

Table of Contents

Preface

Chapter 1: Materials Engineering and Materials Processing

Impacts of Melt Spinning and Element Replacement on the Electrochemical Performances of the RE–Mg–Ni-Based A_2B_7-Type Electrode Alloys	
Y.H. Zhang, L.L. Chen, T. Yang, H.W. Shang, L.C. Chen and D.L. Zhao	3
Effect of Annealing Temperature on Two-Step Method of GaN Films	
M. Liu, X.Y. Xu, B.Y. Man and D.M. Kong	9
Nanoindentation Behaviors of HVOF WC-10Co-4Cr Coating after Heat Treatment	
K.Y. Ding, P.C. Lu and Z. Sun	14
Glass Coating Removal by Atmospheric Oxygen Plasma	
C.Y. Wang, F. Shi, S.H. Pang, C.S. Ren, Y. Tao and P.W. Wang	19
Effects of Copper Interlayer and Annealing on Structure and Mechanical Properties of Diamond-Like Carbon Films by Cathode Arc Evaporation	
B. Zhou, X.H. Jiang, A.V. Rogachev and R.Q. Shen	25
A Strain-Induced Martensite Transformation Model for TRIP Steels in Cyclic Loading Condition	
W.J. Dan, Z.G. Hu and W.G. Zhang	32
Self-Combustion Synthesis of AlN-SiC Solid Solution Powder in Air with Assistance of High-Energy Mechanical Milling	
Z. Li, J.X. Jiang, Y.P. Wei, M. Yan, Y.L. Chen and Y. Chang	39
Theoretical Study on Recombination Efficiency at S-DPVBi/Alq3 Interface in OLED	
Y.W. Hwang, K.S. Kim and T.Y. Won	44
Intrinsic Ferromagnetism of the GaMnN Thin Films	
X.G. Gao, B.Y. Man, M. Liu, C. Yang, C.S. Chen, Z.C. Sun and S.C. Xu	49
Calculation on the Residual Stresses of Injection-Molded Conductive-Carbon-Fiber-Filled Polymer Composites	
A.Y. Jiang, J.C. Zou, B.F. Zhang and H.H. Wu	55
Preparation of Electrospun Poly(ϵ-caprolactone)/Poly(trimethylene carbonate) Blend Scaffold for <i>In Situ</i> Vascular Tissue Engineering	
T. Jiang, G.Q. Zhang, H. Li and J.N. Xun	60
The Role of Na and Mg Doping on the Electronic Conductivity of $LiFePO_4$: First-Principles Investigations	
J. Wu, G.G. Xu, Y.B. Lin and Z.G. Huang	64
Synthesis of Yttria-Stabilized Zirconia Particles by Flame Spray Pyrolysis Method	
X. Zhou and W.J. Kong	70
The Friction Coefficient Testing Method of Metallic Sheet and Strip	
H. Xue, N.X. Kuang and H.C. Zhu	75
Hygrothermal Effect on Stiffness Reduction Modeling Damage Evolution in Cross-Ply Composite Laminates	
M. Sahnoun, D. Ouinas, N. Benderdouche, M. Bouazza and J. Viña	79
On the Precipitation Behavior at 250 and 300 °C of WE54 Supersaturated Solid Solution	
S. Tighiouaret, H. Azzeddine, A. Sam, A. Sari, B. Alili and D. Bradai	85
Creep Behavior of an Industrial Aluminum Drawn Wire	
A. Diha and Z. Boumerzoug	90
Effect of Fiber Orientation on the Critical Buckling Load of Symmetric Composite Laminated Plates	
N. Hamani, D. Ouinas, N. Taghezout, M. Sahnoun and J. Viña	95
Research Status and Developing of Metal Injection Molding	
Y.Q. He, B. Qiao, J.M. Yang and L.C. Feng	100
Microstructure and Mechanical Properties of Metal Injection Molded SiCp/ Cu Composites	
Y.Q. He, J.M. Yang, B. Qiao and L.C. Feng	105

