

Table of Contents

Preface and Organizing Committee

Chapter 1: New and Advanced Materials, Materials Structure and Technologies

Synthesis and Langmuir-Blodgett Films Properties of Zn (II) Meso-Tetra (α, β, α, β-o-pivalamidophenyl) Porphyrin Y.J. Ren, F.D. Zha, C.W. Wang and Q.B. Chen	3
Beam Assisted Deposition Film for Improving Fretting Fatigue Resistance of Ti-8Al-1Mo-1V Alloy at Elevated Temperature W. Tian and X.H. Zhang	7
Degradation of Porous Starch Granules and Poly(Butylene Adipate-co-Terephthalate)(PBAT) Blends: Soil Burial and Enzymatic Tests S. Thothong, A. Jarerat, K.R. Sriroth and R. Tantatherdtam	12
Optimum Dosage of Deformed Steel Fibres in Fibrous Concrete Beams under Predominant Shear C.E. Chalioris	18
Real-Time Investigation of Engineered Nanomaterials Cytotoxicity in Living Alveolar Epithelia with Hopping Probe Ion Conductance Microscopy X. Liu, H. Zhu, H.J. Lu, Y. Li, J.N. Zhang and Y.J. Zhang	24
Thin Film Solar Cells and their Development Prospects in Yunnan X.Y. Wang, Q. Wu, H.Y. Li, H.D. Ju, H. Yang, J.L. Luo, L.Y. Pu, S. Du and H. Wang	29
Matrix Method for Analysis the Effect of the Crystal Field on the Magnetic Moment of Co^{2+} Ion E.F. Kustov, V.M. Novotortsev, I.L. Eremenko and E.O. Goncharov	33
Electrical, Optical and Structural Properties of Tin Oxide Thin Films Deposited by APCVD K. Lagha-Menouer, M.S. Belkaid and M. Pasquinelli	38
A Thermo-Dynamical Constitutive Model Based on Kinetic Approach for Shape Memory Materials N. Pellegrini	42
<i>In Vitro</i> Drug Release and Hemocompatibility of Biodegradable Plga/Peg Coated Paclitaxel-Eluting Stents S. Pavlinich, X.W. Liu, L.D. Hou, H. Zhao, Z. Li and L. Li	49
Hydrothermal Synthesis and Photocatalytic Hydrogen Generation of Cr^{3+} Doped Porous ZnIn_2S_4 Photocatalysts W. Wu and X.F. Bai	54
Preparation of AZO Thin Films by Level Sedimentation and its Optical and Electrical Properties D.W. Gao, T.L. Yin, G.M. Wu, G.J. Xing, Y. Ding and Y. Zhou	60
Carboxymethylation Fiber of Dissolved Air Flotation Rejects and its Influences on Paper Properties Y.H. Wang, X.L. Song and H. Qian	67
Synergistic Effects of MoDTC and Overbased Calcium Sulfonate Additive Z. Zhou, Y.Q. Xia and X.Y. Ge	73
Preparation and Characterisation of Electrochromic Fabrics Based on Polyaniline Q.P. Zhang, B.J. Xin and L.T. Lin	77
Study of Friction and Wear Behavior of Overbased Calcium Sulfonate Complex Grease Containing Anti-Oxidant Additives C. Hou, Y.Q. Xia and X.Y. Ge	83
Morphology and Mechanical Properties of the Polyurethane/PANI-DBSA Blend Nanofibers by the Electrospinning Technique X.L. Wang and L.X. Zhang	87
Surface Morphology and Structural Investigation of TiN Nanocrystal Thin Films Grown with Different N_2 Concentration U. Jiramongkolsiri, P. Thanomngam, A. Pankiew, S. Porntheeraphat and J. Nukeaw	91

