with Space Gauge in High-Speed Machine Tools X.H. Meng, X.D. An, Y.L. Xing and G.N. Zeng	638
Experimental Research on Turning Ni-Based Superalloy with MQL Using Organic Alcohols H. Wang, F.S. Ni and L. Gu	642
Experimental Studies of a Precision Tool Setting Method for Micro Tool Based on the Principle of Electric Breakdown in Micro Gap Z.Y. Xu, Z.J. Zhang, X. Jin and Y.J. Deng	647
Z. I. Au, Z.J. Zhang, A. Jili and T.J. Deng	017
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys	
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding	654
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys	
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines	654
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength	654 659 665
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu	654 659
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength	654 659 665
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang	654 659 665
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network	654 659 665 671 675
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang Preplating Processing of CBN Grinding Wheel Substrate	654 659 665 671 675 679
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang Preplating Processing of CBN Grinding Wheel Substrate J.L. Zhang, Z. Wen and X.D. Gong Research of Machining Process on 17-4PH Stainless Steel Superfine Deep-Hole Drilling Z.F. Liu and H.C. Wang Research on Deflection Analysis and Compensation Method of Ram of Boring and Milling	654 659 665 671 675 679 684
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang Preplating Processing of CBN Grinding Wheel Substrate J.L. Zhang, Z. Wen and X.D. Gong Research of Machining Process on 17-4PH Stainless Steel Superfine Deep-Hole Drilling Z.F. Liu and H.C. Wang	654 659 665 671 675 679 684
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang Preplating Processing of CBN Grinding Wheel Substrate J.L. Zhang, Z. Wen and X.D. Gong Research of Machining Process on 17-4PH Stainless Steel Superfine Deep-Hole Drilling Z.F. Liu and H.C. Wang Research on Deflection Analysis and Compensation Method of Ram of Boring and Milling Machining Center L. Xin, S.C. Cui and Q.L. Shu Research on Quality Control of Motor Shell Coating Process G.Y. Mu, L. Li and D.J. Xue	654 659 665 671 675 679 684 688
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang Preplating Processing of CBN Grinding Wheel Substrate J.L. Zhang, Z. Wen and X.D. Gong Research of Machining Process on 17-4PH Stainless Steel Superfine Deep-Hole Drilling Z.F. Liu and H.C. Wang Research on Deflection Analysis and Compensation Method of Ram of Boring and Milling Machining Center L. Xin, S.C. Cui and Q.L. Shu Research on Quality Control of Motor Shell Coating Process G.Y. Mu, L. Li and D.J. Xue Research on the Laser Welding Technology of GH4169 J.R. Qi, H.K. Wei, D.F. Zhang and L. Han	654 659 665 671 675 679 684 688
