

Table of Contents

Preface, Committees

New Functional Materials

Analysis on Anti-Crack Mechanism of High Elastic Asphalt Stress Absorption Interlayer B. Yang, Q.S. Huang, D.M. Yuan and J.H. Huang	3
Absorbing Properties of Composite Material Plates of Multi-Layer Absorbing Structure J.L. Deng and B. Feng	9
Effect of a Filler Surface Treatment on the Properties of Conductive Silicone Rubber Filled with Ag-Coated Cu Flakes for EMI Shielding X.H. Liu, Z.D. Xia, M.K. Zhao, H. Zhou, Y. Li, G.C. Xu and F. Guo	15
A Study on Shape Memory Performance of Cu-Al-Ni-Be Alloy Single Crystal H.P. Xu, G.F. Song and X.M. Mao	21
Boride Coatings Structure and Properties, Produced by Atmospheric Electron-Beam Cladding A. Teplykh, M. Golkovskiy, A. Bataev, E. Drobyaz, S.V. Veselov, E. Golovin, I.A. Bataev and A. Nikulina	26
Cytotoxicity of Single-Walled Carbon Nanotubes with Human Ocular Cells L. Yan, S. Zhang, C. Zeng, Y.H. Xue, Z.L. Zhou, F. Lu, H. Chen, J. Qu, L.M. Dai and Y. Liu	32
Electrochemical Inspection of the Interaction of Double Strand ds-DNA with Carmine on Nanometer TiO₂ Doped Carbon Paste Electrode M.M. Ma, Z. Tong and J.B. Yang	37
Effect of Temperature on Microstructure and Mechanical Properties of Spray Forming Al-8.5Fe-1.3V-1.7Si Alloys R.H. Zhang, B.H. Zhu, Y.A. Zhang and B. Wu	43
Effect of Resin on the Property of the Fluorescent Inkjet Ink S.H. Gao, X.F. Wei and B.Q. Huang	49
A Study on the Physical Properties of AZO Films as Variation of Sputtering Conditions Y.H. Kim, S.J. An, J.Y. Kim, K.M. Moon, P.P. Wang, D.Y. Zhang and R.I. Murakami	54
Grafting of 4-Vinyl Pyridine onto Polyesters Initiated by Potassium Diperiodatocuprate(III) J.P. Zhang, Y.G. Zhao, Y. Zhao, L.M. Liang, Y.J. Ren and L.B. Bai	58
Mixed Potential Type Sensor Using Stabilized Zirconia and La_{0.75}Sr_{0.25}Cr_{0.5}Mn_{0.5}O₃ Sensing Electrode for NO₂ Detection Y.L. Wu, H.Y. Zhao, L. Dai and L. Wang	65
Bioactivity of TiO₂/Ti Composite Membrane with Different Crystal Phase M.J. Zhan, G. Li, Q. Wei, H.L. Cui and L. Lin	69
The Optimization of Combustion Chamber Components with Constrained Axisymmetric Sensitivity Analysis Algorithm D.X. Zhang, W.G. An, J.F. Huang and X.B. Shao	73
Nucleation Features of the Magnetite Fe₃O₄ Nanoparticles with the Size of 30-40 Nm for the Hyperthermia Applications P. Zhu, L. Zhuang, R. Liang, Y. Xu and H. Shen	77
Vibration Properties of Multi-Layered Graphene Sheets M.L. Tian, J.B. Wang, X.Q. He and Y.Z. Sun	81
Study on Production Performance Simulating the Low Permeability Dual Media Gas Reservoirs Pre and Post Fracturing L.Y. Wang, S.S. Gao, W. Xiong and H.X. Liu	86
An Approach to Raw Material Cost Control Model in Iron and Steel Industry W.L. Wang, Q.N. Meng and X.B. Liu	92
Preparation of CMC-Stabilized FeS Nanoparticles and their Enhanced Performance for Cr(VI) Removal X.B. Wang, J. Liu, D.L. Zhao and X.J. Song	96
PVDF-HFP/PVC Blend Based Lithium Ion Conducting Polymer Electrolytes N.H. Basri, S. Ibrahim and N.S. Mohamed	100

The Application of FEA in High-Speed Cutting L.Q. Ji and K. Liu	104
Structure and Fatigue Crack Resistance of Multilayer Materials Produced by Explosive Welding I.A. Bataev, A.A. Bataev, V.I. Mali, V. Burov, E. Golovin, A. Smirnov and E.A. Prikhodko	108
Effects of IGF-I on the Proliferation of Testis Sertoli Cells in Mouse S.F. Li, H.L. Tong, C.C. Liu and Y.Q. Yan	112
The Study on the Apoptosis of Rat's Granule Cells Induced by Ethanol S.F. Li, L. Hao, H.L. Tong, D.D. Zhao and Y.Q. Yan	116
Study on Reaction Process of Synthesis of Indole from Aniline and Ethylene Glycol J.D. Xing and Z. Liu	120
Correcting Prediction Model of Printing's Dot Area by the Spectral Reflectance C.F. Zhao, Q. Han and X.L. Wen	124
Manufacturing Technique of Temporary Dental Filling Composite C.W. Lou, C.T. Lu, S.Y. Huang, P.C. Lu, T.H. Chao and J.H. Lin	128
Preparation and Characterization of Gelatin/Oligomeric Proanthocyanidins Composite Microspheres C.W. Lou, J.J. Hu, C.C. Huang, S.Y. Huang, H.H. Yeh and J.H. Lin	132
Effect of Foaming Agent AC on the Properties of Al₂O₃-SiC-C Trough Castables J.K. Huang, J.B. Tu, J.C. Wei, C.H. Gao and Y.L. Wang	136
Preparation and Characterization of Low-Methoxyl Pectin/Bletilla Striata Composite Membranes C.W. Lou, J.J. Hu, C.T. Lu, C.C. Huang, M.Y. Sie and J.H. Lin	140
Liquid-Phase Synthesis of NiO-Loaded Ag Nanoparticles and Enhanced Photo-Degradation Performance Z.M. Tian, X. Xiang, Z.W. Li and F. Li	145
Manufacturing of Functional Gelatin/Chitosan Composite Membrane C.W. Lou, J.J. Hu, C.T. Lu, C.C. Huang, M.S. Huang and J.H. Lin	150
Manufacturing Technique and Physical Properties of Environment-Protective Composite Nonwoven Fabrics J.H. Lin, A.P. Chen, J.Y. Lin, T.A. Lin and C.W. Lou	154
Technical Application Process for Eco-Friendly Cotton by Antimicrobial C.W. Lou, C.W. Lin, C.C. Huang, S.Y. Huang, P.J. Chan and J.H. Lin	158
Research for Use Diamond Knife to Ultra-Precision Boring Gauging Pump's Boring J.R. Shi, S.J. Pei, J.H. Cui, J.F. Chen and L. Wang	162
Synthesis and Characterization of Flower-Like Hematite Nanostructures H. Wang, X.Y. He and Y. Wang	169
Analysis of a Magnetorheological Transmission for Fan Clutch J. Huang, L.J. Fu and L.R. Zhong	173
Study of Crack Resistance Property of Polyvinyl Alcohol Fiber Reinforced Concrete K.T. Xiao, J.Z. Li and H.Q. Yang	178
Influence of Z Value and Sintering Temperature on Properties of β-Sialon Bonded Corundum Composite Y.X. Guo, D.L. Qu, Y.F. Sun and S.X. Zhang	183
Effect of CeO₂ Deposition Temperature on the Properties of TI-2212 Superconducting Films Grown on MgO Substrates Q.L. Xie, G.H. Huang, Y.S. Pan, L. Ji, H.W. Yue, X.J. Zhao, L. Fang and S.L. Yan	188
Effect of Quenched Speed on Microwave Properties of the NdFeB Nanocomposites G.Z. Xie, X.L. Song, B.S. Zhang, D.M. Tang, J.W. Chen, Q. Bian and H.X. Lu	193
Carbon Fiber Powder Reinforced Epoxy Composites used for Rapid Tooling H.Q. Hu, L. Zhao, J.Q. Liu, S.B. Wen, Y.J. Gu, Y.K. Zhang, H.T. Wang and L.Y. Zhang	197
Thermal Expansion Anisotropy of Cordierite Crystal D.Y. Yang, K. Zhu, J. Wu, G.H. Wei and J.W. Liu	201
Electronic Binding Energy Changes of Elements in Al₂O₃-MgAlON Composite during the Crack Healing Process D.Y. Yang, H.Y. Yuan, F.L. Qian, G.H. Wei, K. Zhu, J. Wu and J.W. Liu	205

Simulation and Technological Parameters Optimization of Axial Feeding Bulging Process for T-Tube	
S.J. Liu, Y.M. Zhang, K.X. Song, J.X. Gao and X.J. Zhang	209
Combustion Synthesis of Long Afterglow luminescent Materials $\text{Sr}_2\text{-}_x\text{Ca}_x\text{MgSi}_2\text{O}_7\text{:Eu}^{2+},\text{Dy}^{3+}$	
Y.Q. Zhou, Y.G. Tian and H.S. Ying	213
Electromagnetic Effects and Layer Thickness Influence on Natural Characteristics of Multiferroics Composite Structure	
Z.X. Yang and Q.K. Han	217
Research for Repairing the Main Reducer Gears of Helicopter Based on Shot-Peening and Electro-Brush Plating Composite Technics	
L.L. Ding, J. Hu and B.X. Guo	223
The Crystalline Phases of Mold Fluxes Containing TiO_2	
L.F. Sun, H.P. Wang, M.F. Jiang, Q.Z. Lin, C.L. Liu and Y. Zou	227
The Application of the Sequential Valve Gate Control in Injection Molding	
H.L. Shen	231
Process Optimization and Application of Supported Nano-Photocatalytic Materials	
S.J. Gao, W.L. Zhang and G.Q. Hou	235
Simulation Research on the Four-Nozzle Flapper Valve Based on GMA	
X.L. Wang, Y.C. Zhu, Q.F. Cheng, Y.S. Li and H.X. Xu	239
Studies on Lauroyl Chloride Modified Tourmaline Powder	
Y.M. Hu, J. Bian, X. Yang and Q.L. Wang	245
New Water-Based Anti-Corrosion Chemical Materials in Engineering Repairing	
W. Chen, C.J. Xiao, Z.J. Xu, X.N. Jiang, K.F. Zhou, A.P. Zhu and Q. Li	249
Research of Rough Structure of Superhydrophobic Film	
Z.S. Zheng, R.J. Li, P.Q. Yan, R. Yang and P. Li	253
Temperature Effect on Phase Formation of Nanocrystalline Bismuth Titanate Synthesized via Hot Injection Method	
S.W. Yong, H. Khairi Osman, P.W. Koh and S.L. Lee	257
Development of Single Sheet Tester System for Magnetic Materials Under Tensile Stress	
J.Q. Chen and D. Wang	261
Formation of Nano-Textured Silicon Surface Layer (or Nanowires) by Silver Ion-Assisted Etching	
J. Tang, H.Y. Zhang and Z.Q. Ma	265
The Synthesis of Novel Organic Light-Emitting Material 2,7-Dibromo-2',3',6',7'-Tetra(2-Methylbutyloxy)spirobifluorene	
X.X. Sun, Y.C. Li, X.M. Liu, X.X. Zhuang and Y.Z. Lou	270
Preparation of High Purity Low Hydroxyl Synthetic Fused Silica Glass	
Y.F. Wang, L.J. Nie, Z.K. Xiang and X.F. Song	276
Preparation of Zirconia-Aluminum Titanate Nano-Composite Powder	
L.F. Zhang, C.Z. Dong, H.F. Zhang, X.Y. Wang and S.L. Ma	281
Polymer Electrolyte of PVDF-HFP/PEMA-$\text{NH}_4\text{CF}_3\text{SO}_3\text{-TiO}_2$ and its Application in Proton Batteries	
S. Rudhziah, S. Ibrahim and M. Nor Sabirin	285
Study on the Control of Selenium Emission During Coal Gasification	
W.Y. Du, Q. Shuai and L.W. Yang	289
Influence of the Surfactant on the CdTe Nanomaterials Morphology	
C.Z. Dong, L.F. Zhang, X.Y. Wang, M.X. Zhang, Z.M. Cui and Q.J. Zhang	294
Evaluation of Comprehensive Accuracy to the Opto-Electrical Stabilization/Tracking Device	
Y. Li and Y. Zhang	298
Preparation and Properties of Biocomposite Film with Gelatin and Poly(Vinyl Alcohol)	
X.P. Gao, K.Y. Tang and Y.Q. Zhang	302
Modulation of Band Gaps of Codoping GaN: A First Principles Study	
J. Wang, R.Z. Wang, L.C. Xu and H. Yan	306
First-Principles Study of the Electron Transport Behavior of Short Graphene Nanoribbon	
Y.W. Li, J.H. Yao, S.K. Zhong, J.Q. Jiang and X.X. Huang	313