Effects of Z-Direction Flowing RTM Technology on Distribution of Composites Fiber Volume Fraction and Thermoplastic Toughener W.D. Li, G. Liu, X.F. An and X.S. Yi	110
Optimization of the Process Modules for a Top-Down Silicon Nanowire Fabrication Using Optical Lithography and Orientation Dependent Etching N.F. Za'bah, K.S.K. Kwa and A. O'Neill	115
Microstructure of the Synthetic Cast Iron Carburized with Different Types of Carburizers K. Janerka, J. Jezierski, D. Bartocha and J. Szajnar	122
Interfacial Characteristics for LaAlO₃ Gate Dielectric on S Passivated GaAs Substrate T.T. Jia, X.H. Cheng, D. Cao, D.W. Xu, C. Xia, Z.J. Wang and Y.H. Yu	127
Investigation on Interface Failure and Shear Strength of CMT Brazed Lap Joint of Dissimilar Materials J. Lin, N.S. Ma, Y.P. Lei and H. Murakawa	131
Investigations of Fermi Level Pinning and Dipole Formation in TiN/HfO₂/SiO₂/Si Stacks J. Zhang, X.L. Wang, K. Han, W.W. Wang, C. Zhao, D.P. Chen and T.C. Ye	139
Polaronic Effects in Wurtzite In_xGa_{1-x}N/GaN Parabolic Quantum Well R.T.Y. Wu and Q.Z. Feng	145
A Finite Displacement Visco-Hypoelasticity Model H.P.A. de Deus, M.K. Alves and C.R.A. da Silva	152
Second-Order Two-Scale Analysis Method for the Quasi-Periodic Structure of Composite Materials under Condition of Coupled Thermo-Elasticity Q. Ma and J.Z. Cui	160
Influence of Heat Treatment on the Damping Capacity of Fe-Ga Wires M.L. Fang, J. Zhu, J.H. Li, C. Gan, M.M. Li and X.X. Gao	165
Feeding Mathematical Modeling of Superalloy Vacuum-Electromagnetic Casting and its Application W.Z. Jin, S.F. Li and W. Zhang	171
Control of the IN100 Superalloy Ingot Solidification Structure with Linear Electromagnetic Stirring W.Z. Jin, S.F. Li and W. Zhang	176
Gas-Jet-Assisted Keyhole Laser Welding of Q235 Mild Steel X.F. Shen, W.H. Teng, W.R. Huang and C. Xu	180
Systematic Study of Resonant Pattern in Ellipsoidal Microwave Cavities X.J. Li, S.Q. Zheng, B.R. Zhao, X.W. Zhang and W.Z. Tang	187
Effect of Thermal-Mechanical Treatment on Texture and Properties of Cold-Drawn Steel Wire F. Yang	192
Mechanical Properties of Ultrafine-Grained Al Alloy for Engineering Machinery P. Yang and K.H. Yang	198
Finite Element Simulation and Analysis of Initial Residual Stress Field for Titanium Alloy Monolithic Component Blank Y. Yang, B. Liu and Y.L. Wang	203
Response Spectrum 0.9-2.65 μm of In_{0.82}Ga_{0.18}As Detectors by Two-Step Growth Technique T.M. Zhang, G.Q. Miao, J. Fu, D.M. Ban, Z.J. Shen, H. Lin, X. Zou and H.Y. Peng	209
Welding Technology of Gold Alloy N. Yin, W.Q. Qu, S.J. Yang, R. Li and Y. Ding	214
Tube Extrusion Technology for Super-Alloy Inconel690 Z.T. Wang, S.H. Zhang and Y.G. Deng	220
Numerical Simulation on the Electronic Properties in Multilayer Organic Light Emitting Diodes K.S. Kim, Y.W. Hwang and T.Y. Won	224
The Influence of Spin Orientation and Alloying on Magnetism and Work Function for Fe_x-₁Mn_x/Fe (001) Films K.Q. Tang, K.H. Zhong, Y.M. Cheng, Z.G. Chen and Z.G. Huang	229
Preparation and Transport Properties of Superconducting Fete Thin Film C.S. Yang, L.X. Cao, N. Chen, W.Y. Li, L.H. Liu and Y.Z. Zhang	236
Investigation of the Corrosion Resistance of Weathering Steel at Different Atmospheric Environment Z.F. Wang, J.R. Liu, L.X. Wu, Y.Q. Sun and R.D. Han	240