Experimental Study on Friction and Wear Characteristics of Cemented Carbides YG6 with Titanium Alloys Y.H. Sun, S.H. Li and M.W. Ding Full Scale Fatigue Experiment on Submarine Pipelines Z.T. Fang, D.Y. Tang, Y.H. Hu and H.L. Niu Investigation of Femtosecond Laser Ablation Threshold for Nickel Template L. Zhang, X.W. Cao, S.G. Li, R.Y. Xiang and H.C. Sun Mechanical Performance Prediction of Cold Rolled Ribbed Steel Bars Based on RBF Network with Dividing Variable Space According to Original Materials' Tensile Strength B.S. Xing and L. Xu Optimization of Thickness Uniformity for Two Times Spray Technology Y. Zeng and W.W. Zha Prediction of Coiling Temperature of Hot Rolled Strip Based on BP Neural Network E.Y. Liu, W. Peng, N. Cao, S.R. Yu, J. Xu, L.G. Peng and D.H. Zhang Preplating Processing of CBN Grinding Wheel Substrate J.L. Zhang, Z. Wen and X.D. Gong Research of Machining Process on 17-4PH Stainless Steel Superfine Deep-Hole Drilling Z.F. Liu and H.C. Wang Research on Deflection Analysis and Compensation Method of Ram of Boring and Milling Machining Center L. Xin, S.C. Cui and Q.L. Shu Research on Quality Control of Motor Shell Coating Process G.Y. Mu, L. Li and D.J. Xue Research on the Laser Welding Technology of GH4169	654 659 665 671 675 679 684 688

Simulation of Subcritical Crack Growth in Dissimilar Weld Joints with Extended Finite Element Method	
W.B. Wang, H. Xue and F.Q. Yang	717
Structure and Design Research for 200L Extrusion Hollow Blow Molding Machine Head W.M. Li, J. Huang and G.L. Lu	721
Study of Formed Milling Cutter for Involute Gear with Small Numbers of Teeth X.C. Gui, Y.H. Sun, Q. Sun and J. Xiao	726
Study on Prediction Model of Springback Based on Support Vector Machine S.J. Su, Y. Hu and C.F. Wang	734
Study on UV Laser Cutting Carbon Fibre Reinforced Composites L.J. Yang, C.J. Hou, M. Zhang, W.Q. Chen and Y. Wang	738
Surface Roughness Research in Turning of Damage-Tolerant Titanium Alloy T. Sun and Z. Chen	743
The Mold for Bonded NdFeB Magnet Compression Molding W.Z. Qin	747
The Study of Stability of Time-Delay Systems in Milling X.G. Zhang, Q.P. Ren and H. Du	751
The Study on Mechanical Modeling and Controlling System of Simulating Milling Force Mechanism	
Q.L. Shu, X.S. Liang and J. Wang Vacuum Brazing of Aluminum Metal Matrix Composites (70 Vol.% SiCp/Al) Using Al-	755
15Cu-8.5Si-4Ni-1.5Mg Filler Metal J. Li and K.H. Wang	760
Water-Repellent Stability of Superhydrophobic Materials under Hydrostatic Pressure J.Y. Huang and F.H. Wang	764
Influence of Cutting Conditions on Chip Formation in High Speed Milling of Brittle Graphite L. Zhou, C.Y. Wang, W.H. Li, B.X. Zhu and Y.J. Zhai	769
Laser Prestressed Bending of Titanium Alloy Sheet	709
Y.C. Zhang, X.F. Wang, X.B. Wang and J. Guo	773
Research on Laser Engraving Technology for Fabric J. Sun, M.M. Wang and M. Li	777
Research on Microstructure and Wear-Resisting Property of NiCrWMo Laser Cladding on K418	
W.J. Huo, X. Liu, B. Hu and Z.P. Wang	782
Research on the Corrosion Resistance of Ni-ZrO ₂ Nanocomposite Coatings L. Wang, J.L. Lu, C.W. Li and S.M. Kang	787
Rolling Force Calculation for Strip Cold Rolling Based on Influence Function Method H. Zhou and J.L. Bai	791
Sensor Performance Analysis by Equal Strength Beam Test for Crane SHM G.J. Huang, Z.Y. He, M. Chen and X.H. Wang	795
Supplementary Setting of Target Flatness Curves for 1450 Strip Cold Rolling Mill H. Zhou and J.L. Bai	800
Adsorption of Anticorrosion and Antiwear Additives on Axletree B. Feng and S.H. Liu	804
Analysis on the Temperature Field of Gear Form Grinding X.Z. Ren and H.F. Hu	809