Study on the Calcination of Titanium Silicalite Zeolite (TS-1) Y. Liu, Y.Y. Zhang, T.Y. Yang and W.L. He	317
Effect of Pulse Electric Discharging on the Directional Solidification Structure of Pure Aluminum H.G. Ren, J. Su, Z.L. Zhao and C.H. Ai	322
Prediction of Orthotropic Mechanical Behaviors of Hot-Pressing Weft-Knitted Flax/PP Composites M. Shen, W.L. Wang, R. Xu, J.W. Tong and H.X. Li	326
Dynamic Recrystallization Behavior and Softening Kinetics in 3Mn-1.5Al TRIP Steels A. Grajcar and R. Kuziak	330
The Effect on Adsorption Performance of Molecularly Imprinted Polymer Using the Different Functional Monomers X.Y. Yin, X.H. Xu, Y.F. Jiang, Y.M. Luo and L.Y. Luo	334
Preparation of Ag Nanoparticles by Particulate Radiation of Pulsed Electron Beam Y.R. Uhm, C.K. Rhee, S. Sokovnin and M.E. Balezin	338
Microstructure and Tensile Properties of a Mg-5Sn-4Al Alloy S.Q. Tang, J.X. Zhou, Y.S. Yang and C.W. Tian	343
Aqueous Synthesis of Highly Luminescent CdTe/CdS/ZnS Core-Shell-Shell Quantum Dots with Biocompatibility H.Q. Huang, J.L. Liu, B.F. Han and S.K. Xu	348
Mathematical Model of Dynamic Recrystallization of U75V, RE-Heavy Rails X.R. Bao, L. Chen and Y.P. Guo	352
Investigation of the Curing Residual Stress in Gr/Epoxy Laminated Composites by Using Embedded Fiber Bragg Grating Sensor C.C. Chiang	357
Infrared Light Absorption and Emissivity of Silicon Microstructured by Femtosecond Laser in SF₆ Y. Li, G.J. Feng and L. Zhao	364
A Novel Carbon Quantum Dots-Ionic Liquid Hybrid with Strong Photoluminescence Q.G. Zhang, L.M. Shi, C.L. Zhang and S.L. Wang	369
Study on the Preparation of Fe₂Mo₃O₁₂ and its Negative Thermal Expansion Property Q.Q. Liu, J. Yang and X.N. Cheng	373
Electromagnetic Bandgap Structure by Low Temperature Co-Fired Ceramics Technology X.Q. Zhang, B. Li, X.F. Pang, J.B. Sun, J. Wu, B.Y. Chen, H. Guo, J. Zhou and L.T. Li	377
Preparation and Performance of Infrared Radiation Ceramic Using Blast Furnace Dust J.P. Yang, H.Y. Wei, X. Lu and P. Li	382
Preparation of RPSL-01 Type Photosensitive Resin for Stereolithography and Study on its some Properties B.W. Huang, Z.X. Weng, S.M. Liu and W.Q. Chen	386
Adsorption of Dye from Aqueous Solution by Zn-Al Calcined Layered Double Hydroxide L.F. Zhang and Y.Y. Chen	390
Research on Morphology Control of PVA/Na-MMT Composite During Preparation Z. Li, C.H. Yang, K. Yang and C. Wang	394
Shock-Cushioning and Energy Absorption Performance Research of Aluminum Foam-Polyurethane Composite M.S. Qi, W.D. Zhang, W. Yang, H.M. Wang and B. Li	401
Design of an Eco-Power Automobile Body Made from Green Composite and its Structural Optimization in FEA K. Luan, B.Z. Sun, B.H. Gu and J.J. Zhang	405
Experimental Study of Restraining Frost Formation on Hydrophilic Surface under Natural Convection Conditions Y.J. Gou, X.H. Zhong and Z.L. Liu	410
Influence of Nd₂O₃ on Structure and Dielectric Property of Zirconia Barium Titanate S. Wang, Z.H. Li, X. Liu and H. Zhang	415
Microstructure and Performance of Nanocrystalline Nickel Parts J.S. Chen	420
Characterization of (ENR-50)-Ionic Liquid Based Electrolyte System N. Zainal, R. Idris and M. Nor Sabirin	424

Hydraulic System Simulation of Heavy Horizontal Directional Drilling Head Y. Fei, S.Y. Cong and B. Bian	428
Melting, Crystallization and Thermal Degradation of Fly Ash/Lldpe Blends X.X. Cao, J.G. Gao, L.Y. Hu, X. Dai, X.F. He and Y.H. Dai	432
Research on the Contraction Joint Width of Rubberized Concrete Pavement F. Qin, Z.B. He and Q.N. Huang	436
The Effect of Ultrasonic Field on Synthesis of Nanometer Calcium Carbonate and its Growth Mechanism J.Z. Xue, C. Huo, J.Y. Shen, Q.H. Xia and X.W. Cheng	445
Synthesis of SiC Nanowires with Silica Sol and Carbon Black Y. Wei, F. Wang and W.B. Cao	449
Mechanical Behavior of UHPC(<i>Ultra High Performance Concrete</i>) According to Hybrid Use of Steel Fibers G.S. Ryu, S.T. Kang, J.J. Park, K.T. Koh and S.W. Kim	453
Mechanical Properties of Electron Beam Cured MMT/MWNTs/Epoxy Composites Y.Y. Lu, H. Li, B.K. Ng, C.X. Chen, H.M. Kang, L. Jiang and H.Z. Liu	458
Ethylenediamine-Functionalized Carbon Nanotubes and Nylon-6 Composites Q. Zhou, Y.C. Hu, X.N. Sun and Y.J. Weng	462
Synthesis of MgAl₂O₄ Spinel-Corundum Composite with Waste Refractory W.L. Bi	467
Study of Carbon Fiber/Polycarbonate (CF/PC) Material Sandwich Structure for Vehicle Hood T.L. Teng, C.C. Liang, C.J. Shih and M.T. Nguyen	472
Research on Traffic Organization Evaluation Method Based on Simulation G.Q. Duan and X.D. Zang	477
The Effects of Bi₂O₃ Doping on the Electrical Characteristics of SnO₂ Based Varistors J.W. Fan, Z.G. Zhang, X.P. Li, X.Y. Liu and T. Li	486
Preparation and Up-Conversion Luminescence of Yb³⁺ and Er³⁺ Co-Doped BaF₂ Phosphor L.Q. Cheng, G. Cheng, R. Dong and X.Y. Zhang	490
The Influence of Water Content on the Morphology and Magnetic Properties of Nickel Nanoparticles Prepared in Reverse Microemulsion Q. Zhou, Y.C. Hu, Y.L. Ma and Y.J. Weng	494
Effect of Several Factors on Properties and Synthesis of Superabsorbent H. Ren and J. Wang	499
Ba_{0.7}Ca_{0.3})TiO₃-Ba(Zr_{0.2}Ti_{0.8})O₃ Ceramics S.G. Ju, X.G. Tang, J.B. Wu, Y.P. Jiang and Q.X. Liu	503
Solving the Splitting Resilient Modulus of the Asphalt Mixture Z.F. Luo	509
Microstructure and High Temperature Oxidation Resistance of TiC/Ti-25Al Composites H.G. Wang, Y.P. Song, F. Wang and Z.J. Wei	514
Morphological and Adsorptive Characteristics of Hydrogen Sulphide on Zinc Oxide Nanoparticles Modified SBA-15 X.H. Wang and H. Ding	518
Study on Preparation of Nano-Silicon Dioxide and the Influencing Factors of Particle Size Growth L. Wang, D.Q. Meng and C.Y. Zhuang	524
Synthesis of BaCO₃ Nanostructures with Different Morphologies in Water/Room-Temperature Ionic Liquids Mixed Solvents F. Liu, R.Y. Lin, Z. Wang and J. Liang	529
Stabilization Effect of Sodium Phosphate on Hemihydrate Calcium Sulfate Whiskers X. Wang, Y.B. Wang, L.S. Yang, X.F. Wang and J.K. Yang	535
X-Ray Photoelectron Spectroscopy Study on Reduction of Graphene Oxide with Hydrazine Hydrate W.S. Ma, J.W. Zhou and X.D. Lin	539
Static Design Based on Hierarchy Optimization Associating Materials and Structures Y.D. Liu, Y.H. Yin and Y.C. Lu	544

Preparation of Composite Ground Calcium Carbonate in $\text{Ca}(\text{OH})_2\text{-H}_2\text{O-CO}_2$ System and Characterization	
C. Huo, J.Y. Shen and Q.H. Xia	548
Hydrogen Storage Property of $\text{Ti}_{45}\text{Zr}_{35}\text{Ni}_{17}\text{Cu}_3$ Quasicrystal Powder	
B.Z. Liu, Y.P. Fan, B.Q. Zhang and Z. Zhang	553
Optimization of Typical Grinding Model and the Simulation of Grinding Process Numerical	
G.H. Wang, X. Chen and C.Z. Wang	558
Electro-Generation of Furfural Alcohol in Ni-P-MCMC/mCS Bipolar Membrane Equipped Electrolysis Cell	
X. Chen, Y.Y. Hu, Z.Z. Guo, R.Y. Chen, X. Zheng and Z. Chen	564
Hydrothermal Synthesis and Characterization of Ca-Mg-Al Hydrotacite-Like Compounds	
M.L. Zhang, Y. Gao and L.F. Li	569
Experimental Investigation on Durability of A Combined Rotor Bearing Support with Metal Rubber Material under Dynamic Loadings	
J. Hong, H. Wang, Y.H. Ma and Y.F. Li	573
Conductive Ink and Applications in Printing Antenna of RFID Tag	
X.W. Hu, L.H. Li, S.M. Zhao and X. Leng	577
The Study of TiO_2 Whiskers Prepared by Melt Phase-Splitting Method and their Photocatalytic Properties	
S.J. Gao, W.L. Zhang and G.Q. Hou	582
Preparation and Performance of Radiation Grafted Poly(<i>methyl methacrylate</i>)-Graft-Polyimide Pervaporation Membranes for Thiophene/Hydrocarbon Separation	
L.G. Lin	588
Fe_3O_4/ Rectorite Composite: Preparation, Characterization and Absorption Properties from Contaminant Contained in Aqueous Solution	
L.H. Luo, Q.M. Feng, W.Q. Wang and B.L. Zhang	592
Study on Erosion-Abrasion Properties of Al-Mn Alloy and its Composite Reinforced with Al_2O_3 Particulates	
B. Liu, X.M. Li, Y.N. Sun, L. Xiang and C.Y. Wang	599
Experimental Research on the Magnetic Field Sensitive Polymeric Actuator	
C.L. Xia, Y.F. Wu and Q.Q. Lu	603
X-Ray Characterization and Crystal Structure of SBT Doped with V_2O_5	
S.H. Lv, S.L. Guo and H. Ji	608
Research on Properties of $\text{Ca}_{3-x}\text{La}_x\text{Co}_4\text{O}_9$ Thermoelectric Material with Adding La	
L.P. Zhang, X.J. Yu, Z.W. Ge, Y.H. Dong and D.G. Li	613
Study on the Methods Evaluating the Stability of a New Type of Energetic Material	
G.E. Lu, J.Y. Jiang and W.P. Chang	618
Generalized Regression Neural Network Cargo Flow Forecast Model in Logistics Park Based on Radial Basis Function	
Q. Zhang, Y.K. Liang, W.X. Yu and Q. Zhang	622
Influence of the PH Value of Comb-Shaped Polymer on the Adsorption between the Polymer and Ca^{2+} Ions	
G.R. Duan, X. Wang, G.H. Huang and Y. Gong	626
Applied Research on Contractive Rate Inspecting Testing Mould of Pressure Casting Alloy	
G.W. Liu	632
Progress in Research on Mo-MoSi₂ Functionally Gradient Material	
Y.Y. Zhang, Y.G. Li, J. Chen and Y. Tian	636
Effect of Cd on Microstructure and Damping Capacities of Mg-Zr PM Alloy	
Z.L. Liu, G.B. Zhou, P. Shen, X.Q. Liu and H.T. Wang	642
Study on Mechanism of One-Dimensional Phononic Crystals with Locally Resonant Structures	
Z.F. Song, Q.S. Wang and Z.D. Wang	650
Effect of the Different Structure of the Chiral Core on Phase Behaviors of Cholesteric Star-Shaped Liquid Crystals	
M. Tian, X.Z. He, D.S. Yao, B.H. Ding and B.Y. Zhang	654
Thermal Expansion Behavior and Characteristic of SiCp/Al Composites	
X.L. Zhou, D.S. Li, A.H. Zou, X.Z. Hua, Z.G. Ye and Q.J. Chen	658
Experiment on Thermal Conduction of Compacted Bentonite Blocks	
G.Y. Ren, Q.S. Chen and J.G. Zheng	662

New Oil-Absorbing Material Y.J. Shi and Y. Feng	667
SHS and Properties of Perovskite $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ Powders by Using Dual Oxidants X.M. Yan, Y.Z. Mi and L. Xiong	671
The Research on the Tribological Properties of C/C Composites W.X. Wang	675
Developing an Iron-Carbon Nitride Complex as Photocatalyst with Response to Visible Light J.C. Yang, Y. Guo, L.L. Luo, F. Kong, S. Chu, Y. Wang and Z.G. Zou	679
Synthesis of Magnesium Borate ($\text{Mg}_2\text{B}_2\text{O}_5$) Whisker by Flux Method L.C. Wang, Y.S. Zhang, Y.Q. Wang, D.M. Cao, X.P. Huang and Y. Liu	683
Synthesis of Bis(2, 4-Dihydro-2H-3-(4-N-Maleimido) Phenyl -1, 3-Benzoxazine)Isopropane G. Tao, Y.H. Xu and G. Yang	688
Preparation of Energy Storage Ceramsite Manufactured from East Lake Sludge B.G. Ma, J. Wang, Y.Y. Wu and W. Yang	694
Study on Finite Element Nonlinearity Calculation of Folding Rudder Y. Xiong, C.H. Zhang and C.G. Zhang	699
Experimental Study on Seismic Performance of HRB400 Reinforced Concrete Columns under Cyclic Loading Y. Han, H.C. Guan and Z. Li	703
Preparation, Characterization and Catalytic Properties of the Different Types of Nanometer Crystal Manganese Dioxide D.Q. Chu, Y.N. Dong, Z.R. Yu, L.C. Su and L.M. Wang	708
The Process and Property Characteristic of Electromagnetic Shielding Functional Warp Knitted Composite Fabrics J.H. Lin, Y.T. Huang, C.M. Lin, Y.C. Yang and C.W. Lou	712
Finite Element Analysis on Stability for Elastic-Jumping Membrane Z.T. Wu and S.J. Li	717

Building Materials

Control of Electronic Properties of Organic Semiconductor K.J. Tan, K.K. Zhang, S.Q. Liang, W.H. Kan, S.G. Mhaisalkar and C. Kloc	725
Effects of Micro Fines Content on Performances of Mortar Prepared with Mill Tailings from Magnetite J.W. Cai, Z.H. Lü, G.L. Gao and J.X. Wu	729
Preferential Sorption of Minerals on Calcium Hydroxide of Hydration Productions of Cement H.B. Zhu, P.M. Wang and J.D. Zhang	733
Corrosion Behavior of Reinforcing Steel Bar HPB235 in NaCl Solution Y. Wang and P. Li	738
Comparing Tests on Water Relating Stability of Polyester and Polyacrylonitrile Fiber Reinforced Asphalt Mixture J.X. Song, C.L. Chang and H.R. Yang	742
Test and Analysis of Expansive Deformation for Shrinkage-Compensating Steel Fiber Reinforced Shotcrete W.H. Yuan, Q.Y. Ma and P.B. Cui	747
The Effect of Anhydrite on the Hydration of CFBC Ash-Clinker-Water System H.Z. Xu, Y.M. Song and B. Wang	754
Inhibition of the Expansion of CFBC Ash Y.M. Song, B. Wang, H.Z. Xu and Z.J. Wang	758
Experimental Research on Road Performance of Natural Asphalt Modified Asphalt Mixtures L. Fan, X.J. Song and Y.Z. Zhang	762

