

Table of Contents

Committees / Preface

I. Optical Materials

In Situ Preparation of TiO₂ Composite Layer upon Ti Alloy Substrate Using Micro-Arc Oxidation and its Photocatalytic Property	
Y.Q. Wang, X.D. Jiang and C.X. Pan	3
Synthesis and Light-Emitting Properties of Solution-Processable Oligothiophenes Containing Triazole Moiety	
B.E. Kim, S.K. Lee, K.K. Lee and E.H. Lim	12
Optical and Transport Properties of as Prepared and Annealed Te-Substituted Sn-Sb-Se Thin Films	
R. Chander and R. Thangaraj	16
Bright Photoluminescence of CdTe Quantum Dots Formed in Phosphonic-Oleic Acids Binary Surfactants	
A. Rahmi, A.A. Umar, M.M. Salleh, B.Y. Majlis and M. Oyama	25
Optical Properties of Lead Glass Doped with CdS/Se Compound	
K. Won-In, S. Pongkrapan and P. Dararutana	29
Field Emission Properties of ZnO Nanorods Synthesized by Aqueous Solutions	
B. Gao, H.M. Zhang, Y.J. Zhu, Y.J. Li and G.F. Hu	33
Preparation and Photoluminescence of Ca₃(VO₄)₂: Eu³⁺, Bi³⁺ Phosphor Powder	
Y.Z. Li and X.C. Zhou	37
Synthesis, Photoisomerization and Thermo-Optic Property of Azo Optically Active Polymer	
C.H. Ge, F.X. Qiu, X.X. Gu and D.Y. Yang	41
Preparation of YVO₄:Eu³⁺ Red Phosphor by Combustion Synthesis and its Luminescence Properties	
Z.H. Liang, F.Q. Lu, X.X. Liu and G.H. Peng	45
Synthesis and Field Emission Properties of Hand-Like Bi₂O₃ Microcrystals	
J.Y. Lin, Y.A. Zhang, L.J. Wang, L. Yang and T.L. Guo	50
Spectral Analysis of Ca_{2-x}BO₃Cl:xDy³⁺ Phosphors	
C.Y. Huang and M.H. Wan	54
Cooling Effects in Laser Forming	
H. Shen, J. Hu and Z.Q. Yao	58
Preparation and Characterization of CdTe/Porous Silicon System	
X.Y. Lv, W.J. Chen, J.W. Hou, Z.H. Jia, F.R. Zhong and T. Jiang	64
Optical Properties of Sr_{1-3x}Al₂O₄ : Eu²⁺ xDy³⁺ Phosphors	
Y.M. Huang and Y.T. Guo	68
Synthesis, Crystal Structure and Fluorescence Property of Terbium Coordination Polymers with Pyridine-3,5-Dicarboxylic Acid	
Q.S. Shi, B.F. Hu, Q.Y. Liang and T.Q. Liu	72
Effect of Sm Doping on Magnetic Properties of Sr₂FeMoO₆	
Z.F. Xu, J. Liang, J. Pei, Y.Y. Yin and C. Li	76
High Precision Finishing Technique of Sapphire Substrate Surface for Photoconducting Device	
X.H. Niu, X.Y. Liu, S.L. Wang and B.M. Tan	80
Effect of Dy Ions on Optical Properties of Sr_{0.985-X}Al₂O₄: Eu²⁺_{0.015}Dy³⁺_x Phosphors	
Y.M. Huang and Y.T. Guo	84
Growth and Optical Properties of ZnO Nanorod Arrays	
L. Wei, G.H. Zhang, K. Li, J. Jiao and Y.X. Chen	88
Novel Azobenzene Homopolymers via Atom Transfer Radical Polymerization Initiated by an Azobenzene Derivative	
X.D. Tang, D.J. Zhou and N.F. Han	92

Synthesis of High-Performance Aqueous CdSe Quantum Dots Based on Combination of Se Source as Vapor-Phase and Hydrothermal Method	96