Analysis the Failure for Earlier Fracture of 60Si ₂ Mn Stabilizer Bar J.J. An, L.L. Zhang and C.Y. Luo	813
Effect of KI on the Corrosion Resistance of Ni-P Electroless Plating Coating P. Liang, Y.X. Zhang and Y.H. Shi	817
Effect of Micro-Alloyed Treatment for 5183 Welding Wire on Microstructure and Tensile Property of Welded Joint X.M. Wang, S. Zhu, Z.H. Zhao, Q.W. Wang and X.D. Zhao	821
Elastic-Plastic Numerical Simulation of Cold Rotary Forging for Hypoid Gear and the Springback Error	0.5
Y.G. Dang, X.Z. Deng and B. Wang	826

Experimental Investigation on Precision Cutting 116Al4V Alloy Using Single Crystal Diamond Tools	
L.H. Hu and M. Zhou	832
Experimental Study of the Pore Density on the Mesh Partition of Exhaust Muffler on Diesel Engine Performance	
J. Fu, W. Chen, Y. Tang, G.M. Li, Y. Ma and Z.G. Zhu	836
Exploring Liquid Impact Forming Technology of the Thin-Walled Tubes C.M. Huang, J.W. Liu, Y.Z. Zhong, M.J. Wu, K.M. Wang and R.Q. Zhou	841
Numerical Simulation of Temperature Field in Laser Remanufacturing L. Dong, X.C. Yang, Y.S. Wang and J.B. Lei	845
Recovery of Nickel and Cadmium from the Multi Metal Hazardous Waste Using Hydrometallurgical Method with Thermometallurgy X.P. Yang, Z.H. Jia, X.H. Wang and G. Li	850
Research on Cathode Chronopotentiograms and Interelectrode Resistance during Vacuum Boiling Electroforming J.T. Wang and P.M. Ming	854
Research on the Abnormal Grain Growth of Goss Grains in Strip-Cast 4.5%Si Grain-Oriented Electrical Steels	858
Y.X. Zhang, F. Fang, Y.B. Xu, Y. Wang, X. Lu, G.M. Cao, C.G. Li and Y.M. Yu Simulation and Parametric Analysis on the Forging Process of Aluminum Alloy Piston in	030
Automobile Engines M.T. Cui and M. Liu	865
Tribological Properties of TiAl Coating on Aluminum Alloy Surface by Supersonic Particles	
Deposition S. Zhu, G.F. Han, X.M. Wang, Y.X. Liu and C.J. Zhou	870
The Researches on the BTA Drill Wear Characteristics X.B. Huang and X.Q. Shen	874
A Study on the Electroless Ni-P Deposition of AM60B Magnesium Alloy without HF in	
Bath J.D. Qiu and S.Q. Jia	879
Theoretic Analysis on the Influence of the Press-Brake Manufacturing Precision on the Bending Precision of Sheet-Metal	002
Q. Li, Y. Sun, Y.Y. Huang, G. He and D.L. Zhu Simulaitan of the Dual Engagency Congestively Counted An Plagma Using Fluid Model in	883
Simulaiton of the Dual Frequency Capacitively Coupled Ar Plasma Using Fluid Model in Semiconductor Technique X.W. Gu	887
Chapter 12: Applied Mechanics, Building Materials and Development, Construction Engineering	
Application Research on Reflective Insulation Coating Composite Insulation Wall T.H. Guan, Y.B. Xu, H.M. Liu, C.Q. Wu and Y. Shen	893
Definition of the Overturning and Holding Moments for Floor-by-Floor Leaning Walls Made from Aerated Concrete Blocks A.S. Gorshkov, N. Vatin, D. Nemova and D.S. Tarasova	897
Detection of Mechanical Properties of Reinforced Concrete Pipes and Affected the Quality of Construction	
Y.M. Yang, R.T. Zhang, B. Qu and J.P. Sun	904
Influence of Reflective Insulation Coating on Heat Transfer Characteristics of Composite Thermal Insulation Wall T.H. Guan, C.Q. Wu, H.M. Liu, Y. Shen and Y.B. Xu	909
Influence of Sulfoaluminate Cement on the Performances of Self-Leveling Mortar G.M. Wang and C.L. Hu	913