Building Materials

High Temperature Creep Behavior of Zn-1.0Cu-0.2Ti Alloy L.R. Xiao, X.M. Zhang, Y. Wang, W. Li, Q.S. Sun and Z.J. Geng	769
Numerical Simulation on Laboratory Triaxial Test of Composite Soil with Roots Y.Y. Huang, K.F. Liu, Y.J. Zhu, X.Y. Xie and X.R. Yang	777
The Design and Case Study of Pervious Concrete Materials C.L. Hwang, C.T. Chen, H.L. Huang, S.S. Peng, L.A.T. Bui and Y.Y. Yan	781
Dehydration Process of Calcium Silicate Hydrate during Heating in the Air L.N. Lu, S.M. Yu, Y.J. He and S.G. Hu	785
Thermal Resistance and Heat Dissipation of LED PCB with Thermal Vias H.W. Shin, H.S. Lee and S.B. Jung	789
Compressive Strength of High Volume Slag Cement Concrete in High Temperature Curing S. Parniani, M. Warid Hussin and F. Rahimi Mansour	793
The Effect of CFG-Pile Caps and Cushion to Stability of Embankment Z.H. Wu and J.Y. Yuan	797
Effects of AgSbO₃ on the Piezoelectric/Dielectric Properties and Phase Transition of Li₂O Doped NKN Lead-Free Piezoelectric Ceramics M.S. Yoon, N.H. Khansur, W.J. Lee, Y.G. Lee and S.C. Ur	801
Comparision of Direct Quenching and Reheat Quenching Process on Microstructure and Mechanical Properties of a High Strength Steel Z.T. Duan, Y.M. Li and F.X. Zhu	805
Experimental Investigations on Flexural Behavior of Sandwich Composite Panels L. Chen, H.T. Hou and G.Q. Li	810
The Ac Impedance Characteristics of Soil with Different Water Content X.Q. Dong, G.H. Yang, X.H. Bai and Y.K. Lv	815
Preparation and Properties of Alkaline-Earth Silicon Oxynitride Glasses Z.H. Lian, S.L. Wang, L.F. Tian and W.Q. Ge	819
Experimental Study on the Re-Bonded Magnesia - Zirconia Refractory for New Dry Process Cement Kiln H.F. Zhang, H.L. Huang, L.F. Zhang, N. Zheng and F. Zhao	823
Numerical Simulation of Gas Distribution in COREX Shaft Furnace W.F. Ying, Y. Sun, Z.G. Luo and Z.S. Zou	827
Study on Wear-Resistance of Laser Surface Remelted-Strengthening High NiCr Indefinite Chilled Iron Roll Material G.S. Wu and Y.T. Wang	831
Fracture Failure Analysis of the 60Si2Mn Spring Steel Liner T. Liu, R.F. Chen, Y. Pan, X.L. Zhang and L.G. Dai	836
Water Model Study on Circulation Rate Influenced by Snorkel, Nozzle and Blowing Parameters in RH Refining S.L. Li, X.G. Ai, N. Wang and N. Lv	840
Experimental Study of Fly Ash Concrete Attacked by Sulphuric Acid L.Y. Pan, Y. Li and F.L. Li	844
Effect of Microstructural Evolution on Mechanical Properties of 55NiCrMoV7 Steel M.T. Fan, M.Y. Sun and D.Z. Li	848
Study on Mechanical Properties and Microstructure of High Boron Alloy H.Q. Tang, G.C. Su, W.H. Su, X.H. Zhang and L.W. Sun	853
Rutting Treatment Technology of Asphalt Pavement of Abrupt Slope Section in Heavy Load and High Temperature Zone H. Wang, Z.Q. Zhao and J. Zeng	858
A Review of Strength Models in Association with Pore Structure of Cement-Based Materials Q. Zhu, L.H. Jiang and J.X. Xu	862
Study on Microstructure and Properties of CuZn37Mn3Al2FeSi Alloy S.G. Mu, J.Y. Dai, Y.R. Wang, G.H. Chao, X.P. Hong and Y.C. Su	868
Structure and Magnetic Properties of Sm-Fe-N Prepared by Nitriding High Purity Sm₂Fe₁₇ Grown from Sm-Rich Melt W. Jiang, P.Z. Si, H.X. Wang, Q. Wu, J.J. Liu, J.G. Lee, C.J. Choi and H.L. Ge	875

Study on the Influence of Oxygen Content on Fatigue Life of Bearing Steel Using Statistics of Extreme Values H.H. Chung and C.C. Hsu	879
Influence of Heat Treatment on Low-Cycle Fatigue Behavior of AZ61 Magnesium Alloy S.Y. Yin, L.J. Chen and X. Wang	883
Research on Fireproofing and Insulation System of Polyurethane Foam and Moulding Board with Glazed-Hollow-Bead Mortar J.W. Yue, X.S. Sun, L.D. Li and X.L. Huang	888
Inhibition Mechanism of the Substance Containing Aluminum on ASR X.Y. Wang, X.X. Feng, C.Z. Dong, X.R. Kan, L.F. Zhang and J. Han	895
Variation of Carbonation Coefficient of Pumping Concrete with Moist-Curing Time at early Ages and Fly-Ash Content Q. Ye, Z.W. Song and G.R. Yu	899
Pilot-Scale Reconstruction of Steel Slag with Electric Arc Furnace Slag and Coal Cinder Z.B. Li, S.Y. Zhao, X.G. Zhao and T.S. He	906
Removal of Sulfur Dioxide from Sintering Flue Gas with Coking Wastewater S.J. Hao, W.F. Jiang, Y.Z. Zhang and B. Liu	910
Effect of the Combined Using of Fly Ash and Granulated Blast Furnace Slag on Properties of Cementless Alkali-Activated Mortar K.T. Koh, G.S. Ryu, S.H. Kim and J.H. Lee	916
Research on Slaked Magnesium Slag as a Mineral Admixture for Concrete J.W. Cai, G.L. Gao, R.Y. Bai, L.X. Yu and S.J. Wang	922
Application of Interlocking Block Pavement in Rural Highway Y.J. Chang, B. Ma, F. Qin and X. Lv	926
High Performance Prestressed Polymer Mortar System in the Application of Concrete Structure Reinforcement X.F. Zhang, Y. Ma and C.X. Song	930
Effect of Admixtures Treated by Magnetic Field on Concrete H.W. Song and S.Y. Zhao	934
Study on the Preparation and Properties of $\text{CaZr}_{0.9}\text{In}_{0.1}\text{O}_{3-\alpha}$ and $\text{BaCe}_{0.85}\text{Y}_{0.15}\text{O}_{3-\alpha}$ Solid Electrolytes Y.S. Ding, Y. Li, Y. Zhang and C.Z. Wang	939
Experimental Study on the Mix Design and Fundamental Properties for Mixd Mortars Using Recycled Fine Aggregates W.L. Zhao, L.X. Liu and T. Hao	943
The Development of High-Alumina Heat Resisting Alloy Used for Scaleboard Y.Z. Fan, Y.C. Song and R.N. Ma	949
Quantification of SBS Content in SBS Polymer Modified Asphalt by FTIR D.Q. Sun, L.W. Zhang and X.L. Zhang	953
Microstructure and Property of 700MPa Ti Microalloyed High Strength Steel Produced by EAF-CSP J.X. Gao, X.P. Mao, Q.L. Chen and L.J. Li	961
The Influence of Aggressive Environment with a High Content of Fluoride Ions on the Alloy TiAl6V4 with a Protective Ti-Al-Si Layer T. Kubatík, M. Kadlecová, B. Eremiáš and E. Kalabisová	966
Numerical Simulation of the Flow of Gases in a Large-Scale Electroslag Furnace C. Yan, Y. Li, Y.Y. Zhai and Y.H. Sha	970
The Influence of the Pressure on the Solidification of Zinc Alloy Y. Zhang, G.R. Jia, X.J. Xie, S.S. Xie, D.F. Li, W.S. Sun, M.P. Geng and J.Y. He	974
Study on Road Performance of Phase-Change Temperature-Adjusting Asphalt Mixture B. Ma, J. Li, R.W. Liu and J. Ma	978
Basic Properties of Masonry Cement Mortar Affected by Content of Stone Powder C.Y. Li, N. Liang and F.L. Li	982
Basic Properties of Masonry Polypropylene Fiber Cement Mortar N. Liang, X.Y. Zhang and F.L. Li	986
Study on Flexural Strength and Flexural Modulus of Elasticity of Cement Stabilized Aggregate P. Zhang and X.H. Wei	990

Mixture Proportion Design of Reactive Powder Concrete by Means of Liquid Limit Y.Y. Ji, X.W. Ma and Y.Y. Xia	994
Wear Characteristics of Al 6061 Reinforced with Graphite under Different Loads and Speeds A. Baradeswaran and A. Elayaperumal	998
Effect of Active Alumina on Sintering Behavior of Andalusite Powder L.S. Li, Q.C. Cao, G.H. Xu and G.H. Liao	1003
Corrosion Mechanism on Oilwell Cement in Formation Water with High Content of CO₂&H₂S X.W. Cheng, Y. Ma, Z.Y. Li and X.Y. Guo	1008
Study on Strength and Durability of Concrete Containing Recycled Coarse Aggregate Manufactured with Various Method H.Z. Quan	1015
Experimental Study on Impermeability and Frost Resistance of High Strength Concrete Used in Shaft of Coal Mine J.F. Hou, D.M. Guo, H.D. Xu and Z.K. Yang	1019
The Development and Experimental Study on High Strength and Toughness Drill Pipe Steel F. Hu, L.H. Han, H. Wang, Y.R. Feng and H.L. Li	1024
Research on Pavement Performance of Dense Skeleton Lime Fly-Ash Stabilized Aggregate in Gravelly Conditions J.N. Guo, S.B. Ma and L. Wang	1033
Experimental Research and Finite Element Analysis of Concrete-Filled Steel Box Columns with Longitudinal Stiffeners J.G. Zhang, Y.J. Liu, J. Yang and K.L. Xu	1037
The Research on Dense Packing Concrete Mix Proportion S.W. Yao, C.R. Wang and Z.G. Gao	1043
The Effect of Heat-Treatment on the Microstructure and Properties of PC Steel Bars M.G. Fan, S.P. Lin, Q.F. Chen, S.K. Deng, J.X. Yang and B.R. Sun	1048
Oxidation Behavior of Fe-Y Coatings Deposited by Magnetron Sputtering G.Y. Fu, X.P. Tang, Q. Liu, Y. Su and N.N. Yang	1052
Microstructure and Properties and Wear Resistant of Carbide Free Bainitic Casting Steel Z.X. Liu and J.Q. Cheng	1056
Research On Method of Discovering Second Phase Particles with Scanning Electron Microscope X.G. Ma, R.L. Sang, Y.L. Li and Y. Shen	1061
Fire Performance and Thermal Insulation of Reinforced Lightweight Aggregate Concrete H.S. Peng, H.J. Chen, C.W. Tang and Y.P. Chen	1065
Study of Ageing of Copper Foils in the Outdoor Environment X.L. Tian, M.T. Zheng, Q.L. Ma and Z.L. Li	1070
Effect of Heat Treatment on Microstructure and Properties of P91 Steel X.X. Xu, J. Ouyang, Y.T. Feng and X.G. Niu	1074
Industrial Production and Application in LCCs of Bauxite-Based Homogenized Groggs J.C. An, L.J. Wang and Y.S. Feng	1079
Test and Application on New Synchronous Grouting Materials for Earth Pressure Balance Shield G.G. Qiao, D.J. Yuan, D.G. Wang and Q.H. Wang	1084
Behavior of Concrete Permeability Considering ITZ A.P. Yu, H.B. Lu, Y.L. Zhao and K.Y. Wei	1091
Influence of Co-Polymer Dispersion Additives onto Shrinkage Strains for Cementitious Mortars and Concretes M. Gruszczyński	1097
Study on Influence Factors of Co-Crystallized P2O₅ in Phosphogypsum Formation and its Mechanism M. Li, J.H. Peng and T.J. Ning	1102
The Effect of Nb₂O₅ Addition on the Dielectric Properties of BaTiO₃-Based Ceramics Y.X. Zhang, J.J. Hao and J.T. Qi	1108
Optimization and Analysis for Coke Consumption Based on Clustering J.H. Zhang	1112