Chapter 2: Nanometer Materials

Nanorefrigeration Oil Formed by C60, CNTs and Mineral Oil for Air Conditioner M.B. Xing and R.X. Wang	247
Application of Photocatalytic Nanomaterials in Prevention from <i>Sphaerotheca fuliginea</i> In Vivo P. Zhang, R.G. Zhong and H.X. Cui	255
Research on Microwave Absorbing Properties of Multi-Walled Carbon Nanotubes-Reinforced Cement-Based Composites B.M. Wang, Z.Q. Guo, Y. Han, Y. Zhang and H.N. Ma	261
Investigation on Properties of β-Ga₂O₃ Solid Films with ZnO Nano-Interlayer D.M. Kong, A.H. Liu, B.Y. Man, M. Liu, J.J. Guo, J. Hou and Z.C. Sun	266
Structural and Optical Properties of ZnO Nano Particles Synthesised by Mixture of Fuel Approach in Solution Chemical Combustion R. Rao, V. Rajendar and K.V. Rao	273
Eco-Friendly Synthesis of Silver Nanoparticles Using Carica Papaya Extract for Anti Bacterial Applications R. Rao, C. Shilpa Chakra and K.V. Rao	279
Investigation of Nanopowders Application in Metal Casting R. Dimitrova, P. Kuzmanov, R. Lazarova and V. Manolov	284
BaTiO₃ Nanopowders Hydrothermally Synthesized Using H₂Ti₃O₇ Nanotubes and Nanorods H. Zhou	292
Scale Coefficient, Length, Mode and Radius Effect on Critical Axial Compressed Buckling Load of Carbon Nanotubes via Nonlocal Continuum Model H.L. Tian	296
Synthesis of Various Nanostructures ZnO and its Applications for Gas Sensors B. Yulianto, M. Iqbal and A. Nuruddin	302
Electric Polarization Characteristic and Equivalent Circuit of the Pb(Zr_{0.95}Ti_{0.05})O₃ Nanoceramics Y.Y. Chi, C. Zhang, Y. Wang and D.S. Yu	309

Chapter 3: Applied Chemistry

Effect of an Anionic Polyelectrolyte Adsorption on the Colloidal Stability of Aqueous 3Y-TZP Suspensions Y.Q. Chen, X.N. Zhang, Q.S. Kong and Y.Z. Xia	317
Catalytic Performance of Dimethyl Ether Combustion over La-Ce-Cu/Al₂O₃ Catalysts P. Zeng, Y.W. Fang, X. Liu, D.L. Wang, Y. Hu, C.Y. Sun and Y.B. Song	322
A Thermometric Analysis for an Explosion Accident in a Nitromethane Rectification Process B. Zhang, Q.Q. Xin and S.M. Jia	327
Dye-Sensitized Solar Cells Based on Three-Dimensional Web-Like Structure Anodes Z.H. Tian, J.X. Yao and M.N. Guli	332
Developing of a Lubricant Oil for the Ship Gas Turbine of Reducer F.C. Huang, X.Z. Tang, M.R. Su, Z.X. Lu, Y.C. Xiao and S. Li	339
Wood Powder Coated with Carboxymethylcellulose for Papermaking X.Q. Sun, C.S. Zhao and J.J. Yu	344
Study of Culture Paper Making with P-RC APMP by Different Papermaking Process T. Lin, J.W. Song, X.F. Yin and Z.J. Wang	347
Laccase-Catalyzed Coloration of Silk with Tea Polyphenols S.S. Sun and R.C. Tang	352
Study on the Adsorption and Regeneration of Chloroacetic Acid on Polyacrylamide Bentonite Composite X.Q. Chen, J.L. Cao, T.S. Feng and X.L. You	358