Low-Shrinkage Alcohol Cement Concrete A. Shishkin, A. Shishkina and N. Vatin	917
Moisture Content's Influence to Pile Bearing Capacity and Finite Element Analysis	/ . /
L.H. Zhang, L. Yu and Z.J. Quan	922

Problems of Sub-Mountain Area Development Associated with Collapsing Loess Soils (Case of Tajikistan)	
R. Usmanov, M. Rakočević, V. Murgul and N. Vatin	927
Reinforced Soil Beds on Weak Soils R. Usmanov, I. Mrdak, N. Vatin and V. Murgul	932
Research on Improvement of Thermal Insulation and Anti-Radiation Performances of Traditional Wooden Vernacular Dwellings of Tujia Minority in West Hunan L. Zhe and S. Lei	936
The Application and Research of Residential Home Solar Visor in Shanghai X.Q. Feng and B.H. Yang	941
The Damage Assessment of Reinforced Concrete Column under Blast and Loading of Certain Type Rocket Projectile P.F. Zhang, F.P. Zhou and Z.Q. Shen	947
The Monitoring and Analysis of the Anti-Slide Pile's Pile-Soil Interaction N.Q. Wang, Y.Q. Xue, X.Y. Cheng and J.R. Wei	952
The Safety Estimation of the Marine Pipeline L. Muravyeva and N. Vatin	958
Analytical Methods for Determination a Load Capacity of Concrete-Filled Tubes under Axial Compression I.M. Garanzha and N. Vatin	965
Choosing the Right Type of Windows to Improve Energy Efficiency of Buildings N. Vatin and O. Gamayunova	903
Development of the Ventilation System in Historical Buildings of St. Petersburg V. Murgul, D. Vuksanovic, V. Pukhkal and N. Vatin	977
Effect of Constructional Measures on the Total and Local Loss Stability of the Thin-Walled Profile under Transverse Bending	000
D. Trubina, D. Abdulaev, E. Pichugin and V. Rybakov Energy Efficiency of Facades at Major Repairs of Buildings N. Vetin, A.S. Gorshkov, D. Namova and D.S. Torssova	982 991
N. Vatin, A.S. Gorshkov, D. Nemova and D.S. Tarasova Features of Using the Russian State Standards and the Eurocodes for the Protection and Repair of Concrete Structures	991
A. Khodakov, M. Tochenyy, S. Belyaeva, O. Nikonova and L. Pakrastinsh	997
Global Structure Strength Analysis of SWATH Based on Direct Calculate Method C.B. Zhen, L. Feng, G.C. Lu and Y.H. Hou	1002
Hydraulic Methods for Calculation of System of Rear Ventilated Facades N. Vatin, M. Petrichenko and D. Nemova	1007
Physical-Mechanical Properties of the Modified Fine-Grained Concrete Subjected to Thermal Effects up to 200°C V.I. Korsun, N. Vatin, A. Korsun and D. Nemova	1013
Reconstruction of Khrushev's Buildings of Series 1-528 S. Vasiutina and N. Vatin	1013
Renovation of Educational Buildings to Increase Energy Efficiency N. Vatin, M. Petrichenko, D. Nemova, A.A. Staritcyna and D.S. Tarasova	1023
Research of Axially Loaded Steel Columns Reinforced under Load L. Zhou, Y.H. Bai and X.M. Nie	1029
Research Progress of Steel Columns Reinforced by Enclosed Reinforced Concrete under Axial Compression with Initial Compressive Load L. Zhou, X.M. Nie and Y.H. Bai	1033
Simulation of Cold-Formed Steel Beams in Global and Distortional Buckling N. Vatin, A. Sinelnikov, M. Garifullin and D. Trubina	1037
Study of Integrity and Interaction of a Non-Buried Marine Subsea Pipeline with Soil L. Muravyeva and N. Vatin	1042
Study on Fluid-Solid Coupling for Vibration Characteristics of Stiffened Plate L. Zhu, H.B. Song, X.L. Yao and X.H. Miao	1047