Investigation of Sulphate Attack on C-S-H Gel X.X. Feng, X.J. Li and Q.M. Wei	1116
Research on the Failure Feature of AAC Load Bearig Block Wall Based on the Quasi-Static Test J.H. Yu and Q. Sun	1121
The Microstructure Research on Interfacial Transition Zone of Filling Material Containing FA and Coal Gangue Y. Yao, H. Wu and L. Wang	1125
Numerical Analysis on the Load-Carrying Capacity for the FRP Reinforced Four-Point Bending Concrete Beam H.C. Qu, C.Q. Wu and L.L. Chen	1130
Research on Hydration Mechanism of 50% Portland Cement–50% Fly Ash Systems with TA and NMR Techniques L.X. Tan, S.L. Huang, J.Y. Han and Q.J. Ding	1135
The Effect of Pretreatment and Homogenization on the Precipitation of Spherical Al₃Zr Phase in Aluminium Alloy Containing Trace of Zr Z.Y. Guo, G. Zhao, Y. Liu and N. Tian	1140
Mechanism of Melt Treatment Improving Thermal Stability and Glass Forming Ability of the Al-Ni-Y Amorphous Alloy J. Mu, J.Q. Ge, W. Li, H. Zhang and Z.Q. Hu	1144
Study on Toughening Cement-Based Composites with CaCO₃ Whisker and Fiber M.L. Cao and H. Yao	1149
Research on the Application of Recycled PE in High Modulus Asphalt Mixture S.L. Huang, F. Shen and Q.J. Ding	1155
Study on the Properties of Pumping Gangue Filler Y.Z. Lin and D.C. Lin	1164
Development and Conceptual Design of Steel Deck Pavement Used Cement/Emulsified-Asphalt/Epoxy Resin Concrete Q.J. Ding, F. Shen, Z. Sun and S.L. Huang	1168
Study on Grinding Dynamics of Phosphorous Slag Prepared by Vibration Mill X. Xu	1175
Influence of Fiber Type on Concrete Flexural Toughness J.G. Han and P.Y. Yan	1179
Evaluating Plain Concrete Flexural Toughness Using PCER Method J.G. Han, P.Y. Yan and G.L. Li	1184
Study on the Difference of Amorphous Substances of Coal Ashes B. Wang and Y.M. Song	1189
Morphology and Structure of Aluminum Substituted C-S-H Synthesized by Reaction of Alkali Silicate and Calcium Nitrate Aqueous Solution Y.J. He, L.N. Lu, J.M. Zhang and S.G. Hu	1193
Feasibility of Basalt Fiber Reinforced Inorganic Adhesive for Concrete Strengtening Z. Ding, Z.X. Lu and Y. Li	1197
Proposal of a Simplified Prediction Formula for Compressive Strength of Fly Ash Concrete W.B. Zhang, I. Yoshitake and T. Saitoh	1201
The Research Status and Prospect of the Fiber Reinforced Concrete J. Sun	1209
3D Finite Element Analysis on a 270m Rockfill Dam Based on Duncan-Chang E-B Model D.W. Sun, G.D. Zhang, K.P. Wang and H.Q. Yao	1213
Energy Calculation Model of Concrete Based on Life Cycle Assessment P. Gong	1217
Experimental study on the Crack Initial Stress and the Crack Damage Stress of Red Sandstone Under Different Strain Rate Conditions C.S. Chen, P.X. Fan and W.P. Li	1221
Analysis of Heat Conduction of Anisotropic Building Materials S.Y. Su and J. Chen	1227
Strength Test and Forecast of CFRP-Confined Concrete Preloaded under Uniaxial Compressive Force S.J. Li	1233

Experimental Study on Alkali-Activated Slag-Lithium Slag-Fly Ash Environmental Concrete	
L.F. Zhang and R.Y. Wang	1237
The Effect of Super-Absorbent Polymer as a Self-Curing Admixture on the Performance of Mortars	
F.Q. Yu, N. Sun, C. Deng, J. Zhang and M.S. Pei	1241
Microstructure and Strength Characteristics Analysis of Shrinkage-Compensating Shotcrete	
W. Huang and Q.Y. Ma	1247
Investigation of Aging Kinetics of SBS Modified Asphalt Based on Rheological Properties	
J. Ouyang and D.Q. Sun	1252
Influence of p/i Interface Treatment on the Flexible Thin Film Solar Cells for Application in Building Integrated Photovoltaics	
J.S. Lei, Y.S. Zou and Z.Q. Zhang	1259
Applying Research on Microwave Promoting Curdle Technique of High Performance Concrete	
Z.J. Wang, X.O. Jin, D.M. Sun and F. Zhao	1263
Experimental Study on CBR Swelling Characteristics of Remolded Expansive Soil	
A.J. Chen, J.S. Zhang and H.B. Zou	1267
Shear Strength Parameters Determination of Compacted Loess with Compression-Tension Tests	
X.J. Li	1271
Experimental Study on Compound Binding Material of Alkali Activated Metakaolin and Ground Granulated Blast Furnace Slag	
Y.J. He, L.N. Lu and S.G. Hu	1275

New Energy Materials

Novel Low-Temperature Electrolyte for Li-Ion Battery	
Y.H. Ren, C.W. Yang, B.R. Wu, C.Z. Zhang, S. Chen and F. Wu	1283
The Electrochemical Characterization of Electrochemically Synthesized MnO₂-Based Mixed Oxides for Supercapacitor Applications	
Z.G. Ye, X.L. Zhou, H.M. Meng, X.Z. Hua, Y.H. Dong and A.H. Zou	1290
Study on Synthesis and Electrochemical Property of LiMnPO₄ by Microwave Method	
L.Z. Wang, K. Wang, Y. Zhang, L.S. Zhang, K.Q. Zhang and Y.J. Han	1299
Improving the Rate Capability of Unburned Carbon from Oil-Fired Fly Ash as an Anode Material in High-Power Lithium Ion Batteries	
Y.S. Wu, T.S. Yeh and Y.H. Lee	1304
Influence of Sintering Atmosphere on the Physical and Electrochemical of LiFePO₄/C	
Y. Lin, J.B. Wu, A.J. Xu and J.Y. Xu	1308
Research on the Electrical Electrochemical Properties of the LiFe_{0.98}Mn_{0.02}(PO₄)_{1-0.02/3}Cl_{0.02}/C Cathode Materials	
N. Li, B.R. Wu, C.Z. Zhang, C.W. Yang and F. Wu	1314
Influence of Carbon Sources on the Electrochemical Performance of LiFePO₄/C Composite Cathode Material	
X.J. Qin, G.J. Shao and H.L. Wu	1322
Solvothermal Synthesis of Pyrite (FeS₂)	
H. Ma, Z.G. Zou, Y. Wu, F. Long, H.J. Yu and C.Y. Xie	1327
Properties and Synthesis of Kaolin / Potassium Polyacrylate / Acrylamide Composite Superabsorbent Resin	
H. Ren, J. Li, Y.F. Zhang and T.Z. Huang	1331
Preparation and Biocompatibility of Nano-Hydroxyapatite/β-Sheet Silk Protein Composite	
H. Yang, L.L. Zhang and C. Wang	1335
Synthesis and Properties of Chemically Cross-Linked Poly(Vinyl Alcohol)/quaterized Hydroxyethylcellulose Ethoxylate (PVA/QHECE) as Novel Alkaline Anion-Exchange Membrane	
L.L. Liu, L. Xu, J. Xie, L. Ding, J.L. Qiao and G. Li	1344

Theoretical Study on Crystal Structure and Hydrogen Storage Properties of Sodium Hydride	
J.H. Lei, Z.Z. Yan, H. Duan and Y.J. Zhang	1348
Study on Solid Phase Crystallization of Silicon Films Deposited on Different Substrates	
Q.D. Chen, J.P. Wang and Y.X. Zhang	1352
Effect of the Thickness of Cr Interlayer on the High-Frequency Characteristics of FeCoTa/Cr/FeCoTa Multilayers	
S.D. Li, F. Xu, M. Liu, Y. Hu, J.P. Wu, X.L. Cai, J. Qiu, J.H. Lin and J.G. Duh	1356
Hydrothermal Synthesis of GdVO₄:Eu³⁺ Phosphors by Optimizing its Preparation Conditions	
Y.L. Yan, Y.H. Xu, J. Wang and Z.X. Luan	1360
Characterization of Aminoalky Cellulose Adsorbent	
H. Zhu, X.Y. Lin, X.G. Luo and Y. Li	1365
PtRu-SiO₂-TiO₂/C Anode Electrocatalyst for Direct Methanol Fuel Cell	
J.F. Ju, D.H. Wu and Y.J. Shi	1369
The Effect of Rare Earth Modification on the Structure and Catalytic Performance of SO₄²⁻/ZrO₂ Solid Acid Catalysts	
Y. Chen, B.H. Wang, X. Sun and H. Li	1375
Synthesis of Monodisperse Carbon-Coated Lithium Iron Phosphate	
Q. Ye, J.J. Hao and Z.M. Guo	1379
An Analysis of how Water-Based Ink Affects the Low Energy Surface Wettability	
L. Jia, B.Q. Huang, X.F. Wei and N. Feng	1383
High Transparency and Thermal Stability of Alicyclic Polyimide with Crosslinking Structure by Triallylamine	
J.C. Chen, W.Y. Tseng, I.H. Tseng and M.H. Tsai	1388
Modification of Recycled Melamine-Formaldehyde Plastic on Polypropylene	
M.S. Yang and L.K. Li	1397
Wettability and Water Absorption of Irradiation Cross-Linked UHMWPE	
Z.F. Ni and G.M. Chen	1402
Structure and Properties of Doped ZnO Nanopowders Synthesized by Methanol Alcoholysis Method	
Y.C. Chen, Y.H. Hu, X.H. Zhang, F. Yang, H.J. Xu, X.H. Chen and J. Chen	1406
Electrochemical Construction of (0001)-ZnO/(111)-Cu₂O Heterojunction Diode with Excellent Rectification Feature	
F. binti Mohamad, J. Sasano, T. Shinagawa, S. Watase and M. Izaki	1412
Carbon Nanotubes on the Performance of Al³⁺ Doped α-Nickel Hydroxide	
C.J. Liu, P.P. Li and L.H. Huang	1416
Highly Porous Carbon Derived from Sunflower Seed Shell for Electrochemical Capacitor	
W. Xing, X. Li, X.L. Gao and S.P. Zhuo	1420
Several Measures to Improve the Mechanical Properties of Hand-Pushing Tapping Knife	
H. Huang, M. Li, Z.D. Cui and J. Zhang	1424
Synthesis of Cathode Materials Fe-Doped NiS₂ by Mechanical Alloying for Li/NiS₂ Cells	
X.J. Liu, D.W. Park, Z.Z. Xu, S.D. Kang, I.S. Ahn and H.J. Ahn	1428
Facile Fabrication and Characterization of Carbon Fiber Microelectrode	
Z.J. Yang, Y.Y. Ren, J. Li and X.Y. Hu	1433
Effects of Titania and Silica Nanoparticle on Paint Film	
T.C. Teng, T.P. Teng and S.I. Pan	1437
Spin Precession from Hyperfine Interaction on Magnetoresistance in Nonmagnetic Organic Semiconductors	
J.Q. Zhao, T.Y. Zhang, Z.F. Jia, M. Ding, N.Y. Zhang, F.X. Wang, Y.J. Ji, Y.T. Pang, Y. Chen and G. Fu	1443
Characterization of Heat Storage by Nanocomposite-Enhanced Phase Change Materials	
T.P. Teng, B.G. Lin and Y.Y. Yeh	1448
Effect of Growth Temperature on the Indium Incorporation in InGaN Epitaxial Films	
P.C. Chang, C.L. Yu, Y.W. Jahn, S.J. Chang and K.H. Lee	1456
A New Method for Preparation and Luminescence of YBO₃:Eu³⁺ Phosphor	
L.Y. Jia, Z.B. Shao and Y.W. Tian	1460

Manufacture of Biodiesel by Transesterification Reaction with Alkali Process from Waste Cooking Oil J.H. Leu	1464
Effects of Ash Contents of Activated Carbon on the Performance of Electric Double Layer Capacitors R. Zhang, X.J. Duan, Q.G. Guo, B. Zhou, X.M. Liu, M.L. Jin and L.C. Ling	1469
Synthesis and Characterization of the Positive Electrode Material LiFePO_4/C under Different Microwave Heating Time H. Wang, Q. Chang and J.P. Shi	1477
A Study on the Modification of Water Lubrication Bearing Materials J.M. Peng and M.F. Luo	1481
Structural Stability Analyses of Composite Laminate Wind Turbine T.H. Cheng, I.S. Kim, S.Y. Park, Z.Z. Li and Y.D. Shen	1486
Structure and Magnetic Properties of $\text{MnAl}/\alpha\text{-Fe}$ Nano-Composite Powders Prepared by High-Energy Ball Milling H.X. Wang, P.Z. Si, W. Jiang, J.J. Liu, J.G. Lee, C.J. Choi and H.L. Ge	1492
Transesterification of Cotton-Seed Oil by Heterogeneous Solid Super Base KF/MgO Catalyst Y.L. Fan, W.Q. Zhang, L. Yang, D.L. Hu, L.X. Zhu and C.J. Liu	1496
Self-Powered Device Using Aligned Carbon Nanotube Arrays in Multi-Physics Fields J.L. Lu, G.L. Wang, L.F. Sun, M. Gao, J.H. Chen, F.Q. Gao and L.Y. Ma	1505
Synthesis and Characterization of 5-Fluorouracil and Polyethylene Glycol Esters as Prodrugs C.W. Li, G. Li and J.C. Zuo	1509
Kinetic Study of Nitrite Removal from Municipal Wastewater Using Ion Exchange Resins M. Sica, C. Draghici, A. Duta and C. Teodosiu	1513
Characterization of the Aging Behavior of Microorganism Coagulated Natural Rubber W.J. Luo, S.D. Li, S.Q. Liao, L. Fang and Z.F. Wang	1517
Impact of Impurities in Metallurgical Grade Silicon on Removal Efficiency of Vacuum Evaporation K.X. Wei, W.H. Ma, Y. Zhou, K.Q. Xie, B. Yang, D.C. Liu and Y.N. Dai	1521
Theoretical Investigation on the Structure and Optical Properties of Alq_3 and its Difluorinated Derivatives X.C. Liu, Y.J. Ji, G. Fu, F.X. Wang, Y. Chen and Z.P. Sun	1526
Synthesis and Properties of Waterborne Polyurethane-Acrylate Hybrid Emulsion Modified by Organic Silicane X.J. Lai, Y.D. Shen and L. Wang	1532
Synthesis, Characterization and Properties of Polyesteramides Based on ϵ-Caprolactone and 6-Aminocaproic Acid Y. He, Y.R. Du and X.B. Liu	1538
Crystal Structure of Aromatic Polysulfones Containing Biphenylene Units A. Zulkifli	1548
Evaluation of Li-Mg-B Alloy Anode for Intermediate Temperature Lithium Batteries Z.J. Wang, Y.Q. Niu, J.L. Du, N.X. Xu and Z. Wu	1553
Study of Dislocation Generation and Growth Orientations in Upgraded Metallurgical Grade Multicrystalline Silicon Y. Jiang, W.H. Ma, K.X. Wei, Y. Zhou, X.Y. Mei, B. Yang and Y.N. Dai	1559
Research on Lithium Ion Battery Material LiCoO_2 for Hybrid Supercapacitor S.L. Zhang, L.H. Ma, X.G. Li, Y.H. Song and W. Li	1565
The Interaction between a Screw Dipole in Matrix and an Elliptical Inhomogeneity Containing a Confocal Crack M. Yu and Y.W. Liu	1569
Synergistic Strengthening and Toughening of PS/LDPE Blends with Nano-CaCO_3 W.H. Luo, B.B. Zou and X.X. Liu	1574