Synthesis and Photoelectric Properties of a Novel Polymerizable Perylene Diimide Electron Acceptor Material S.L. Yi and Q. Xu	97
Hydrophilic and Photocatalytic Performances of Y-Doped Titanium Dioxide Thin Films J. Du, Y.B. Yu, J.J. Huang, H.Q. Fu, B.H. Li, Q. Wu, Z.Q. Xiao, J. Liu, H.L. Peng, M. Luo, D.M. Zheng and J.G. Zou	103
Potential for Persulfate Degradation of Semi Volatile Organic Compounds Contamination Z.Y. Gu, Z. Zhong, Z. Qiu, F.C. Sun and Z.L. Zhang	109
Two Ruthenium Complexes with Phenanthroline Ligand for Dye-Sensitized Solar Cells Y. Thathong, K. Wongkhan and R. Jitchati	115
Development of Concretes with Resistance to High Temperatures in the Czech Republic and Surrounding European Countries L. Bodnárová, J. Zach, J. Hroudová and J. Válek	120
Desiccant from Cassava for Dehydration of Alcohol Vapor at Near Azeotropic Concentration P. Rattanaphanee, W. Laha and C. Boonfung	126
An Investigation of Injection Times Affect on Properties of Recycled Glass Fiber Reinforced Flame Retardant PBT Y. Yin and S.D. Zhang	131
Aqueous Synthesis and Thermal Decomposition Behavior of Rare Earth Complexes with <i>o</i>-Carboxylbenzaldehyde-2-Pyrroleformylhydrazone Ligand C. Yang, X.R. Liu, L.N. Wang, W.S. Shen and D.W. Yang	137
A Trilinear Model for M - θ Curves of Semi-Rigid End-Plate Connections T. Wang, Z. Wang and J.J. Feng	143
Effect of Two-Step Deposition Process on Morphology and Optical Properties of Nanostructured Diamond Films S.T. Khlayboonme, W. Techitdheera and W. Thowladda	148
Effect of Silane Functionalization on the Properties of Iron Oxide Nanoparticles/UP Toughened Epoxy Nanocomposites S.J. Jaisingh, V. Selvam, M.S.C. Kumar and K. Thyagarajan	154
Synthesis and Semiconductor Characteristics of Poly[(2-methoxy,5-octoxy)1,4-Phenylenevinylene-Carbon Nanotube Composites W. Ding, F. Yun, Z.X. Song, J.H. Si, C.L. Liu, J. Zhu and X. Hou	159
The Influence of Oxide Inclusion on the Refinement of Bainite and Toughness in HAZ for Low Carbon Steels S.R. Li, X.M. Wang and X.L. He	163
Strength and Permeation Properties of Slag Blended Fly Ash Based Geopolymer Concrete S.D. Partha, N. Pradip and K.S. Prabir	168
Using DMA to Study Protection Performance of Polyurethane Foam to Underwater Blast Bubble Impulsion M.H. Li, C.H. Bai, M.W. Shi and H. Zhou	174
Fire Endurance of Concrete Elements Reinforced with GFRP Bars A. Almerich-Chuliá, J. Molines-Cano, P. Martin-Concepcion and J. Rovira-Soler	181
The Microwave Synthesis and Photocatalytic Activity of ZnO/TiO₂ Nanocomposites G.C. Zhou, Q.X. Zhu, W.Q. Xiong, J. Lei, W.X. Ye and X.H. Liao	187
Study of the Electrical Properties of Monolayer MoS₂ Semiconductor X.Y. Ma	193
Research and Development of Self-Lubricating Bearing Materials X.L. Wang, L.Y. Yang and S.R. Wang	198
Fabrication and Characterization of Ag@PS Composite Nanospheres Y.W. Zhou, X.P. Zhao, C.S. Yang and G.F. An	204
A New Method for Predicting the Net Heat of Combustion of Organic Compounds H.Y. Cao and R. Wang	210
Characteristic of Eggshell in Substitution of Hydroxyapatite in Biomedical Appliances S.M.H.W.B.S.M. Hassan, A.B. Amir, R.A.B. Arman, S.B.B.M. Latif, M.A.H. Hashim and M.H. Ismail	216
The Response of Woven CFRP under Static and Fatigue Loading S. Wicaksono and G.B. Chai	221