H.K. Qiu, Y. Shen, L.J. Wang, J.C. Zhang and K.F. Qin	
Hydrothermal Synthesis of Hexagonal Phase $Zn_{1-x}Mn_xS$ ($x = 0-0.05$) Nanorods Using Single-Source Precursors	100
Z.N. Du, Y.C. Zhang, Z.Y. Xu and M. Zhang	
Preparation of SnS_2 Thin Films by Chemical Bath Deposition	104
J. Li, Y.C. Zhang and M. Zhang	
Spectral Properties of Spatially and Spectrally Partially Coherent Pulsed Beams in Fused-Silica Glass Medium	108
C.L. Ding, M. Teng, Z.G. Zhao and L.Z. Pan	
Influence of Polarization on the Spectral Changes of Stochastic Electromagnetic Pulsed Beams	113
L.Z. Pan, C.L. Ding, Z.G. Zhao and X. Yuan	
Controllable Luminescent Properties of Phosphors $Sr_{2.97-x}Ca_xMgSi_2O_8: Eu_{0.01}^{2+}, Dy_{0.02}^{3+}$ by Adjusting Sr/Ca Ratio	118
J.F. Chu, Y.H. Hu, H.W. Yin and Y.W. Hao	
Template-Free Sonochemical Preparation of ZnO Cauliflower-Like Microstructures	125
C.H. Deng, H.M. Hu, S.L. Wang and G.Q. Shao	
The Phase Composition of Re^{3+} (Re=Lu, Gd, La) Co-Doped YAG:Ce and its Luminescent Properties	129
L. Zhang, H. Yang, P.D. Han, L.X. Wang and Q.T. Zhang	
Synthesis and Luminescent Properties of a New Green Phosphor $CaO:Tb^{3+}, Li^+$	133
R.Q. Wang	
The Luminescence Properties of $BaGd_2(MoO_4)_4: Eu^{3+}, Er^{3+}, Yb^{3+}$ Phosphors	137
J.Y. Sun, W.H. Zhang, Y.J. Lan and H.Y. Du	
Vapor-Induced Response of HTPB/MWNTs-COOH PU Conductive Films Based on Hydrogen Bonding Interactions	141
Y.L. Luo, L. Niu, F. Xu and Y. Yao	
Origin of the Photoluminescence of a Banana-Shaped Liquid Crystal	146
Y.M. Huang, B.G. Zhai and Q.L. Ma	
Synthesis of Yb^{3+}/Tm^{3+}Co-Doped MF_2 (M=Ca,Sr,Ba) Nanocrystals with Blue Up-Converted Fluorescence	150
H.Y. Du, J.B. Xian, X.Y. Zhang and J.Y. Sun	
Reflectance of Micro-Structural Material on Au	154
G.J. Feng, P. Li, Y. Wang, C. Li and L. Zhao	
The Effect of Spin-Orbit Splitting on the Third-Order Nonlinear Optical Susceptibility in CdSe/ZnS Quantum Dot Materials	158
C.J. Yu, X.Z. Guo and D.Z. Yao	
Preparation of $YVO_4:Eu^{3+}, Ln$ ($Ln = Bi^{3+}, La^{3+}, Li^+$) Red Phosphors by Combustion Synthesis and their Luminescence Properties	162
Z.H. Liang, F.Q. Lu, H.L. Zhang and G.H. Peng	
Effect of Sputtering Pressure on the Formation of Semiconducting Mg_2Si Films	166
Q.Q. Xiao, Q. Xie, K.J. Zhao and Z.Q. Yu	
Synthesis and Luminescent Properties of Violet-Ultraviolet Long Afterglow Phosphors	170
H.Y. Wu, Y.H. Hu, Y.H. Wang, C.J. Fu, F.W. Kang and X. Li	
Influence of Flux on Morphological and Luminescent Properties of $Y_3Al_5O_{12}:Tb^{3+}$ Phosphor	177
Q.M. Yu	
Surfacial Metallization of Carbon Fibers by Copper Coating and Field Emission Properties	183
L. Yang, Y. Ye, T.L. Guo and X.J. Huang	
Photocatalytic Performance of Polyoxometallate Intercalated Layered Double Hydroxide	187