Study on Carbonization Thermal Dynamic Process of Coal Tar Refined Soft Pitch L.J. Gao, X.F. Zhao, S.Q. Lai and J.X. Cheng	364
The Research of Second Acid Fracturing Temporary Plugging Agent in Long Interval Gas Well of Puguang C.Y. Zhou, D. Wang, H. Liu and W. Xiong	370
Formation of Methyl Acrylate from Methyl Acetate and Formaldehyde Condensation over Solid Base Catalysts Y.N. Wang, Q.L. Wang, H.H. Chen, J.L. Zhang and Z.R. Zhu	376
Effect of Steam Treatment on Catalytic Performance of La₂O₃-HZSM-5 for Methylation of Toluene with Methanol J.H. Li, Z.H. Hu, Y.N. Wang, H. Xiang and Z.R. Zhu	381
Effect of a Zwitterionic Copolymer on the Rheological Behavior of Aqueous α-Al₂O₃ Suspensions Y.Q. Chen, X.N. Zhang, Q.S. Kong and Y.Z. Xia	386
Effect of Crosslink on Properties of Thermoplastics Dialdehyde Sweet Potato Starch S.D. Zhang, Y.R. Zhang, Y.Z. Wang and X.L. Wang	391
Characterization of Nano Ni/MgO-ZrO₂ Catalysts M. Yang, D.J. Han, G.F. Li, B. Ning and H.T. Cui	396

Chapter 4: Materials and Manufacturing Technologies in Construction

Moving Load and Fatigue Analysis of a Long Span High Speed Railway Bridge A. Pipinato	403
Moving Loads Bridge Response: Structural Analysis and Eurocode Provisions A. Pipinato	409
Creep and Dilatancy Behavior of Rock Salt around Underground Caverns S.N. Moghadam, H. Mirzabozorg, A. Noorzad and K. Nazokkar	418
Identification of Nonlinear Rheological Parameters of Medium-Strength Marble Rock Y. Li, W.S. Zhu and S.C. Li	423
A New Criterion for Stability Analysis of Tunnel Surrounding Rock-Support Structure Based on the Convergence-Confinement Method Y. Kang, B.L. Chai, X.C. Wang and D. Li	427
Spatial Variability of Material Parameter and Bearing Capacity of Clay M.M. Rahman and H.B.K. Nguyen	433
Progress of Filling Layer of Self-Compacting Concrete in CRTS-III Type Track System J.Q. Cheng, X.H. Zeng, Y.K. Yang and H.P. Gu	438
Thermal Characteristics of Urban Surface Materials G. Galli and A. Vallati	443
Response Characteristic of Internal Surface of Phase Change Wall on Outdoor Temperature Changes Q.Y. Yan, L.L. Jin, L.H. Yue and Z.B. Ruan	448
The Surface Electrical and Microstructure Analysis of Peat Treated with Cement H. Moayedi, S. Kazemian and A.H. Vakili	455
Effect of Cement-Sodium Silicate Grout on the Compressibility Parameters of Fibrous Peat K. Sina and M. Hossien	461
Influence of Sand Ratio on the Fluidity Properties of SCC in CRTS III Type Track System H.P. Gu, G.H. Li, X.H. Zeng and J.Q. Cheng	466
The Application of Ground Penetrating Radar in the Karst Detection of Tunnel Bottom C.Z. Yang, Y.L. Chen, Y.J. Wang and C. Fang	471
The Study on Mechanical Properties and Microstructure of Cement Paste with Nano-TiO₂ L.C. Feng, C.W. Gong, Y.P. Wu, D.C. Feng and N. Xie	477
Synthesis of Ca(OH)₂ Nanoparticles Aqueous Suspensions and Interaction with Silica Fume V. Daniele, G. Taglieri and A. Gregori	482
A New Image-Based Soil Deformation Measurement System Y.J. Zhao, Y.X. Wang, G. He and H.H. Zhao	488