Environmental Catalysis and Environmental Friendly Materials

Photocatalytic Degradation of Gaseous Acetone by a Self-Prepared Nano-Sized Composite TiO₂/In₂O₃/SnO₂ Film Photocatalyst	1581
C.S. Yuan, H.H. Tsai, J.F. Wu, B.C. Guo and C.H. Hung	
Dehydration of Fructose to 5-Hydroxymethylfurfural Catalyzed by Alkaline Ionic Liquid	1585
Y.S. Qu, Y.L. Song, C.P. Huang, J. Zhang and B.H. Chen	
Synthesis of Sn⁴⁺ Doped TiO₂ Nano Powder and its Photocatalytic Activity	1591
H.Y. Dong, K.M. Huang, Y.Y. Teng, Y.P. Ren, Z.C. Jia, Z.Z. Cao and W. Ma	
Studies on Alkali Lignin Degradation by Phomolybdic Acid Using Ultrasonic Method	1595
F.D. Yu, Y.R. Guo and Q.J. Pan	
Nano-Materials Coupled with Non-Thermal Plasma Application in Environmental Protection	1599
T. Zhu, Y.D. Wan, Y. Fang, X. Chen, D.Y. Xu, X.W. He and X.Q. Shu	
Study on A New Inorganic Binder for Fabricating Casting Mold and Core	1603
Y.S. Zhang, L. Xia and J. Huang	
Preparation of CNTs/TiO₂/CS Film and its Photocatalytic Activity	1607
L.P. Zeng, Q. Zhang, G.Q. Zhang and L.H. Zou	
Photochemical Degradation of Azo Dyes in the Presence of Hydrogen Peroxide and Hematite under Visible Light Irradiation: Surface Complex Forming and Reaction Mechanism	1612
Y.C. Tang, X.H. Huang, H.Q. Yu, W.H. Li and C.N. Wu	
Fixed-Bed Column Study for the Removal of Ag(I) and Cr(III) from Aqueous Solutions Using Puffed Rice Husk	1620
Y. Wu, Z.F. Deng, Y. Tao and X.G. Luo	
Solvent Extraction and Separation of Palladium(II) from Hydrochloric Acid Medium with N-Benzothiazolylazo Butyl Imide	1626
L.L. Chen, Z.M. Qiu and J. Huang	
Direct Synthesis of DMC from CO₂ and CH₃OH over Ce_xZr_{1-x-0.1}Y_{0.1}O₂ Catalysts	1632
Z.F. Zhang, R.B. Wang and X.R. Ma	
Preparation and Photocatalytic Activity of Pb²⁺- SiO₂-TiO₂ Composite Catalyst	1636
Z.M. Qiu, Y.Z. Lv and Z.J. He	
Preparation of Bi_xY_(2-x)O₃ and its Photocatalytic Degradation of Molasses Fermentation Wastewater under Visible-Light Irradiation	1640
M.G. Fan, Z.Z. Qin, Z.L. Liu and T.M. Su	
Research on Correlation of Total Bacterial and other water quality index in Water Distribution Network	1646
S.H. Li, J. Li and D.S. Dai	
Adsorption Behavior and Thermodynamic Characteristics of p,p'- DDT on Expanded Graphite	1653
Y.Y. Zhou, Z.G. Yan and K. Kim	
Preparation and Characterization of Rare Earth Solid Superacids SO₄²⁻/TiO₂-SnO₂-Dy₂O₃	1659
H.F. Guo, X. Li, Z.S. Chen, P. Yan and S.M. Li	
Determination of the Presence of Composite Ions in Catalysts and Composite Ionic Liquids-Catalyzed Isobutane Alkylation	1666
Y.N. Cong, Y. Liu and R.S. Hu	
Preparation, Characterization, and Oxidative Dehydrogenation of C₃H₈ with CO₂ of V-Cr/SBA-15/Al₂O₃/FeCrAl Metal Monolithic Catalysts	1671
H.J. Zhang, Z.G. Jia and S.F. Ji	
Characterization and Application in Pretreatment of Landfill Leachate on Modified Bentonites	1675
H. Shao and N. Cao	
Influence of Resin on the Performance of Water-Based Plastic Gravure Ink	1680
M.J. Yu, B.Q. Huang and X.F. Wei	
The Effect of Barium Modification on the Sulfur Tolerance of Methane Catalytic Combustion over PdO/Al₂O₃ Catalysts	1685
L. Ma, P. Xie, D.Q. Lu, C.S. Lu, Q.F. Zhang and X.N. Li	
Application of Pd/C Catalyst to Degradation and Utilization of Nitrobenzene in Water	1691
Q.F. Zhang, Y.M. Ju, L. Ma, C.S. Lu and X.N. Li	

Synthesis of Bis-Indolylmethanes Containing 1,2,3-Triazolyl Catalyzed by Brønsted Acidic Ionic Liquid under Solvent-Free Conditions Y.H. Zhang, Z.K. Lei, X.J. Huang, X.Y. Pan, X.H. Zhao and C.J. Liu	1696
Preparation of Dialdehyde Konjac Glucomannan D.Y. Xu, Z.F. Liao, M.M. Zhao and J.Y. Ren	1700
Preparation of Au and Au-Ce Catalysts Supported on Acid-Activated Bentonite and its Catalytic Performance R.B. Zhang, L.J. Yao and Y. Ju	1704
Study of Benzene Hydrogenation on Ni/Bentonite Catalyst R.B. Zhang, L. Wang and Y. Ju	1708
Investigation of Biocomposites Containing Glycerol-Plasticized Soy Protein and Kaolin H.F. Tian, G.Z. Xu and B. Yang	1712
Influence of Oxide Doping on $\text{Co}_3\text{O}_4\text{-CeO}_2$ for CO Oxidation J.X. Cai, Y.H. Lv, R.B. Zhang and L.T. Luo	1718
Study Defoaming Properties of Water-Based Varnish D.P. Zhao, B.Q. Huang, X.F. Wei and S.B. Zhang	1723
Synthesized WO_3/ZrO_2 Nanocomposite as the Catalyst for Preparation of Peracetic Acid M. Li and Z.M. Chen	1727
Preparation of Nano-TiO_2 Using a Sol-Gel Process Mediated in Reverse Microemulsion Combined with a Solvent Thermal Technique H.S. Li, H. Xu, S.Y. Wang, Y.L. Pan, Q. Wu and C.H. Liu	1731
The Preparation of C, N, S Tri-Doped TiO_2 and Visible-Light Photo-Degradation of Methylene Blue and Dyes Y.D. Shi, Q. Guo and Y.S. Xie	1735
Controlling Morphologies and Visible Light Photocatalytic Activity of Microstructured BiVO_4 in a Microwave Hydrothermal Process Y. Hu, D.Z. Li, G.C. Xiao and Y. Shao	1744
Catalytic Transfer Hydrogenolysis of 2-Phenyl-2-Propanol with Pd/C and Formic Acid J. Feng, W. Xiong, Y. Jia, J.B. Wang, D.R. Liu and R.X. Qin	1749
Vapor-Phase Elemental Mercury Adsorption by Novel Modified Vermiculite Adsorbents Impregnated with Different Agents L.P. Ma, J.P. Liu, J.Y. Wang, K.D. He and X. Cui	1753
A Novel Catalyst for the Preparation of Biodegradable Polycarbonate from Carbon Dioxide G. Qin, L.D. Fan, R. Zhang and S.K. Cao	1761
Research on the Technical Conditions on Synthesizing Calcium Zirconate Material J.G. You, G.D. Zhang and D.L. Qu	1765
Discussion the Influence of Nonmetal Doped TiO_2 S. Han, S.Y. Guo, W. Xiang, H. Wang, L. Yang and F.F. Wang	1771
Hydrothermal Treatment and its Influence on the Structure of Phosphorous Doped Titania S.Y. Guo, F.F. Wang, L. Jiang and D.P. He	1775
The Study of Photogradation of Dichlorvos Pesticide Residues in Vegetables T.B. Liu, J.W. Mao, G.N. Xiao, Y.B. Zhu and B.J. Liu	1779
Electrochemical Reduction of Nitrate by Fe-Si Alloy Electrode M. Li, Y.Z. Sun, C.Y. Li and P.Y. Wan	1789
The Performance of Low-Heat Accumulation Asphalt Mixture and the Evaluation Model of its Thermal Effect on Cities J.G. Xie, Z.X. Yang, X.Q. Fang and Y. Hu	1795
Preparation of Poly(<i>Butylene succinate</i>)(PBS) Foaming Materials Q. Sun, G.B. Huang, J.H. Ji and C.A. Zhang	1805
Solar Photocatalytic Degradation of MCRR by Ag-Doped TiO_2 Films X.G. Chen, R.T. Yan, X.Y. Wu and Y. Hu	1811
Photocatalytic Degradation of Bisphenol A in Wastewater Using Nanometer TiO_2 Film P. Tian, H. Zhang, Z.Y. Shi, M.Y. Zhang, L. Wei and Z.Q. Yang	1815
Study on Adsorption Treatment of Phosphate Wastewater by Briquette Ash S.H. You, H. Lin, L.L. Ma and K. Li	1819
Photocatalytic Degradation of Methylene Blue Solution Using Nanometer TiO_2 Film P. Tian, H. Zhang, Z.Y. Shi, Y. Lv, T.T. Zhao and M. Mao	1823

Preparation of Konjac Glucomannan/Tannin/Rice Flour Crosslinked Films Y. Luo, A.X. Lu and X.G. Luo	1827
Effect of Coagulation Bath Concentration on the Structure and Properties of Polyacrylonitrile as-Spun Fibers during Wet-Spinning B.H. Ji	1832
Effect of Oxide Buffer Layers on the Optical and Electrical Properties of Ga-Doped Zinc Oxide Thin Film B.W. Gil, S.E. Lee and H.C. Lee	1837
Synthesis and Characterization of New Kinds Sulfoxide Extractants for Palladium(II) L.L. Chen, Z.M. Qiu, Z.Z. Huang and Y.F. Wu	1841
Study on the Influence of PH Value on the Plastic Water-Based Gravure Ink J.Z. Sun, B.Q. Huang, X.F. Wei and Y.C. Zha	1847
Synthesis of Mn and Se-Doping TiO₂ Mesoporous Materials and their Antibacterial Efficacy under Visible Light Irradiation S. Chu, H.Y. Zhu, M. Xue, L.L. Luo, F. Kong, Y. Wang and Z.G. Zou	1852
Study on the Characterization of Fe- Ti Modified Bentonite and Its Influence on Absorption Performance of Wastewater H. Shao and D. Zhang	1856
Study on Unsupported Nano-MoS₂ Catalyst for Clean Fuel Y.Q. Zhu and D.L. Zhou	1860
Effects of BaO on Properties of Low Fluoride Content Mould Flux for High Speed Continuous Casting Y.Q. Lu, X. Fang and G.D. Zhang	1866

Earthquake Resistant Structures, Materials and Design

Study on Tungsten Carbide Leaching of Cemented Carbide Tool in Sodium Carbonate Solution X.M. Jia, Y.X. Song, X.X. Chen and X.L. Zhang	1873
Effects of Different Structural Systems on Lateral Rigidity of Steel Structural Frames W.G. Yang and X.P. Li	1877
Experimental Study on Seismic Performance of Tall Building Structure of Concrete Filled Steel Tube (CFST) with Transfer Story B.W. Chen, Y. Oyang and J.G. Tan	1882
Reflected Amplitude of Elastic Wave at Free Surface X.Y. Yang, B. Zhang and D.F. Zhang	1888
The Seismic Damage Characteristic and Mechanism Analysis of Building Structure in Wenchuan Earthquake Y. Wang, Y. Yao, B. Cheng and L. Wang	1892
In-Plane Force Effect of Reinforced Concrete Beam with Elastic Supports Z.K. Guo, W.X. Chen, Q.F. Wang, Y. Huang, C.P. Li and X.Z. Xu	1896
An Evaluation on the Width-Thickness Ratio of the Rotation Capacity of HSB800 Steel Flexural Members K.H. Moon, S.W. Han and Y. Rew	1902
Pushover Testing of Circular Adobe Structure W. Jinwuth, B. Samali and C. Wang	1907
Numerical Analysis for Earth Structure Sitting on Liquefiable Soils in Roller Boundary C.W. Lu, M.W. Gui and B.Y. Chang	1911
Coincident Work between Upper Steel Structure and Lower Concrete Structure of Ningxia Flower Art Center W.G. Yang and P. Gu	1915

Biomaterials

Study on Medical Polyvinyl Alcohol (PVA) / Polyvinyl Pyrrolidone (PVP) Hydrogel Wound Dressing S.D. Zhang, Y.C. Zhai and Z.F. Zhang	1925
---	------