Preparation and Evaluation of Chitosin-Coated Alginate/Gelatin Microspheres for Sustained-Release Drug Delivery System <i>In Vitro</i> Q.S. Wang, Y.L. Cui and T.J. Dong	227
Thermodynamic Properties of Rare-Earth Ions Doped Lithium-Yttrium-Aluminium-Silicate Glasses X.Z. Han, Y.H. Li, T.C. Ma, Z.Q. Wang, X. Zhao and H. Lin	232
Study of Stress and Deformation of Composite Geo-Membrane High Earth-Rock Dam H.B. Jiang	237
Effect of Surface Penetrating Sealer on the Microstructure Properties of Cement-Based Composites T.L. Weng and W.T. Lin	245
Synthesis and Forming Behavior of <i>In Situ</i> AA 7075 - TiC Composites V. Anandakrishnan, S. Baskaran and S. Sathish	251
The Effects of Contents of Oxygen in Argon-Oxygen Mixed Gas on Polyethylene Terephthalate (PET) Films by CCP Discharge Y.F. Xie, H.Y. Zhou, D. Zhang, H.W. Zhang, Y.C. Shi and Y. Guo	257
Effect of Annealing Temperature on the Corrosion Resistance of Electroless Produced Ni-B-W Coatings R.A. Yildiz, A. Göksenli, B.H. Yüksel, F. Muhaffel and A. Aydeniz	263
Tensile Characteristics of Coconut Fibers Reinforced Mortar Composites R.H. Luminkewas, P. Heru, G. Ausias, D. Priadi, T. Lecompte and A. Perrot	269
Material Testing and Evaluation of Steel Mechanical Properties for Classification of Steel Grade of Existing Civil Engineering Structure M. Karmazínová and J. Melcher	274
Enzyme-Linked Immunosorbent Assay for Streptomycin in Animal Feeds H.Y. Zhang and J.P. Wang	280
Structural Characterization of the Chromium-Iron Alloy Formed by Thermal Diffusion Processes R.B. Arroyo	284
Fabrication of Nano-Particle Reinforced Metal Matrix Composites A. Pramanik and G. Littlefair	289
Phenomenon of Instantaneous Work Hardening Characteristics of Sintered Cold Deformed Cu Alloy Preforms A. Rajeshkannan and S. Narayan	295
Synthesis of N Doped Titania Photocatalyst by Using an Electrochemical Oxidation of TiN Layer H.J. Oh	302
Effect of Solution Aging Time on Stability of Colorimetric Assay for Degradation Rate Evaluation of Porous Si in Artificial Cerebrospinal Fluid T. Sun, J.Z. An, W.T. Park, T.B. Yee and M. Je	306
Numerical Simulation of Mesoscopic Concrete Cracking Evolution H.M. Xu	312
Oxidation of Acid-proof Steel Foil as a Method of Deposition of Phases Active in Nitrogen Oxides Decomposition on Metallic Monolith Walls E. Bielańska, J. Camra, J. Dutkiewicz, P. Kornelak, M. Najbar, A. Wesełucha-Birczyńska and T. Wilkosz	317
Determination of Material Parameters of Concrete for Non-Linear Modeling T. Zimmermann, A. Strauss and K. Haider	321

Chapter 2: Material Processing Technology, Technologies of Application of Materials

Large Area Uniform Microstructures on Silicon Surface Created with a Picosecond Laser Beam Scanning X.Y. Wang, Y.G. Huang, D.W. Liu, B.J. Wang, X.N. Zhu and H.L. Zhu	327
A Way to Weld Sheet Metal with Double-Electrode GMAW G.H. Ma and Y.M. Zhang	333