Chapter 5: Mechanical Engineering

Three-Dimensional Numerical Study of a Kitchen Extractor Adopting Nearby Pumping Method	
J. Deng, C.G. Hong, G.Q. Wang and H.Z. Sheng	495
The Vibration of Spur Gear Pair with Strong Nonlinear Suspension	
X.S. Wang, S.J. Wu, J.C. Hu and Z.M. Peng	501
Chaos and Bifurcation Analysis of Gear Pair with Wear Fault	
X.S. Wang, S.J. Wu, J.C. Hu and J. Chen	506
Nonlinearity Errors in Heterodyne Interferometer: A Survey	
H.J. Hu, J.J. Hu and Y.H. Ji	511
Surface Roughness Extraction by Gibbs Random Fields of Laser Speckle Pattern Texture	
L. Yang, R.S. Lu, Z.J. Liu and L.Q. Lei	515
Micro-Drop Mixer Driven by Standing Surface Acoustic Waves (SSAW)	
B.G. Miao, C.H. Wang, T.F. Zheng, Q.M. Zhang and Z.D. Jiang	521
Study of HAN-Based Liquid Propellant Droplet Evaporation in High-Temperature and High-Pressure Environments	
Y.Z. Pan and Y.G. Yu	524
Topology Optimization of Applied Damping Material for Noise Control	
W.G. Zheng, Y.F. Lei, Q.B. Huang and C.B. Li	530
Studies on Improved Silicon Module for Concentration Photovoltaic System	
J.J. Liu and Y. Fan	536
Optimal Space Management Mechanism of Sharable Multi-Channel On-Chip Memory	
C.X. Liu, X.Q. Tian and Z.B. Zhang	542
The Optimization of the Design of a Railway Wheel in Terms of the Acoustic Radiation under the Vertical Excitation	
B. Zhang, L.Y. Liu and W.J. Shao	548
Analysis of Particle Trajectory within Rotating Cylinders by DEM Simulation	
Z.Y. Xie and J.X. Feng	552
Experiment of Control Blasting with Water Jets Slotting	
X.C. Wang, Y. Kang and X.F. Yang	558
Numerical Analysis of Active Cooling Structure of Engine Combustion Chamber	
Y.G. Zhang, Y.G. Bai, X.C. Yu and Y.F. Liu	564
Design of Ultrasonic Guided Wave Excitation Signal Generator for Rotating Shafts	
X.Y. Wang, Y.Y. Yang and D.S. Wang	570
Effect of Injection Molding Parameters on Residual Stress of Plastic Drawing Board	
L.F. Jiang, H. Liu, C.G. Hu, X.L. Chen and Z.J. Lei	576
Couple Model for Predicting Behaviors of Underwater Towed Systems under Effect of Heave and Pitch Motion of Ship	
Z.J. Yuan, L.G. Jin, W. Chi and H.D. Tian	581
Rigid-Elastic Coupled Dynamics and its Application	
H.Y. Song, L.F. Liang and H.B. Li	587
An Improved K-ω Model for High Speed Flows	
J.Y. Liu and Z.H. Zhao	593
Calculation Model for Wellbore Pressure and Temperature in Heavy Oil Wells Considering of Non-Equilibrium Phenomenon	
R.D. Zhao, C.M. Xiong, J.J. Zhang, Z. Tao, J.F. Shi, X.D. Wu and X.S. Zhang	601
Implementing of Displacement Boundary Conditions of Element-Free Galerkin Method and its Applications Used in Fracture Mechanics	
G. Cheng, W.D. Wang and D.F. Zhang	606
A New Slip Boundary Model of Liquid Flows	
F.Q. Song and X.X. Chen	611
Study on Contact Strengths of Thick-Walled Cellular Solids with Irregular Pores Structures	
F. Xie and Z.M. Liu	617
Some Aspects over Thixotropic Fluid Behavior	
H.P.A. de Deus, G.S.P. Dupim and C.R.A. da Silva	623