The Application of Radiation Technology in the Field of Medical Biomaterials H.Y. Jin, H. Yin and Y. An	1929
Effect of Sintering Aid on Microstructure and Mechanical Properties of TiB₂/TiN Tool Materials M.L. Gu, J.H. Zhang and Z. Wei	1933
Influence on Surface Characteristics of Microalgae Cell by Solution Chemistry H.Y. Zhang, Y.L. Kuang, Z. Lin and C.H. Liu	1938
Study on Laccase Immobilization with PVA Materials F. Du, Z.J. Li, A.L. Zhang and Q. Qi	1943
Preparation, Characterization and Antibacterial Activity of Chitosan Schiffbases J.X. Xu, Y.T. Lin, Q. Lin, W. Yuan, X.Q. Yin and Y. Cao	1947
The Influence of Different Carbon Sources to γ-PGA's Molecular Weight Distribution J.G. Wu and J. Gu	1952
Controlled Release of Aspirin from SiO₂-PEG Hybrid Coating on 316Lss Substrate for the Preparation of Drug Eluting Stents M.K. Jian, W.P. Chen, M. Feng and H.B. Zhan	1956
Enhanced the Insulin Secretion of HIT-T15 Cells by Hyaluronic Acid-Coating Involves Cytosolic Free [Ca²⁺]_i Response Y.P. Li, B. Gu, X.F. Pi, Y.C. Gong, X.Y. Xiong, G.J. Wu and Z.L. Li	1960
Investigations on Poly(Ethylene glycol) Modified P₂O₅-CaO-SiO₂ Gel Bioglass Q.Y. Fan, W. Liu, M. Feng and H.B. Zhan	1966
Preparation and Properties of Fluoride-Coated Mg-Zn-Zr Alloy for Biodegradable Intravascular Stents X.Y. Ye, M.F. Chen, D.B. Liu, M. Yang and J. Wei	1970
Study on the Application of Marine Biodiesel on High Speed Diesel Engines L.C. Ma, Z.G. Zhou, L.Y. Xia, D.X. Liu and X.L. Yu	1976
Mechanical Properties and Rheological Behavior of Injection Moulded Foaming Bamboo Powder-Polypropylene Composites X.X. Zhou, Q.J. Lin and L.H. Chen	1980
Preparation and Application of Picroside II Molecularly Imprinted Ploymer for TCM Researching Q.S. Liu, R. Liu, H.M. He, J. Cui, Z.R. Pang and X.Y. Yin	1987
Investigation on the Novel Technology of the Fine Inclusion Removal due to the Dispersed <i>In Situ</i> Phase Induced by the Composite Ball Explosive Reaction P. Fei, X.F. Wang and Y. Lin	1991
Preparation and Bioactivity of Mesoporous Bioactive Glasses with Different Phosphorus Contents Y. Cao, L. Zhang, Y.Q. Xu, X. Wang and B.L. Liu	1997
Extraction of Polysaccharides from <i>Cordyceps militaris</i> by Ethanol Refluxing Method F. Gao, Y.L. Yu and Y.J. Chen	2003
<i>In Vitro</i> Degradation and Biocompatibility of WE43, ZK60, and AZ91 Biodegradable Magnesium Alloys C.L. Liu, J. Jiang, M. Wang, Y.J. Wang, P.K. Chu and W.J. Huang	2008
Fabrication of Sandwich-Like Hydroxyapatite-Al₂O₃-Si(100) Biocomposite Z.J. Wu, J.M. Yuan and W.S. Li	2015
The Use of ¹⁵N to Measure N₂-Fixing Effectiveness of <i>Rhizobium leguminosarum</i> Strains Y.H. He, G.B. Huang and L.Z. Guo	2023
Anti-Inflammatory Property of Biomaterial Carotenoids Production by Rhodobacter Sphaeroides WL-APD911 W.T. Wu and W.S. Liu	2028
Fe₃O₄) and Polyvinly-Alcohol(PVA)/ Iron Oxide Red(Fe₂O₃) Magnetic Sensitive Hydrogel S.D. Zhang, Y.C. Zhai and Z.F. Zhang	2032
Synthesis of a Neotype Molecule Absorption Resin and Study on its Separation of Pigment from Fermentation Liquid L. Lu, Y.N. Wang, R. Yu, D. Xuan, C.H. Xing, X.H. Li, C.J. Gao and H.S. Wang	2036
Effect of Polyethylene Jacket on Swelling Behavior and Mechanical Properties of PVA Hydrogel Nucleus Pulposus Prosthesis J. Gao, W. Zhu, X. Zhou and X.G. Li	2042

Chemical Materials

- Synthesis and Characterization of Rodlike Ammonium Tetrathiomolybdate and its Thermal Decomposition Mechanism**
J. Zhang, S.P. Hu, Y.L. Feng, B. Xu and Y.H. Guo 2049
- High Performance Poly (*Vinyl Alcohol*)-Zeolite LTA Composite Membranes for Ethanol Dehydration Pervaporation**
Z. Huang, W.J. Jiang, X.H. Shi and L.J. Teng 2053
- Synthesis and Spectroscopic Properties of 2-(7-Fluoro-1*H*-Imidazo[4,5-*B*]phenazin-2-yl)-Phenol Derivatives**
Y.J. Lei, J. Ouyang and M. Ding 2057
- Foundations and Advances of Cohesive Mixing**
M.J. Yang, X.W. Li, T.L. Shi and S.H. Huang 2061
- Optimization Research on Synthesis Conditions of Adsorption Materials for Lithium Extraction from Seawater and Brine**
L.F. Liu, Y.S. Zhang, D.M. Cao, J.K. Zhang and H.W. Zhang 2066
- Study on Adsorption of Cr(VI) in Wastewater by Powdered Activated Carbon**
J.T. Liu, S.J. Liu and H. Gao 2070
- Research on Application of High Degree of Substitution Cationic Starch in Paper Coating**
Q.X. Liu, J.L. Li, W.C. Xu and Y.B. Lv 2074
- Research on Preparation of Cationic Polyacrylate Emulsion Paper Strengthening Agent**
Q.X. Liu, W.C. Xu, Y.B. Lv and J.L. Li 2078
- Study on Preparation of Calcium Sulfate Whisker with Leaching Tailings of Nickel Ore**
L. Wang, C.Y. Zhuang and D.Q. Meng 2084
- MEG and its Application in Drilling Fluid**
Y.X. Sun, Y.N. Xie and C. Xiao 2088
- Synthesis of Mesoporous Zr-P-Al Materials with High BET Specific Surface Area without Calcination**
Z.Y. Liu, Y. Qi, Y.X. Wei, Z.B. Wu and Z.M. Liu 2094
- Interlayer Structure and Ion-Exchange Properties of Hydrotalcite Intercalated with CO_3^{2-} , CrO_4^{2-} , SO_4^{2-} and NO_3^-**
G.X. Pan, M.H. Xu, H.F. Chen, P.S. Tang, F. Cao and Z. Ni 2102
- Synthesis and Characterization of Biodegradable Segmented Liquid Crystalline Poly(*Ester-Urethane*)s**
J. Du and X.Y. Cao 2106
- Lanthanum Modified Catalyst for Efficient Supply of Hydrogen through Dehydrogenation of Organic Chemical Hydrides**
G.L. Zhu, T. Chen, X.D. Jiang, H.L. Zhang and B.L. Yang 2110
- Waterborne Cationic Fluorinated Polyurethane Modified by Perfluorinated Alkyl Long Chain**
X.W. Yang, Y.D. Shen, P.Z. Li and G.H. Li 2116

Thin Films

- The Effect of Annealing on the Electrical and Optical Properties of Cu-In-O Thin Films**
F. Ye, X.M. Cai, P. Fan, D.P. Zhang and L.J. Liu 2125
- Effect of Substrate Temperature on Properties of CuInSe₂ Thin Films Deposited by Magnetron Sputtering**
Z. Yan, X. Ji, M. Li and Y.M. Mi 2131
- Investigation of Microstructure and Tribological Properties of Cr_xTi_{1-x}N Composite Films on Piston Rings**
Z.H. Cai, Y.L. Di, J.W. He and P. Zhang 2136
- Growth of ZnS Films and Application in Heterojunction**
J. Huang, L.J. Wang, K. Tang, J.J. Zhang, W.M. Shi, Y.B. Xia and X.G. Lu 2140
- SSI Damping System Research Based on Discontinuity of the Motion**
Z.Y. Zhang, Z.C. Gao and Y. Li 2144

Effect of Target Power and Bias on Adhesive Force of BCN Films K. Bi, J. Liu and Q.X. Dai	2148
Fundamental Research on the Mechanism of High-Speed Welding Undercut P.F. Huang, C. Tang and Z.Y. Lu	2152
Study on Ultrafiltration Membrane Technology for Water Purification in Zhengzhou Z.L. Zhao, Y. Lin and S.P. Liu	2156
Influence of Anisotropy Behavior in UOE Process for X80 Micro Alloy Steel S. Moeinifar	2161
Spectroscopic Ellipsometry Study on HfO₂ Thin Films Deposited at Different RF Powers W.T. Liu and Z.T. Liu	2165
Study on Crystallization Characteristic of 3PE Anti-Corrosion Coating for Steel Pipeline Y.P. Tang, Z.F. Li, G.Y. Hou, H.Z. Cao and G.Q. Zheng	2169
The Research on YAG Laser Welding Porosity of Al-Li Alloy L. Chen and S.L. Gong	2175
Fatigue Properties of AF1410 Steel Welded Joint by Electron Beam Welding B. Wu, Z.Y. Mao and J.X. Zhang	2181
Identification of Dynamical Contact Parameters for Spindle-Tool Holder Interface Based on the Receptance Coupling Substructure Approach Y.S. Zhao, R.Q. Dong, Z. Liu and T.N. Guo	2185
Porosity Formation Mechanisms and Controlling Technique for Laser Penetration Welding W. Yao and S.L. Gong	2191
Study in Motion Control for Adsorption Type Wall-Climbing Robot with Several Legs J. Yu, M. Yu and G.Q. Huang	2195
Study on the Influence Factors of ZnFe₂O₄ and TiO₂ Composite Films Photoelectrocatalytic Properties G.Q. Hou, W.L. Zhang, S.J. Gao and X.Y. Wang	2199
Effects of Negative Bias Voltage on Structure and Mechanical Properties of DLC Films Synthesized by FCVA Deposition F. Wen, N. Huang, F.J. Jing, H. Sun and Y. Cao	2203
Shape Finding Analysis of Membrane Structures Based on Real Material Property W.G. Yang and X.P. Li	2207
Preparation of AlN/Diamond Film Structure for High Frequency SAW Devices J.M. Liu and H.S. Wu	2213
Study of Nanocrystalline ZnO and Zn₂TiO₄ Film Electrode with ZnPc Dye and PbS Quantum Dots Composite Sensitization Q. Wang, X.N. Zhang, X.D. Huo, R.H. Zhang and J.F. Dai	2217
High-Frequency Microwave Heating Technology for Automobile Windshield F. Wang, L.Z. Wang, S.L. Zang, D.H. Yu, C. Yu and Y. Jiao	2221
<i>In Vitro</i> Bioactivity Test of FA Added with TiO₂ of Different Phases Coated on Ti-6Al-4V Substrates by Nd-YAG Laser Cladding Process C.S. Chien, Y.S. Ko, T.Y. Kuo, T.Y. Liao, T.F. Hong and T.M. Lee	2225
Research on the Characteristics of Si-Based Reflector under the Action of Strong Laser Y.F. Peng and J.L. Cui	2230
Isothermal Physical Aging of Poly(<i>ethyl methacrylate</i>)/Polyhedral Oligomeric Silsequioxanes Nanocomposite Thin Films S.R. Jin and J.K. Lee	2234
Structural and Electrical Properties of PVC-NH₄CF₃SO₃-EC Proton Conducting Electrolyte System S.K. Deraman, N.S. Mohamed and R.H.Y. Subban	2240
The Influence of Sputtering Argon Pressure on LaB₆ Films Characetristics J. Xu, G.H. Min, H.S. Yu and J. Li	2244
Laser-Induced Thermoelectric Voltage in La_{0.5}Pr_{0.5}MnO₃ Thin Film Q.Q. Hua, L.S. Zhang and P.J. Wang	2248
Mechanical Optimization with Unknown Mathematical Model Based on Improved Adaptive Genetic Algorithm Z.B. Li and S.D. Xiao	2252
Numerical Studies on the Dynamic Performance of Polymer Foams Q.P. Zhang and Z.G. Fan	2256

Effect of Sputtering Parameters on the Property of TaN_x/Ag/TaN_x Low-Emissivity Film J.M. Huang, X.P. Hao, M. Wu and G.T. Hu	2261
Study on Behavior of Ni-Based and Fe-Based Hardfacing Alloys in Plant Valves with Laser Cladding A.Q. Xu, G.Y. Fu, C. Wang, H. Zhang, S. Liu and H.P. Wei	2267
Electrodeposition of Blue Gold Thin Film onto Indium Tin Oxide Coated Glass J. Du and J.W. Di	2271
The Manufacturing Method of Diamond Dressing Gears for the Dressing of Honing Rings T. Yu, S.Y. Wang and Y.X. Fan	2275
Study on the Effects of Process Parameters on Weld Joint using Coaxial Inside-Beam Wire Feeding C. Wang, S.H. Shi, A.Q. Xu, X.L. Han, H.Y. Li and H.S. Sun	2279
Investigation of High Emissivity Coatings Prepared by Plasma Spraying C. Wang, Q.S. Wang, X.J. Ning, Z. Du, Y.B. Liu and P. Gu	2283
Performance Analysis on CRA-Clad Pipes Extruded from Bimetallic Centrifugal Castings F.G. Li, B. Wei, Z.Q. Bai and X.H. Zhao	2288
The Preparation and Electromagnetic Properties of Nickel-Zinc Ferrite Thin Films Y. Wang, Y. Huang and Q.F. Wang	2294
Effects of Sputtering Power on the Microstructure of Mg₂Si Films by Magnetron Sputtering C.H. Zhang and Z.Q. Yu	2298
The Diffusion and Interfacial Reaction of Cu/Si(100) Systems X.X. Gao, Y.H. Jia, G.P. Li, J.P. Ma and Y.B. Wang	2302
Influence of Substrate Temperature on the Structural, Electrical and Optical Properties of Al-Doped ZnO Films by RF Magnetron Sputtering Y.H. Sun, C.H. Li, W.H. Xiong and C.H. Huang	2308
Surface Modification Mechanism of Parylene C Film by Solution of Sodium-Naphthalene Complex L.S. Zhang, Y.L. Zhou, Y.H. Sun and H.B. Bao	2314
Preparation and Research of Ferroelectric Properties of Fabricated Thin Film by Doping La and Nd to Bi₄Ti₃O₁₂ S.L. Guo, J. Li and X.D. Xu	2318
The Dielectric and Tunable Properties of Graded Fe Doped PST Thin Films Fabricated by Sol-Gel Method X.H. Sun, X.N. Li, S.G. Zhou, S. Hou, T.Y. Peng and X.Z. Zhao	2322
Improvement of Atomic-Layer-Deposited Al₂O₃/GaAs Interface Quality through a Novel Sulfuration Method G.M. Tan, Q.Q. Sun, H.L. Lu, P.F. Wang, S.J. Ding and D.W. Zhang	2327
The Electrochemical Characteristics of Corrosion Scale on P110 Carbon Steel J. Miao, S.D. Zhu, Q. Wang, Y.R. Feng and X.W. Zhao	2332
Simulation of Contact Behavior of the Thin Film of Hard Disk at Head/Disk Interface H.R. Ao, D. Pan and H.Y. Jiang	2339
Hydrogen Sensing Properties of WO₃/Pd Composite Films J.H. Li, M. Zhao, J.B. Su and M.P. Jiang	2343
ZnO Films Deposited on Various Diamond Film Substrates with Different Surface Roughness R. Fan, L.J. Wang, J. Huang, K. Tang, J.J. Zhang, W.M. Shi and Y.B. Xia	2347
Nanocrystallization of Fe-Based Amorphous Alloys Fe_{73.5}Cu₁Nb₃Si_{13.5}B₉ by Continuous CO₂ Laser Overlapping Irradiation G.R. Zhang, Y. Bao, Q.L. Ma, L.M. Yu, L.F. Ji and Y.J. Jiang	2351
Synthesis and Characterization of Reduced Graphene Oxide Film as Electronic Material J. Yang, C.L. Zang, L. Sun, N. Zhao and Y.Z. Zhou	2356
Experimental and Numerical Study of Double Containment Joint Having Circular Cross-Section Support A.M. Al Samhan	2360
Study on Vibration Assisted Heat Transfer for Isonlated Fins K.T. Park, D.K. Kim, J.W. Lee, M.G. Lee and H.J. Kim	2364
Thermal Stability of Cu/Si (111) Films Prepared by Ionized Cluster Beam Technique B. Cao, Y.H. Jia, G.P. Li, S.J. Cho and H. Kim	2369