Machining and Tool Wear Mechanisms during Machining Titanium Alloys A. Pramanik, M.N. Islam, A. Basak and G. Littlefair	338
Ultra-Precision Machinability and Properties of Electroless-Nickel A. Pramanik and A. Basak	344
Ductile Mode Turning of Brittle Materials and its Practical Aspects A. Pramanik and A. Basak	350
Experimental Analysis of Welding Parameters on Variable Polarity Plasma Arc Pressure Y. Jiang, M. Liu, Y.H. Lu and B.S. Xu	355
Predicting Surface Roughness of WEDMed Wc-Co Composite Using Box-Behnken Response Surface Method V. Muthuraman, R. Ramakrishnan, K. Sundaravadivu and B. Arun	361
Evaluation and Characterization of Reliable Packaging Method for Neuromotor Prosthetic Device K.L. Tan, R.Q. Lim, T.B. Yee and M.Y. Cheng	367
Effect of Boric Acid Mixture as Solid Lubricant towards Machining Processes S. Sulaiman, M.K.A.M. Ariffin, T.S. Hong and N.A. Mustafa	372
A Study on Various Process Parameters Involved in Detonation Gun Coating Technique K.N. Balan, B.R.R. Bapu and R. Roy	378
Extraction of Lipase from Rice Bran Using Aqueous Two-Phase System Q.Y. Wang, Q.L. Lin and X.H. Li	384
A Repair Technology of Anti-Cavitation and Anti-Abrasion on Water Pump Impeller H.B. Yao, X. Zhang, W.M. You, Y.S. Li and L.M. Mao	389
Fracture Behavior of Aircraft Fuselage Materials under Thermal / Mechanical Loadings for Mode I Crack C.H. Gao, X.S. Tang and M.W. Chen	396
Raman Spectral Analysis of Particulates of Diesel Engine with DOC and CDPF After-Treatment Devices Z.H. Ma, Y. Chao, L. Li, B. Xu, X. Xu and F.H. Ma	401
Preparation and Characterization of Cellulose Nanofibers from Jute Using Blender Combined with Chemical Pretreatments L. Duan, H.B. Wang and W. Yu	408
Removal of Sulfate and Iron from Coal Mine Waste by Using SRB Batch Bioreactor H.X. Wang and M.L. Zhang	414
Prediction of Dynamic Modulus of Asphalt Mixture Based on Viscoelastic Properties of Asphalt Mortar X.L. Zhan	419
Investigation of Deformation Behavior during Cold Rolling Cladding Process of Four-Layer Composite Aluminum Alloys L.H. Su, C. Lu, G.Y. Deng, K. Tieu, J.T. Li, H.T. Zhu, H.J. Li and X.D. Sun	424
Microstructure and Mechanical Properties of Cr-W-B-N Coating Deposited by DC Reactive Magnetron Co-Sputtering L.Y. Tseng, J.K. Chen, K.H. Hsu, W.Y. Wu and C.L. Chang	430
A Study of the Sensitivity of Parameters Affecting Coated Tool Life in High Speed Milling Superalloy GH4169 W.W. Liu, X.S. Wan, Y. Yu, F. Li and H. Chen	436
A Study on the Aluminum Alloy AA1050 Severely Deformed by Non-Equal Channel Angular Pressing G.Y. Deng, C. Lu, L.H. Su, J.T. Li, H.T. Zhu, X.H. Liu and K. Tieu	442
Effect of Rotating Tool Electrode on Machining of Titanium Alloy Using Electric Discharge Machining A. Uthirapathi and D.L. Singaravelu	448
Study on Anticorrosion Technique of CO₂ Flooding Well in Yushulin Oilfield Y.B. Bao	453
Experimental Study on the Interaction between Femtosecond Laser and Energetic Materials H. Chen, W.H. Tang, X.W. Ran, B.B. Xu and Z.H. Xu	458
Application of Low Carbon Materials in Packaging H.Q. Ji	462

Analysis and Test on Indoor Thermal Environment of Timber Dwellings in Shangri-La L.P. Li, H. Wang and S. Fan	466
Tribological Properties of Cr Coating Lubricated with Different Lubricants X. Feng and X.Y. Ge	470
Disinfection of Municipal Wastewater Using ZnO Nanofluids L.L. Zhang, X.M. Liu, B. Chen and Z.F. Li	474
The Effect of Surface Treatment on Composites of Water Hyacinth Natural Fiber Reinforced Epoxy Resin A.H. Saputra, A. Difandra and A.B. Pitaloka	480
Application of Oil Palm Empty Fruit Bunch Fiber to Improve the Physical and Mechanical Properties of Composite Railway Brake Block Materials T. Agus, W.P. Ign, H.S. Alam and S. Rochim	486
The Effect of Electrode Parameters on Lead-Acid Battery Performance V. Esfahanian, P. Kheirkhah, H. Bahramian, A.B. Ansari and G. Ahmadi	492
Effect of Surface Treatment of Hemp Fibers on the Thermal Stability of the Hemp-PLA (Poly lactic acid) Composites N. Lu and S. Oza	499
Transient Thermo-Elastohydrodynamic Lubrication of Rough Surface in Soft Material K. Wongseedakaew	505
The Application and Dynamic Temperature Test Methods of Micro Thin Film Resistor Sensor D.P. Jia and Z. Yuan	511
Three-Dimensional Flexible Polyimide Based Probe Array with Stiffness Improvement by Using Biodegradable Polymer M.Y. Cheng, K.L. Tan, T.B. Yee and M.Y. Je	517