Tilted Bulk Disordered Distribution Cosmological Model A. Bagora and R. Purohit	635
Asymptotic Analysis of Second-Order Boundary Layer Correctors for Composite Plate with 3-D Small Periodic Configuration Z.Q. Wang and J.Z. Cui	641
Improved MoM-PO-Based Technique for Wideband Analysis of Antennas around Large Platforms J. Ma, S.X. Gong and Q. Wang	646
Modeling and Active Control of Circular Electrostatic Torsional Micromirror C. Bai and J. Huang	649
A Review of Contact Sensors Used for Monitoring Malodorous Gas in Animal Facilities S.R. Zhang, J.H. Wang, D.M. Dong, W.G. Zheng and X.D. Zhao	655
Embedded Supervisal System of Geological Prospecting Based on AMF Protocol P. Li and Y.T. Fu	662
Based on Serial Port Class Implements of SCM and PC Serial Communication Program Design Y. Yang and Y. Zhu	667
A New Design of Ultrasonic Power Based on ARM Z. Yao, Z.N. Guo and Y.J. Zhang	671
Study of Transducer Installation Effects on Ultrasonic Flow Metering Using Computational Fluid Dynamics B. Wang, Y. Cui, W. Liu and X. Luo	676
Method for Modeling Ultrasonic Driving Circuit and Designing Matching Network B.X. Wang, W.F. Liu, J.N. Liu, Y.Y. Cui and X.Z. Luo	682

Chapter 6: Thermodynamics

Research on the Flow Boiling Characteristics of Water in a Multi-Furcated Tree-Shaped Mini-Channel C. Yan, C. Wei and S.S. Zhang	691
Application of Equipartition of Entransy Loss Principle in Heat Exchangers C.S. Guo, W.J. Du and L. Cheng	699
Thermodynamic-Dynamic Sea Ice Modeling under J Parallel Adaptive Structured Mesh Applications Infrastructure X.Y. Liu, T.G. Bai and T. Zhang	704
Numerical Analysis of a Heater with Conjugate Heat Transfer Y.G. Bai, Y.G. Zhang, Y.F. Liu, K. Yang and X.W. Gao	711

Chapter 7: Information Engineering and Modeling

A New Small-World Neural Network with its Performance on Fault Tolerance X.H. Li, F. Xu, J.H. Zhang and S.N. Wang	719
Design of Data Acquisition System Based on DSP and Optical Fiber Bundle X. Wan, D.G. Yao, Z.M. Zhang, H.M. Zhang and W.B. Xiao	725
Association Rule Mining for Job Shop Scheduling Problem Based on Genetic Algorithm C.L. Yan and W.F. Shi	730
Incomplete Rationality vs. Incomplete Strategy in Minority Game Model X.B. Yao, C.F. Han and S.L. Wan	735
Ring-Space Array Torque Measure System and Signal Singularity Detection Y.G. Wang	741
Modern Technological Innovation Model, Uncertainties and Risk Management of Furniture Enterprises Q.M. Zhang and W.M. Zhang	747
The Analysis and Optimization of the Reliability of Laminates Based on Probabilistic and Non-Probabilistic Hybrid Model W.J. Peng, X.X. Huang and R. Ge	752

Complexity Metrics for Assembly Supply Chains: A Comparative Study V. Modrak and D. Marton	757
Topic Research with Semantics B. Wu and C.Y. Zhang	763
Research in Keyphrase Extraction B. Wu and C.Y. Zhang	768
Analysis for Gene Logic Networks of Colon Cancer Q.Y. Wang and S.Y. Cao	773
A SOMNN Model for Transport Risk Assessment of Hazardous Materials by Rail K. Pan and S. Guan	778
Generating Singleton Fuzzy Models from Data with Interpretable Partition J. Contreras	784
An Algorithm of Maze Problem Based on Search J.L. Cao and Z. Zhou	792
Multi-Fractal Nature of HS 300 Index and its Traded Volume S.G. Zuo	796
An Energy-Efficient Unequal Clustering Algorithm in Wireless Sensor Networks R.Z. Wan, J.J. Lei, Q.W. Xu and X.M. Gou	801
A Decision-Making Model for Distribution Center Location during Earthquake Responses W.D. Tian, H.Q. Jiang, H.J. Zhou, D. Guo, W.B. Li and Y. Lu	808
Research on Asymmetry Information and Order Behavior in Order-Driven Market S.J. Zhang	815
Research on Command Process Modeling Method Based on IDEF Theory Z.H. Chen, Y.H. Zhu and X. Fan	820
Norm-Profile Construction Using Splitting Neural Gas for Anomaly Detection G.S. Liu, H. Qu and Z. Yi	826