The Effect of Negative Substrate Bias on the Strain Prosperities of ZnO Films Deposited by PFCVAD	
Y. Zhao, S. Hou, L.G. Fang, Y.Y. Wu, L. Wang, G.H. Sheng, J.C. Tang and Y. Liu	2373
Ferroelectric, Dielectric and Pyroelectric Properties of Highly C-Axis -Oriented Nanostructured (Pb,Sr)(Zr,Ti)O₃ Thin Films	
T.D. Cheng, X.G. Tang, S.J. Kuang, N. Ding, Y.P. Jiang and Q.X. Liu	2381

Thin Films

Application of Whey Soy Proteins Waste Water in Beverages	
G.Y. Yin and J. Sun	2389
Effect of Hydrogen on Microstructure of TA15 Electron Beam Welded Joint	
X. Liu, Z.Y. Mao and Y.P. Lei	2393
A Comparative Study of Structural and Optical Properties of ZnO Thin Film Prepared on Sapphire Substrate by PLD and Annealed	
X.Q. Wei, Y.J. Wang, M.Y. Zhang and Z. Zhang	2397
Characteristics of the Keyhole and Energy Absorption during YAG Laser Welding of Al-Li Alloy	
A.Q. Duan and S.L. Gong	2401
CdS Sensitized ZnO Core-Shell Nanorod Array Films Preparing by Chemical Bath Deposition	
Y.F. Wang, J.H. Yao and G.Z. Jia	2407
Calculating the Phase Equilibria of Al Rich Al-Cu-Mg Alloys	
Z. He, L.Y. Li and Y.Q. Liu	2411
Cracking Analysis of the Upset Head of PC Steel Bars	
M.G. Fan, S.P. Lin, Q.F. Chen, S.K. Deng, J.X. Yang and B.R. Sun	2415
Effect of Defocus Distance on Layer Quality in Insider-Laser Coaxial Powder Feeding Laser Cladding	
H.S. Sun, S.H. Shi, G.Y. Fu, J. Zhang, C. Wang and H.Y. Li	2419
Annealing Temperature Effect on the Microstructure and Adhesion of SiC Films Produced by MF Magnetron Sputtering	
Y.Y. Li, J.J. Hao and X.L. Pang	2423
Characterization of Ti-Al-N Films Deposited by Cathodic Vacuum Arc with Different N₂ Partial Pressure	
G.P. Zhang, X.Q. Wang, G.H. Lv, H. Chen, H. Pang, L. Zhou, J. Huang, W. Chen and S.Z. Yang	2429
Annealing Effects on Microstructure and Thermoelectric Properties of Bi₂(Te_{0.95}Se_{0.05})₃ Thin Films Prepared by Flash Evaporation Method	
X.K. Duan and Y.Z. Jiang	2434
Analysis of Refrigerants Properties and Alternative	
H.L. Wang, X.J. Hou and J.R. Tian	2438
A Stable Thin Film from Soluble Single-Walled Carbon Nanotubes on ITO	
S.M. Wang, Q.G. Wang, J.P. Li, H. Moriyama and W.X. Chen	2443
Dielectric Tunability of Mn Doped Pb_{0.3}Sr_{0.7}TiO₃ Multilayered Thin Films Prepared by Sol-Gel Method	
X.H. Sun, S.G. Zhou, Z.M. Luo, S. Hou, T.Y. Peng and X.Z. Zhao	2447
Determination of Thermal Parameters via a Homotopy Algorithm	
Q.W. Xue and X.Y. Du	2452
Auto-Control of Defocus Distance during Filling Laser Welding of Ti-Alloy with Wire	
X.S. Chen, W. Yao and A.Q. Duan	2456
Dielectric Properties of Pb_{0.97}La_{0.02}Zr_{0.95}Ti_{0.05}O₃ Antiferroelectric Thin Films Prepared at Different Annealing Temperatures	
W.P. Geng, X.J. Chou, Y.T. Zhang, M.X. Guo and J. Liu	2460
Comparative Studies on the Corrosion Protection Effect of Different Ions Selective Polyaniline Coatings	
Y.H. Dong, Y.N. Liu and Q. Zhou	2464
Deposition of PANI/SSA Nano Films by MAPLE Technique and the XPS Research	
W. Wang, C.X. Li, L.S. Sheng and G.B. Zhang	2470

Hydrogen and Fuel Cell Science, Engineering & Technology

Simulation on Performance Curves of PEM Fuel Cell S.N. Zhao, H. Sun, Z.N. Jin and Y.H. Wu	2477
Research on Weak Leak Detection of Boiler Tubes under Strong Background Noise L.S. An, P. Tong and G.S. Jiang	2481
Fabrication and Characterization of Solid Oxide Fuel Cell Anode with Impregnated Catalytic Ni-CeO₂ Nano-Particles on 8YSZ Fibers C.C. Chou, C.F. Huang and M.J. Chen	2485
Electrospinning Processing and Microstructural Characterization of Ce_{0.78}Gd_{0.2}Sr_{0.02}O_{2-δ} Fiber for a Composite Anode C.C. Chou, C.F. Huang, F. Mangasa Simanjuntak and Y.Y. Wu	2489
Preparation and Characterization of NiO/YSZ Cathode and BSCF/SDC Anode of SOEC for Hydrogen Production B. Yu and M.F. Wen	2494
Simulation Researches of PEMFC Based on ANSYS / FLUENT H.J. Ni, Q.Q. Hu, X.X. Wang and Z.Y. Li	2500
Electrochemical Performance and Microstructural Characterization of Solid Oxide Electrolysis Cells J.X. Zhu and B. Yu	2506
Studies of Half-Cell for Anode Supported SOFC after Reduction X. Wang and F.H. Wang	2511
Synthesis and Properties of Sulfonated Polyimide/Polybenzimidazole Cross-Linked Membranes for Fuel Cell Applications Z.J. Xia, H. Xu, X.X. Guo and J.H. Fang	2516
Effects of Cold-Rolled Deformation on the Electrochemical Performance of Al Anode Materials J.G. He, J.B. Wen and X.D. Li	2522
Microstructure and Electrochemical Properties of La_{0.75}Mg_{0.25}Ni_{3.5}(TiNi₃)_{0.1} Hydrogen Storage Alloys A.Q. Deng, J.B. Fan and P.Y. Yang	2526
Effect of Channel Depth of PEM Fuel Cell on its Performance Z.N. Jin, H. Sun, S.N. Zhao and Q. Liu	2531
A New Hydrocarbon-Type Polymer Electrolyte Membrane for DMFC Application Y. Sakaguchi	2536

Textile Materials

Performance of Electrically Conductive Fabrics Based on Polyester/Metal Wire Wrapped Yarns F.Y. Li, S.Y. Yan and X.W. Cheng	2543
Study on Influence of Crimping Performance of PET/PTT Self-Crimp Yarn Treated with Moist Heat J. Guo, N. Zheng and Y.T. Chen	2547
The Effect of Blending Ratio and Yarn Twist Multiplier on Polysulfone /Meta-Aramid Blended Yarn Properties X.H. Li and J.H. Yin	2552
Effect of Nano-TiO₂ Antibacterial Treatment on Mechanical Properties of Cotton Fabric Y.P. Jin, Z.F. Pan, W.S. Li, M.Z. Chen and F.Y. Zou	2557
Study on the Properties and Application of Optim™ Fine Fibers J.W. Yao and W. Yu	2561
Study on Acid Hydrolysis of Cationic Starch H. Zhang, R. Wang and J.K. Wang	2565
Study on the Compressive Properties of Spacer Fabric Composites Based on Finite Element Software ANSYS H.J. Cao, K. Qian, Q.F. Wei and H.S. Li	2569

Study of the Cooling Wall Boundary Layer with Underfloor Supply Room X.H. Li and D.G. Lin	2575
Research on Finishing of Oxidized Cotton Fabric with Sericin Y.H. Xu and X.L. Zhang	2579
The Optimised Technological Parameters for Electrospun PMIA Nano-Scale Fibers B. He and Z.J. Pan	2583
Preparation of SiO₂/PPS Fiber and Study of its Heat-Resistant Properties X.Q. Sheng, R.P. Zhang, M. Niu, H. Yang, J.M. Dai and L.B. Gao	2590
Preliminary Studies on Washing Durability of Fire-Retardant Viscose Fiber F.F. Liu and T.H. Ke	2598
The Principle of the New Fiber-Delivering Device for Friction Spinning J.Q. Wang, L.J. Qu and G.H. Chen	2602
Effect of Far-Infrared Pre-Heat Treatment and Adding Methylenediphenylisocyanate(MDI) on Adhesion Bonding between Reinforcement and Rubber of Conveyer Belt W.H. Hsing, Y.J. Huang, Y.K. Wang and M.Z. Lin	2606
Far-Infrared Emission of Filled Fabric by Sweat W.H. Hsing, W.J. Yang and Y.L. Hsing	2610
Adhesion between PET/Nylon Fabrics and Rubber by RFL with the Solution of Different Proportion W.H. Hsing, C.T. Yeh and M.C. Lin	2614
The Approach of Electrode Materials on Electroluminescent Fabric W.H. Hsing, T. Chuang, P.J. Chen and N.T. Lee	2618
The Study of Two-Step Dip System of Conveyer by Different Pre-Treatment C.K. Yen, W.H. Hsing and S.Y. Chen	2622
Composited Silver-Contained PA 6 Electrospun Fibers with Spunbond Nonwovens for Filtration Applications Y.J. Pan, W.S. Chuang, C.Y. Lin and C.H. Chu	2626
The Feasibility Study of PET Fabric Dyed with Disperse Dye by Adding ZnO Powder C.K. Yen, Y.J. Pan, Y.Y. Yeh, Y.Y. Chen and Y.J. Yao	2630
Uniformity of Nanofiber Alignment by Electrospinning Y.J. Pan, C.K. Yen, F.W. Cheng, W.H. Hsing and W.S. Chuang	2635
Research on Dissolve Oxygen Modeling Based on Neural Network G.D. Gao, W.X. Zhang, G.Z. Yu and J.H. Sui	2640
Tearing Behavior of the Polyurethane-Coated Fabrics with Five Different Silicone Contents Z.L. Zhan, Y.R. Chen and J.S. Wang	2644
Effect of Acid Modification on the Properties of Potato Starch Pastes and Starch Film W.Y. Wang, X. Jin, S.Q. Hou, Y.F. Zhang and X.X. Sha	2648
Research on Design Principle and Method of Trademarks with Embossment Effect Realized by Adopting the Method of High Weft Density Z.M. Jin, Q.H. Shen and J. Yan	2652
Process Technology and Mechanical Properties of Polylactic Acid Ply Yarns and 316L Stainless Steel Braids C.W. Lou, W.C. Chen, Y.S. Chen, S.P. Wen, C.W. Chang and J.H. Lin	2656
Processing Technique and Sound Absorption Property of Three-Dimensional Recycled Polypropylene Nonwoven Composites J.H. Lin, C.C. Lin, J.M. Chen, Y.C. Chuang, Y.H. Hsu and C.W. Lou	2660
The Evaluation of Physical Property and Manufacturing Process of Functional Warp Knitted Fabrics with Variation of Weft J.H. Lin, Y.T. Huang, C.M. Lin, Y.C. Yang and C.W. Lou	2664
Manufacturing Technology of 316L Stainless Steel/Poly(Lactic acid) Composite Braids and the Induction of Hydroxyapatite Formation on the Braid C.W. Lou, J.J. Hu, Y.S. Chen, S.P. Wen, K.C. Lin and J.H. Lin	2669
Manufacturing Technique and Mechanical Properties of Environment-Protective Composite Nonwoven Fabrics J.H. Lin, A.P. Chen, J.Y. Lin, T.A. Lin and C.W. Lou	2673
Processing Technique of Fiber-Based Composite Sound Absorbent/Thermal-Insulating Board J.H. Lin, C.H. Huang, K.C. Tai, C.C. Lin, Y.C. Chuang and C.W. Lou	2677

Hidrophilic Modification of Electrospun Polysulfone Fiber Mat L.G. Liu and Z.J. Pan	2681
Fast Evaluation of Pectin Content in Ramie Using NIR Techniques W. Jiang, G.T. Han, Y.M. Zhang and J.H. Chen	2689
Anti-Bacterial and Crease-Resist Finishing of Cotton Fabrics with Chrysalis Chitosan L.X. Huang	2693
Study on Extracting of Sappanwood Natural Dye by Cellulase S.Q. Liu, X. Han, K.Y. Yang and Y.Z. Cui	2697
Manufacturing Technology and Characteristics of Nerve Conduits Made of Poly(<i>Lactic acid</i>) Braids C.W. Lou, J.J. Hu, Y.S. Chen, C.T. Lu, C.H. He and J.H. Lin	2701
Study on Preparation and Properties of Cotton Fabric Modified by Anthraquinone Extract from Aloe Y.H. Xu and Y.J. Deng	2705
Multi-Target Gray Situation Decision-Making for Clean Performance of Effective Cleaning Cloth for LCD Display Panel H.Y. Yang, J.L. Zhou, P.P. Zhu and H.B. Yuan	2709
A Novel Method for Preparing Electroconductive Cotton Fabric F. Wang, B.R. Li, Y. Qi, S.D. Liu and L.J. Wang	2713
The Study of Far Infrared Emissivity Influence by Rate Visible Spectrum W.H. Hsing, C.Y. Lin and Y.L. Hsing	2717
Preparation and Characterization of Polyester Fibers/Absorbent Cotton Composite Dressing Matrix Fabrics C.W. Lou, J.J. Hu, C.C. Huang, C.T. Lu, C.T. Hsieh and J.H. Lin	2721
Effect of Far-Infrared Pre-Heat Treatment and Adding Methylenediphenylisocyanate(MDI) on Adhesion Bonding between Reinforcement and Rubber of Conveyor Belt W.H. Hsing, Y.J. Huang, Y.K. Wang and M.Z. Lin	2725
Processing Technique of Sound Absorbent/Thermal-Insulating/Flame Retardant Composite Material J.H. Lin, C.H. Huang, K.C. Tai, C.C. Lin, Y.T. Tsai and C.W. Lou	2729