Chapter 3: Product Design and Manufacturing Technologies, Engineering Applications

The Characteristics of Flow Boiling Heat Transfer and Pressure Drop in Small Tube with the Pipe Sections Having Increased Diameters M.Y. Wen and K.J. Jang	525
Application of a Newly Developed Thermally Induced Volumetric Error Compensation Model in Improving Dimensional Accuracy of Parts Y.X. Lu and M.N. Islam	530
The Research and Design of Portable ECG Acquisition Device Based on Bluetooth and 3G D.X. Lu and T. Liu	538
Strength Analysis for Lifting Mechanism of Dump Truck Based on Virtual Prototype and Finite Element Technology L.L. Zhu, D.W. Liu, X.K. Ge and W. Fan	543
Memetic Algorithm Approach to Two-Stage Hybrid Flow Shop Scheduling Problem with Identical Parallel Machines P. Kaweejitbundit	548
Exploration of the Hakka Traditional Ware Design From Product View J.F. Huang, Y. Jiang and J.X. Cheng	553
The Research of Product Innovative Design Methodology-The Exploration and Practice of Interesting Design J.T. Li and Q. Sheng	559
Computer Aided Form Design Based on Multi-Channel Deformation Technology L. Guo, X.M. Ji and X.B. Bai	564
Research on Product Identity Design Based on Kansei Image in Mechanic Equipment P. Wang, J.N. Su, C.B. Hu and S.T. Zhang	569
Research on the Inheritance of Inlay Silver Lacquer Furniture X. Wang and Z.F. Zhang	575
Research on the Restaurant Space Humanized Design X. Wang and Z.F. Zhang	579
Research on the Forms and Emotion Expressions of Bamboo Lamps J.S. Gao and Z.F. Zhang	584

The Developments and its Application Examples of Computer Simulation Code on Heat Treatment Process	
D.Y. Ju and L.P. Cao	589
Influence of Functional Knowledge Structuring for Modular Design	
H. Issa, E. Ostrosi, M. Lenczner and R. Habib	595
A Method with a Statistical Approach for the Evaluation of Tolerance Chains	
R. Ambu	601
Design and Development of Electro-Discharge Drilling Process	
A. Singh, P. Kumar and I. Singh	607
Stress Analysis of Engineering Products Using the Adventure System – Finite Element Software	
	612
Control-Structure Integrated Design of Flexible Spacecraft Using MOEA/D	
Z.W. Feng, Q.B. Zhang and Q.G. Tang	619
Study on Gasoline Engine Knock Indicators Based on Wavelet Transform and Rough Set	
Y.Y. Wang, J.G. Yang and Z.Y. Ji	625
An Application of Multiresolution Analysis and Lifting Scheme in FEM	
Y.M. He, X.L. Zhang, Y.B. Dong, P. Gao and Z.B. Wei	631
Localization Research of Industrial Design Based on Shaanxi Folk Art	
L.L. Chen, J.X. Chen and S.X. Wang	635
Reverse Design of Non-Circular Planetary Gears Train Beating-Up Mechanism	
X. Zhao, M.X. Yang, J.N. Chen, C.L. Li and C.H. Zhu	641
Discussion on Market Research System for Product Development and Design	
S.J. Long	647
Analysis of Surface Scratch in Finite Line Contact EHL	
H.Y. Sun	651
Design of Mechanism for Sieving Sweet Corn Seeds	
C.Y. Deng, F. Chen, C. Deng and X.Q. Zhang	656
Research on Evaluation and Optimization Modeling of Engineering Equipment's BDRA Capacity	
L. Yuan, L.Y. Jiang and Z.C. Dong	661
An H-Shaped Dual-Band Microstrip Patch Antenna	
D. Yan, L. Huang, P. Wang and Y. Liu	668
Research of Several Quantities of Mechanics	
K. Qiu and F. Luo	673
Wear-Life Analysis and Optimization of a Typical Folding Mechanism	
J. Zhang, Z.J. Li, B. Bai and J.Z. Bian	678
The Optimization of Flexible Job-Shop Scheduling Problem Based on NSGA-II	
C.P. Li, H.Y. Cui and G.C. Wang	684
Using CFD Couple with Visual Basic to Investigate the Thermal Behavior for Fuel Rod Bowing Problem	
W.K. Lin, J.R. Wang, Y.S. Tseng and J.E. Chang	688
A Review of the Research on Aeroelasticity in Aero Turbomachinery	
L.C. Fang and S.M. Li	694
Research on Progressive Die Design for Asymmetric U-Shaped Contactor	
Z.F. Zhao and L.X. Yang	701
Design Key Points for High Power LED Encapsulation	
Z.F. Zhao and J. Ye	706
Vibration Modeling of Machine Tool Spindles: A Calibrated Dynamic Stiffness Matrix Method	
O. Gaber and S.M. Hashemi	710
Fuzzy Ball Drilling Fluid for CBM in the Ordos Basin of China	
J.F. Wang and J.G. Deng	717
Coupled Numerical Simulation Study on Electromagnetic Field, Flow Field and Heat Transfer in $\phi 210\text{mm}$ Round Billet Mold with M-EMS	
W. Chen, B.X. Wang, N. Zheng, Y. Chen and Y.P. Feng	722
Effect of Concentration and Loading Fluid of Nanofluids on the Thermal Resistance of Sintered Powder Wick Heat Pipe	
N. Putra, W.N. Septiadi and R. Irwansyah	728