Y.H. Zhang, J.X. Su, X.P. Wang, Q. Pan and W. Qu	
Transmission Spectra of Quantum-Well Structured Photonic Crystals with Positive- or Negative- Refractive Index Materials	191
Q.H. Lu, Y.J. Gao and M.N. Jiao	
Electronic and Optical Properties of the Zn and Mg Doped AlN	195
X.M. Cai and Y. Luo	

Kinetic Monte Carlo Simulation of the Flux Dependence of Semiconductor Quantum Dot Growth	199
C. Zhao, M. Zhao, Y. Wang, A.J. Lv and G.M. Wu	
Characteristics of a Triode Field Emission Display Panel with the Suspension Gate Structure	203
Y.K. Li and Y.P. Liu	
Effect of Anionic Surfactants with Different Structure on the Fluorescent Properties of the CPPO-H₂O₂-Rhodamine B System	207
H.Y. Du, W.D. Xu, W. Zhou and J.Y. Sun	
Synthesis and Characterization of Ternary Terbium Luminescence Complexes with Phthalic Acid and 1, 10-Phenanthroline	211
H.J. Ren, D.H. Sun, Z.F. Cui, H. Yang and G.Y. Hong	
Investigation of Optical Properties of ZnO Films Deposited by RF Magnetron Sputtering	215
S. Li, F.X. Wang, G. Fu, Y.J. Ji and J.Q. Zhao	
Study of Vacuum-Sealed Field Emission Display Device with Discrete Anode Sub-Pixel Layer	219
C. Wu, Y.F. Zhang and T.Y. Guo	
Measurement on Thermal Radiation of Standard High-Temperature Blackbody Furnace in Visible Spectrum Range	223
J.B. Lei, J. Chen, Z. Wang and Y.S. Wang	
Antimony Bismuth Alloy Films: Preparation, Optical and Thermal Properties	227
X.M. Lu, Y.Q. Wu and Y. Wang	
Preparation of Two Carbazole Derivatives and its Third-Order Nonlinear Optical Properties	231
L. Li, Y.Q. Wu, C.Y. He and W.B. Duan	
The Luminescence Property Study of CdTe/PMMA Emitting Green Light under Visible Light	235
W. Wang, L.M. Huang, M.J. Lin and K.Y. Yang	
Combustion Synthesis and Photoluminescent Properties of Ca₃((P,V)O₄)₂: Eu³⁺ Nanophosphor	239
X.J. Wang and X.C. Zhou	
Preparation and Characterization of Skin-Colored N-Doped ZnO Nanocrystals	243
H.M. Hu, C.H. Deng, Q. Fang, Y. Gao and M.W. Song	
Research on the Eye Controlled Model of Anti-Glare Imaging Detector Based on Liquid Crystal	247
H.H. Zhang, Y.H. Tang, X.S. Yang, S.W. Wang, Y.K. Xu, Y. Liu, X. Zhang, G. Gao, Z.K. Yang and T. Wang	
Poly(Acrylic Acid)-Ferric Hydroxide Photosensitive Self-Assembly Film	252
X.F. Li and S.X. Peng	
High-Performance Thin Film Encapsulation for the Application of White Organic Light-Emitting Diodes	256
Y.J. Liao, J.Z. Liu, Y. Zhang, L. Li, F.F. Yu and B. Wei	
Optical Properties of Hydrogen Sensitive Films for Surface Plasmon Resonance Optic-Fiber Micro-Sensor	260
Z.L. Li, Y.K. Tang, C.D. Zhou and J. Xu	
Photostimulated Luminescence Studies of Electron Trapping Materials SrS:Eu²⁺,RE (RE=Dy³⁺,Yb³⁺,Pr³⁺,Ho³⁺,Tm³⁺)	264
H.Y. Du, Z.X. Liu and J.Y. Sun	