Smart/Intelligent Materials/Intelligent Systems

Water Model Experiments on Surface Flow Velocity of Molten Steel in Slab Caster Mold X.H. Mao, J.S. Li and X.C. Lin	2735
Numerical Study of Effective Elastic Properties of HGB Periodically-Reinforced Composite B. Wang, H.J. Li, X. Liang and W. Yu	2739
Effect of Electromagnetic Field on the Solidification Structure of C70250 Copper Alloy B.M. Li, H.T. Zhang and J.Z. Cui	2744
Study on the Processing Technology and Mechanical Properties of Nonwoven Fabric Compositied by Recycled PP Selvedges J.H. Lin, C.C. Lin, J.M. Chen, T.T. Li, M.I. Lin and C.W. Lou	2748
Research on Welding Deformation Simulation G.W. Wang	2752
The Application of Shape Memory Polymer Composite in Space Deployable Truss Structure Y.J. Zhou, F.L. Guan and L.F. Qian	2756
The Establishment of the System to Measure Displacement Based on Two Stage Rotary Coder T.C. Wang, Z.P. Du, L. Liu and Y.R. Zhang	2760
Analysis on Dynamic Performance of FlatValve in Water Hydraulic Piston Pump G.Q. Huang, J. Yu and Y. He	2764
Investigation on New Submersed Entry Nozzle in Slab Caster Y. Ma, J.S. Li, X.C. Lin and L.Y. Sun	2768
Structure Design for Resonant Diaphragm Liquid Density Sensor Y.X. Zhang, X.Q. Zeng and X.J. Wang	2772
Health Monitoring of RC Frame Structure to Shake Table Excitations W.I. Liao, J.S. Hwang, Y.C. Sung and S.J. Wang	2776

Velocities of Starch Particles in ER Fluids Measured with Laser Speckle J.J. Fan and N.H. Yu	2781
Study of Microwave Reflection Behaviour in Fe₃O₄ Magnetorheological Fluids N.H. Yu and J.J. Fan	2785
Detecting Centroid Projection for a Quadruiped Robot with Hand-Fused Foot Based on ARM Y.X. Zhang, X.Q. Zeng and X.J. Wang	2789
Effect of HPC on the Thermo-Sensitive and Hydrophilicity of PAN Films G.L. Gong and H. Li	2793
Application of Wavelet Analysis in the DPIV Information Processing for the River Model Test D.Z. Pan, Y. Li and G. Chen	2797
Turbine Blade Aerodynamic Optimization Based on Variable Dimensionality Model L.B. Ao, Y.S. Li, L. Li, Z.X. Wen and Z.F. Yue	2801
Research on Digital Modeling about Free-Form Surface with Holes Based on Coordinate Measuring Machine M.Y. Huang, X.J. Wu, Z.S. Jia, H.J. Ni, J.J. Lv, X.F. Wan and P.P. Wen	2805
The Modeling and Performance Analysis of Automatic Drilling & Riveting System Based on Modular Design Y. Xu, Y. Zhao, T. Wang and X.P. Hu	2810
The Design and Characteristic Analysis of New MR Fluid Damper S.S. Zhu, Y. Zhao and L.J. Qu	2816
Simulation of Adsorption Equilibrium of Heavy Metal Cations on Soils in Circumneutral Aqueous Solution: Influences of Solution PH and Dissolved Humus Substances Y.Y. Liu, T. Kobayashi, T. Kameya, Y. Takahashi and Y. Ohashi	2822
Hoop Stress Analysis of High Grade Heavy Wall Thickness Pipe in Hydrostatic Test Y.H. Yang, Z.Z. Yang, X.L. Liu and H.X. Yang	2826
Analysis of LEACH Protocol Based on Ant Algorithm Y. Hu and J. Wang	2830
Based on Risk Source Pipe Leakage Emergency Device and Sealing Method Research H.W. Yan, Z.M. Kou, J. Wu and X.H. Wang	2834
Study on Grout Permeation Model of an Equipment for Grouting in Roller Compacted Concrete W.P. Peng, X. Zhao and Z. Liu	2840
Design of Rope Tension Measuring System of Fishing Gears S.J. Jiang, H. Zhou and X. Liu	2844
Analysis of Flow Field for Stirring Tank with Complicated Cavities Based on FLUENT S.Z. Zhou, X.B. Peng, J.Q. Wang, C. Qiao, M. Shi and C. Li	2848
The Modeling Design and Research of Multi-Function Electric Fan X.W. Jiang	2852
The Assessment of Communication Problem and Effect for Product Form J.S. You and C.L. Gu	2856
Experiments on Dicing Monocrystalline Silicon Wafer Using Micro Abrasive Water Jet Y.Y. Lei, D.J. Jiang, K.F. Liu and P.H. Tang	2863
Design of Multi-Functional Infant Handcart Q.L. Du	2869
Development of Intelligent Drilling and Intelligent Drill Tools R.H. Yu and P.B. Yuan	2873
Effect Analysis of Different Wall Materials on Construction Project Cost C.J. Ke, S.Y. Wang, H. Wang and B. Yuan	2879
Finite-Element Analysis of the Arm Lock of Ejection Seat Interlock Device Y. Xu, J.H. Yang, B.D. Hou and L.C. Peng	2883
A New Portable Toilet Design and Optimization C.J. Yang	2888
A Linear Mapping Hysteresis Model Based on Theory of Microscopic Polarization C.H. Ru, W.D. Li and M.Q. Pan	2892
Stiffness Analysis of Structures Using Shape Memory Polymer Composites S.J. Zhang and L. Cheng	2898

Numerical Simulation and Optimization in Solidification of Zinc Alloy Y. Zhang, G.R. Jia, X.J. Xie, S.S. Xie, J.Y. He, D.F. Li, W.S. Sun and M.P. Geng	2902
Summary on On-Line Balancing Techniques and Devices of Spindle C.B. Bai, P.F. Teng, R. Ma and C.J. Sun	2906
Study on the Sensing Property of Carbon-Coated Filaments F.Y. Zou, Y.H. Xu, H. Chen and L. Ye	2911
Effect of Magnetic Fields on the Resistance and Microstructure of Al-Cu Alloy during Solidification Processing C.Y. Ban, P. Qian, X. Zhang, Q.X. Ba and J.Z. Cui	2916

Other Related Topics

Adsorption Behavior and Corrosion Inhibition of EPP for Q235 Steel in H₂SO₄ Solution L.K. Zou, C. Lai, B. Xie, X. Yang, Z. Xiang, N. Zeng, C. Huang and Y.M. Wang	2923
Analysis of the Formation Mechanism of Hollow and Cricoid Stria in Formed Coke M.J. Ma, Q.R. Liu and S.X. Huang	2927
Study on the Methods Evaluating the Burning Temperature of Gunpowder W.P. Chang, S.G. Du, G.E. Lu and J.Y. Jiang	2933
Chemical Reaction Mechanism of Sintering Flue Gas Desulphurization with Pyrolusite Slurry Y.L. Gui, Q.C. Yan, Y.K. Yan and C.Y. Song	2937
Investigation on the Interaction between Human-Like Collagen and Iron F. Chen and D.D. Fan	2941
Analyses and Determination of Current Density and Energy Density in Electric Melting Glass Furnace W. Ning, L.D. Luo, X.Y. Xu, Q.W. Wang and J. Chen	2945
Enriching Indium Using Neutralization from Solution Bearing Indium Y.G. Li, D.J. Yang, J.R. Peng and X.Y. Li	2952
Study on Behavior of Impurity Antimony in Zinc Electrowinning X.H. Yu, Y.G. Li, G. Xie, Y. Lu, K.W. Ji and Z. Shi	2957
Investigation of Ultraviolet Transmission Characteristics of Detecting Window in Ultraviolet Corona Inspector Z. Dong and D.G. Huang	2961
Comparison on Extraction Yield and Quality of Coix Seed Oil X.N. Xiao, Y. Guo, X. Yi and H. Xiong	2966
Study on Wet Picking/Wet Repellence at the Grain Direction of Offset Paper Y.G. Yang	2970
MOSFET Performance Manufactured on <100> Silicon Wafer Using CESL Strain Technology with Temperature Effect M.C. Wang, H.C. Yang and W.S. Liao	2974
Study on Effect of Spring Materials on the Comfort of Bed L. Li	2978
Multi-Function Electrical Energy Meter Detection Method Analysis J. Zhu, X.Y. Qian and Y. Wang	2982
Application of Metal Powder Metallurgy Technology in Prepartion of Friction Materials of the Railway Vehicles F. Shang, H.X. Zhou, B. Qiao, H.Q. Li and Y.Q. He	2987
The Detection of Cypermethrin on the Surface of Apple by IR Micro-Imaging X.T. Li, D.Z. Zhu, D. Wang, L.G. Pan, Z.H. Ma and J.H. Wang	2991
Microstructure and Wear Properties of TiC-Al Composite Fabricated by Field Activated and Low-Pressure Assisted Combustion Synthesis Q.D. Hu, P. Luo, M.X. Zhang, M.S. Song and J.G. Li	2998
Study on Application of Extrusion Concrete Side Wall in Concrete Face Rock Fill Dam C.D. Xu, Y. Wang, H.M. Hou and H.C. Li	3002
Modeling for the Print-Through Prejudging Based on the Optical Density Difference Y.G. Yang	3007
Recycling and Using of Vibration Energy X.L. Yang, T.M. Zhang, H. Xing and H.X. Qi	3011

Na₂WO₄-Mn/mullite Catalysts for Oxidative Coupling of Methane P. Viravathana, N. Sukwises, S. Boonpa and S. Larпкиattaworn	3015
Experiment Layout of Space Laser Communication System Based on Adaptive Optical System S.F. Wang, X.T. Wang, X.Y. Zou and Y. Wen	3020
Washing Deinking of Mixed Office Wastepaper As a New Resource for Electrical Purposed Paper P. Chandranupap, P. Chandranupap and P. Kongsat	3024
Flotation Deinking of Xerographic and Laser-Printed Paper: Influence of Surface-Active Substances P. Chandranupap, P. Chandranupap and P. Kongsat	3028
Environmental Impact Assessment on Lifecycle of Sofa Material Y.K. Chou and T.L. Chen	3032
Research to Health Diagnose Model of Gate and Hoist Machinery Based on AHP G.M. Yang and W.B. Jia	3036
The Factors of Pseudo Threshold Pressure Gradient Z.Q. Zhu, W. Xiong and S.S. Gao	3043
Discussion on the Detection and Prevention of SQL Injection X.Z. Zhang and X.J. Zhang	3047
Improve the Charge Balance of White Phosphorescent Organic Light Emitting Diodes Using Co-Doped Electron Transport Layer in Emitting Layer Y.S. Tsai, L.A. Hong, F.S. Juang, K.C. Lai, C.J. Lai, G.H. Ye and P.H. Yeh	3051
Optimal Design on Clearance of Piston Friction Pair for Water Hydraulic Pump G.Q. Huang, J. Yu and H.L. Pu	3056
The Application of Siemens PLC in Traditional Chinese Medicine Production T.C. Wang, Z.P. Du, L. Liu and H.X. Bi	3061
Modeling of Structural Degradation of AlCu4Mg1 for Extruded Stringer Type Specimens Exposed to EXCO Solution Environment B. Eremiáš, T. Kubatik and E. Kalabisová	3065
Research on Trivalent Chromium Removal from Wastewater by Gas Quenching Steel Slag J.G. Li, L.H. Wei and Y.Z. Zhang	3069
Depression Performance of Azo Dyes to Sulfide Minerals L.H. Lan, J.H. Chen, P. Lan, M.L. Liang and Y. Chen	3074
Novel CO₂ Capturer Derived from SBA-15 Monolith Coated with Amine K.K. Han, Y. Zhou, J.J. Wen and J.H. Zhu	3081
Research on Internal Stress in Electroplated Cu Films and Ni Films on Ag Substrates Y.M. Zhu, S.S. Wang and F.Z. Ren	3085
Research on the Effects of the Basic Properties of Offset Paper and Art Paper on Printing Dot Reproduction Y.G. Yang and F.P. Liu	3089
Promoted and Un-Promoted Co/SiO₂ Fischer-Tropsch Catalysts S. Prangsri-Aroon, P. Viravathana, W. Bangmek, A. Worayingyong, W. Kangwansupamonkon, O. Deutschmann and H. Schulz	3093
The Metallographic Structure and Mechanical Properties of the Brazing Weld of 3003 Aluminum Alloy X.H. Liang and X.H. Jie	3098
Position and Anti-Swing Control Based on BVP Arithmetic for Bridge Cranes Z.D. Yu, J.T. Xu and X.F. Wang	3102
Numerical Simulation of Coupled Heat and Moisture Transfer in Porous Building Material X.B. Zhang, W.B. Zhu and S.P. Tan	3106
Taguchi Method for 304 Stainless Steel Nd-YAG Laser Beam Welding T.Y. Kuo, H.C. Lin, T.Y. Liao, C.H. Kuo and T.J. Han	3112
Multi-Dimensional Grey Construction Deformation Prediction Model Research M.C. Chen, F.L. Chen and H. Zhang	3116
Study on a Self-Diverting Acid System for Well Stimulation Based on Novel Visco-Elastic Surfactant F.J. Zhou, C.M. Xiong, Y. Shi, X.Y. Yang, S.J. Lian, X.F. Liu and X.D. Li	3120

Laboratory Study on Low Temperature Rapid Strength Cement Slurry

Z.Y. Li, C. Zhou, J.Y. Li, Q.B. Wu and X.Y. Guo

3127

3D Dynamic Analysis of a 270m Concrete Faced Rockfill Dam

D.W. Sun, K.P. Wang, G.D. Zhang and H.Q. Yao

3131