Thermoelectric Heat Pipe-Based Refrigerator: System Development and Comparison with Thermoelectric, Absorption and Vapor Compression Refrigerators N. Putra, H. Ardiyansya, R. Irwansyah, W.N. Septiadi, A. Adiwinata, A. Renaldi and K. Benediktus	736
Design of a Novel Calcium Sulfate-Based Lightweight Composite: Towards Excellent Thermal Properties Q.L. Yu and H.J.H. Brouwers	745
Design of a Novel Photocatalytic Gypsum Plaster: with the Indoor Air Purification Property Q.L. Yu and H.J.H. Brouwers	751
An Approach to Determining the Decomposition Level for Wavelet De-Noising Based on Gamma Test Y. Wang and Y.Y. Chen	757

Chapter 4: Automation, Control and Monitoring Technologies, Software and Information Engineering

Research on Shield Tunnel Three-Dimensional Modeling Method M. Huang and X.L. Rong	765
The Application of Internet of Things on Medical System Q. Teng and D.X. Lu	770
Design of Mobile Remote ECG Monitoring System Based on 3G J.M. Peng, D.X. Lu, C. Zhou, W. Li and Y.B. Qin	774
Advance Control of Vibration Mill with High Vibration Intensity Based on SCM(III) – Simulation Debugging and Test Comparison Analysis X.L. Yang, J.F. Liu, M.P. Jia, J.C. Zou, Z.W. Xiao and X.B. Lu	779
Fast Pedestrian Detection for Intelligent Vehicle Based on FPGA and Monocular Vision X.D. Miao, S.M. Li, M.X. Wei and H. Shen	784
Research on XML-Based Exchanging System between Databases W.J. Li, S. Liu and Y. Hu	789
The IOT Technologies based Medical Equipment SCM in the Hospital S.H. Cao and T.Y. Zhou	795
Design of "Software Engineering" Teaching Website Y.X. Li, X. Liu, G.B. Zhang, X.S. Liu and Z.B. Gao	802
FPGA Verification for the OR1200 Subsystem in AVS-SoC Q. Lv and L.G. Cui	807
Evaluation of Different Monitoring Methods of Laser Additive Manufacturing of Stainless Steel M. Hirvimäki, M. Manninen, A. Lehti, A. Happonen, A. Salminen and O. Nyrhilä	812
The Recognition Research of Birds' Nest on Transmission Line Towers F.J. Sun, Z. Wang and J.Q. Fan	820
Investigation of Dual-Wavelength Erbium-Doped Fiber Laser Intra-Cavity Absorption Sensor Y. Lu, X.H. Huang, B.Q. Wu, L. Jing, M. Musideke, C.J. Hao, L.C. Duan and J.Q. Yao	825
Study on New Task Scheduling Strategy in Cloud Computing Environment Based on the Simulator CloudSim Z.T. He, X.Q. Zhang, H.X. Zhang and Z.W. Xu	829
Research on the Generation of Two-Dimensional Fitted-Body Grid by Adjacent Boundary Nodes Sliding Method Z.R. Feng, L.X. Wang and J.H. Cui	835
Method to Detect SQL Injection Attacks for Complex Network Environment W.M. Pan	841
On Cloud Sharing Model of Digital Educational Resources in Hebei Universities L.N. Huang, F.H. Liu and L.F. Tang	846
Excavation Dynamics and Control of Shallow Lunar Soil Sampling Manipulator L. Liang, H.L. Wang and Y. Zhao	852
A Decorrelation-Based Nonnegative Matrix Factorization Algorithm for Face Recognition D. Zhou, H.Y. Gao and Y.J. Zhang	858