Synthesis and Luminescent Properties of Novel Polythiophene Derivatives with 1,3-Dioxane Group	268
R. Li, Y.J. Jiang, F. Chen, H.L. Mao, Y.H. Wang and G.L. Zhong	
One-Step Anodization Preparation and Photoluminescence Property of Anodic Aluminum Oxide with Nanopore Arrays	272
W.B. Yang and X.H. Tang	
Fluorescence Gas Sensor Using CdTe Quantum Dots Film to Detect Volatile Organic Compounds	276
N.A. Bakar, A. Rahmi, A.A. Umar, M.M. Salleh and M. Yahaya	
Blue Photoluminescence of Sol-Gel Derived SnO₂:Sb Films	280
L.L. Chen, B.G. Zhai and Y.M. Huang	

Two Synchronized Operating Modes of Femtosecond and Picosecond Pulses in a Dual-Wavelength Laser	284
C.J. Zhu, J.F. He, X.J. Zhai, B. Xue and C.H. Zhang	
Photoluminescence of Pyrrole Oxidized in Hydrogen Peroxide	288
Q.L. Ma, B.G. Zhai and Y.M. Huang	
Preparation and Characterization of Porous Silicon in HF-AgNO₃ Solution	292
W.B. Yang, J. Wun, F.F. He, X.H. Tang and Y.L. Zhou	
The Influences of Turbid Media on the Optical Property of Different Ultra Short Gauss Pulse	296
M. Zhao and C. Zhao	
Efficient Photoluminescence from Thin Films of Polypyrrole	300
Y.M. Huang, B.G. Zhai and Q.L. Ma	
Fabrication and Properties of Zinc Silicate Long Afterglow Phosphors	304
G.J. Jiang, J.Y. Xu, H. Shen, Y. Zhang, L.H. Xu, H.R. Zhuang and W.L. Li	
Synthesis and Photophysical Properties of Novel Polystyrene Derivatives Containing Oligofluorene Pendants	308
X.D. Hu, S.H. Wang and Z.X. Hou	
Effect of Various CF₄/CH₄ Flow Ratios on Structure and Optical Band Gap of Fluorinated Diamond-Like Carbon Thin Films	312
J.R. Xiao, T. Tong, Y.W. Li and X.H. Li	
Synthesis and Luminescence Properties of 1,10-Phenanthroline Terbium/Polyvinyl Alcohol Hybrid Functional Materials	316
H. Zhang and L. Zhou	
Synthesis and Infrared Transmittance of Curved Surface Diamond Film	320
D.S. Li, X.L. Zhou, D.W. Zuo and X.Z. Hua	
The Study on Microstructural and Optical Properties of Nanocrystalline Germanium Films	324
C. Song and R. Huang	
Near-Infrared-to-Green Upconversion in Yb³⁺/Er³⁺ Co-Doped BaYF₅ by Chemical Co-Precipitation Method	328
H.Y. Du, W.H. Zhang and J.Y. Sun	
Photoluminescence of Eu³⁺-Doped La₂Mo₂O₉ Phosphors	332
E.G. Wang	
Photoluminescence Characteristics of Silicon Oxynitride Films at Different Annealing Temperatures	336
J. Song, Y.Q. Guo, X. Wang, Y.X. Zhang, C. Song and R. Huang	
Aurora Intensity Conversion and Distribution Simulation	340
Y.H. Tang, Q.J. Jia, L. Qin, X.D. Duan, O.Y. Qu, X.G. Cao and T. Peng	
Research on Light Amplification Panel Based on Stimulated Radiation	344
Y.K. Xu, Y.H. Tang, X.S. Yang, X. Zhang, H.H. Zhang, S.W. Wang, Y. Liu, G. Gao, Z.K. Yang and T. Wang	
Exploration in the Two-Photon Absorption Effect of Silicon Based Films	348
M. Yang, J. Li, Y. Yao, C.J. Yin, C.Y. Wu, X.N. Zhu, Z.J. Xu and S.Z. Xiong	