The Loss of Local Stability of Thin-Walled Steel Profiles D. Trubina, D. Abdulaev, E. Pichugin and M. Garifullin	1052
The Calibration of Parameters in Hardening Soil Model Based Odometer Tests O. Sokolova and D. Trubina	1058

1065
1069
1077
1082
1086
1090
1095
1100
1104
1111
1117
1124
1124
1128
1133
1140
1148
1154
1161
1166
1174
117 4 1179
1187
1191

Numerical Analysis on Effects of Inlet Bent Pipe's Position on a Centrifugal Compressor's Aerodynamic Noise	
S.G. Zuo, H.J. He, X.D. Wu and K.J. Wei	1196
Power Characteristic and Damper Effectiveness Evaluation of Vibration Damper for 1250mm ² Conductor Y. Qi, K.J. Zhu, Q. Yin and Y. Gao	1202
Reliability Assessment for Load Bearing Underframe on Car Body A.Q. Tian and H. Dong	1206
Reliability Distribution Law and Statistics Analysis for High-Speed EMU Z.G. Cui and H. Dong	1213
Research on the Field Dynamic Balancing Technology and Instrument for a High Speed Cantilever Rotor Z.X. Zhang, Y.L. Fu, S.Z. He and J.Y. Kuang	1220
Simulation Analysis on Dynamic Characteristics of a Quad Intergrated Mirror Frame G. Zhao, C.X. Pan and Y. Wang	1229
Static Aeroelasticity Solution for Divergence Dynamic Pressure of Wing L. Yu, B.B. Lv, H.T. Guo, Y. Yan, J. Zha and B. Lu	1233
Structure Strength Analysis of Light Truck Cab Based on Tilting Mechanism F. Ding	1237
The Design and Research of Quadcopter Frame Z.J. Yang and P. Wei	1241
Analysis Design and Roof Motion Track Simulation for Gob-Side Entry Retaining Hydraulic Support	
X.Y. Wang, D.Y. Shang, N. Liu, S.Y. Li and X. Fan	1244
Mechanical Analysis on Incremental Launching for the Steel Box Girder H.S. Wu, H. Wei, Y. Zou, J.M. Ma and H.J. Wang	1248
The Local Buckling Analysis of Houdingxiang Bridge in the Process of Pushing H.S. Wu, H. Wei, Y. Zou, Y.M. Li and H.J. Wang	1252
The Analysis and Diagnosis of Vibration Fault of a Certain Type of Aero-Engine Y.F. Liu, Q.W. Wang, S.Y. Wang, S. Zhang, J.M. Cao and C.J. Zhou	1256
Wind Tunnel Studyon Vortex-Induced Vibration Characteristics of Long-Span Suspension Bridges with Single Cable Plane H. Yu	1263
Design and Realization of the Sponge Membrane Winding System H. Zhu, Y.H. Guo and J.L. He	1267
Microscopic Layout Design of Metamaterial J.B. Du and R.Z. Yang	1273
Positioning Error Analysis Modeling of the Aircraft Skin Y. Wang and C. Lu	1277
Kinematics Analysis of Offshore Flexible Riser Fatigue Testing Machine X.J. Zhang and Z.Y. Chang	1281
Mechanical Analysis on the Main Components of Backward Rotary Transplanting Mechanism in Wide-Narrow Row Planting T.T. Wang, F.Q. Zhao, C.J. Shi and F. Yang	1285
The Dynamic Characteristic Analysis of Vibration System for Longitudinal and Torsional Ultrasonic Vibration Honing H.B. Zhao and X.H. Shen	1289
Structural Optimization of Shield Machine Cutterhead Applied in Sandy Cobble Stratum L. Wu, J.Y. Zhang and T.M. Guan	1294
Thin Film Geometry Design for Flapping Rotor Wing J. Lu, Y.F. Hang and Y.J. Hu	1299
The Distribution Design and Dynamic Simulation Analysis of the Flow of the Transmission's Cooling and Lubrication System LV Dynamic TR Sangard TT Vang	1202
J.K. Du, S.H. Wang, T.B. Song and T.T. Kang Stress Distribution of Wellbore under Non-Uniform <i>In Situ</i> Stress	1303
X.Z. Wang, Z. Qu and Y.H. Dou	1311