Static Loadability Assessment Using Covariance Matrix Adapted Evolution Strategy S. Alamelu, S. Baskar, C.K. Babulal and S. Jeyadevi	864
650nm Plastic Optical Fiber Transmission System D.J. Miao and Y.Z. Dai	870
The Methods to Achieve of Virtual Storage Technology and its Applications Y.X. Niu, D.X. Lu, L.Q. Zou and Y.B. Qin	874
Matched Field Processing Based on the Simulated Annealing Q. Wang, Y.M. Wang and Y.N. Gou	879
A Method for Obtaining Chaos-Based S-Box via a PWLCM B.Y. Su, G. Xu, G. Zhao and Y. Liao	885
The Research of Aircraft Landing Problems Based on Neural Network M.Q. Chen, G.M. Zhang and J.H. Feng	891
3G Car-Based Networking Technology and its Application L.F. Tang and L.N. Huang	896
Current Situation and Development Trends on Key Technology of IOV (Internet of Vehicles) L.F. Tang and C.J. Wang	901
Research and Design for Image Search Engine L. Qiu and Z.X. Wei	906
Short-Term Power Load Forecasting Based on EMD and ESN Y. Luo, X. Jia and S.W. Chen	910
Applications of Cloud Calculation in the Intelligence Transportation System G.X. Liu	917
Matching the Russian HIL with the EILOG06 Logging System M.Z. Luo, L. She and X.D. Xiong	922
The Development of a Logging Signal Converter between PCM and DTB M.Z. Luo, X.D. Xiong and A.P. Wu	926
Inductance Parameter Simulation Analysis and Measurement of Permanent Magnet Synchronous Motors X.T. Jiang, B. Wang, W.K. Li and H.W. Zhu	931
Dynamic Surface Neural Control for a Class of Nonlinear Time-Varying Delay Systems Preceded by Unknown Hysteresis X.Y. Zhang, C.P. Liu and Y. Sun	937
Constrained Epistemic Extension on Agent Knowledge Acquisition Z.L. Hong and M.H. Wu	943
Design and Implementation of Dam Safety Monitoring and Management System M.H. Liu	949
Matrix Structure and Cryptographic Properties of Rotation Symmetric H Boolean Functions J.L. Huang, Z. Wang and J. Zhang	955
MEMS Tri-Axial Tactile Sensor for Sensorized Guide Wire in Catheterization Application M.Y. Cheng, E.L. Tan, R.Q. Lim, K.L. Tan, S.S.Y. Ng, C.J.R. Chue, M. Hamidullah, T.B. Yee and C.R. He	961
Sliding Mode Control for Singular Systems with Variable Switched Surface J. Xie, C.C. Gao and C. Zhang	967
Development of Non Contact Torque Sensor Applied to Wind Generator D.Y. Ju and K. Tabata	976
Advanced System for Control Milling and Flotation Processes Based on an Estimation of Ore Quality Grade V. Morozov, Z. Ganbaatar, L. Delgerbat, L. Bokányi and V. Stoliarov	981
Applying Back-Propagation Neural Network for Estimating the Slump of Concrete C.M. Kao, L. Chen, C.H. Kou and S.W. Ma	986