Chapter 8: Dynamic and Control

Stability Analysis and Controller Design of Networked Control Systems with Packet Dropout Y.G. Sun	835
Finite-Time Control of Networked Control Systems with Bounded Packet Dropout J. Xu and Y.G. Sun	840
Design One Kind of Simplified Smart Home Monitor and Controller Based on ARM-Linux System and Information Network to the Public Z.F. Zhao, Y.T. Zhang, Z.Q. Zhou and H.Y. Yu	845
Research on Key Technology of Intelligent Terminal Navigation Based on Augmented Reality H. Zhang and S.Z. Yi	848
Robust H_∞ Output-Feedback Synthesis Optimal Control to Uncertain Time-Varying Delay System with Genetic Algorithm J.Y. Deng, Q.R. Wang, W.J. Lee and J.B. Xiong	853
The Application of the Case-Based Reasoning Method in the Analysis of Battlespace Command Decision-Making X.S. Tang, Y. Yang, Z.J. Niu and B. Qiao	859
Command and Control System Executable Modeling Researching X.S. Tang, Q.H. Meng, Z.H. Dong and D.G. Lou	864
A Kind of Mathematical Method to Assess the Threat Degree of Aerial Targets X.S. Tang, L. Li, Z.G. Yu and X.B. Lu	868
Laser Localization of Autonomous Vehicle Using an Improved Particle Filter W.J. Ying and F.C. Sun	873
Vessel Surface Equipment Attitude Measurement Based on Conventional Inertial Reference System L. Zhang and A.G. Wang	878

Chapter 9: Related Topics

Discussion on General Solution of the Laplace Equation for Far Field Electric Potential L.H. Yu	887
About the Maximum Transfer of Power in Time-Varying Linear Circuits M. de la Sen, S. Alonso-Quesada, A.J. Garrido and A. Ibeas	894
Study on a Nonlinear Oscillator of Elastic String and its Application in Energy Harvesting L.H. Xie	900
Fundamental Study on the NMR Spectroscopy in a Time Dependent Longitudinal Field Y.F. Hu, H. Ma, J.B. Li and B. Xu	906
A Study of Magnetic Susceptibility of NMR Samples in a Time Dependent Longitudinal Field Y.F. Hu, H. Ma, J.B. Li and B. Xu	911
A Characteristic Finite Difference Domain Decomposition Substructuring Method for Immiscible Displacement Problems in Three-Dimensional Porous Media C.F. Li	915
Collaborative Pricing and Service Level for a Supply Chain L.T. Chen	920
A Newsvendor Problem with Revenue Sharing in B2B Marketplaces L.T. Chen	924
Study on RP-RS Combined Contract of Three-Level Supply Chain Q.H. Pang	927
Application of Analytical Hierarchy Process in Evaluation of Municipal Solid Waste Utilization D.X. Zhu and X. Li	932
Research on Mining Technological Parameters of 7[#] Thin Coal Seam in Liuquan Mine D.S. Zhang, X.F. Wang, Y. Zhang and J.L. Wang	937
Optimization and Practice on Method of Roof Control in Single-Support Coalface for Ascending Mining X.F. Wang, L.W. Tian and J.L. Wang	943
Research on Evaluation Index System of Enterprise Efficiency J.G. Li	950
Reverse Service: A New Concept of Service Science H. Hao, F. Zhang, G.C. Tang and X.G. Wu	956
Optimize the Governance Structure of Private Enterprises from Social Angle J.G. Li	962
Research on Accounts Receivable Control Problem in Stages Y.Y. Song	968
Analysis of Inventory Management in Internal Controls Perspective Y.Y. Song	972