Thin Metal Films and Multi-Layers Structure as Absorbers for Infrared Detectors	352
H. Liu, L. Song, S. Zhou and C.L. Cai	
Effect of Ammoniating Temperature on Growth of GaN Nanowires with V as Intermediate Layer	356
F. Shi, Z.Z. Yang and C.S. Xue	
Optical Constants of Al-Doped Er₂O₃ Films Prepared by Radio Frequency Reactive Magnetron Sputtering	361
Y.Y. Zhu and Z.B. Fang	
Photoreflectance of AlGaN/GaN Heterostructure Measured by Using Mercury Lamp as Pump Beam	365
Y.L. Peng, R.L. Hsu, D.P. Wang and I.M. Jiang	
Synthesis and Electrochromic Properties of Novel Oligothiophene Derivatives	369
L. Guan, J. Wang, M. La, Y.P. Zhong, P. Liu and W.J. Deng	
Second Harmonic Generation Properties of RbTiOPO₄ Crystal	373
Y.G. Zhao, Z.P. Wang, X. Sun, H.H. Yu, L. Guo, L.J. Chen, S.D. Zhuang and X.G. Xu	

Structure and Optical Properties of ZnO Thin Film Preparation Using RF Magnetron Sputtering	377
S.Y. Quan, L.M. Yang, C. Liu and X.D. Zhang	
Effect of Er and Yb Doping Concentration on the Luminescent Properties of Y₂O₃:Yb, Er Phosphors	381
P.D. Han, L. Zhang, Y. Chen, L.X. Wang and Q.T. Zhang	
Optical, Dielectric and X-Ray Absorption Properties of Soda-Based Glass Fabricated from Thai Quartz Sands Doped with Iron Oxide	385
S. Pongkrapan, S. Yamban, K. Won-In, P. Dararutana and N. Sirikulrat	
Analyses of New Diffraction Optics Element Design by Polymer Gratings	389
K.F. Yarn, W.C. Chang and W.C. Chuang	
Preparation and Characterization of ZnS/ZnO Compound Grown on Porous Silicon Substrate Using CVD Method	393
F.R. Zhong, X.Y. Lv and Z.H. Jia	
Structural and Photoluminescent Properties of Li-Doped ZnO Film Prepared by Sol-Gel Technique	397
P.F. Cheng, S.T. Li, H.C. Liu, L.X. Song, B. Gao and Q.P. Wang	
Optical and Structural Properties of TiO₂ Films Deposited from Different Titanium Oxide Materials by Electron Beam	401
F.X. Wang, C.K. Hwangbo, B.Y. Jung and J.H. Qi	
Photoluminescence Spectra of PbSe Quantum Dots with Different Reaction Time and Temperature	405
X.L. Sun, Y.H. Dong, C. Li and X.H. Liu	
Fabrication and Optical Properties of Monodisperse Fine Zinc Oxide Nanorods	409
C.P. Li, J. Zhang, H.M. Yu and X.J. Guo	
Effects of O₂ Ambient on Structural, Optical and Electrical Properties of Hafnium Oxide Thin Films Prepared by E-Beam Evaporation	413
C. Yang, Z.M. Chen, Y.X. Xi and T. Lin	
Microwave-Assisted Hydrothermal Preparation of YVO₄:Eu³⁺ Phosphor	417
E.G. Wang	
Uncooled Infrared Bolometer Arrays with α-Si and Metal Films	421
H. Liu, S.S. Wang, C.L. Cai and S. Zhou	
Properties of Different Nano-Metallic Particles in Optical Trapping	425
Y.H. Zhang, Y.A. Fang and D.Z. Yao	
The Influence of Dy³⁺ in the Novel Electron Trapping Materials (ETM) (ETM) SrS: Eu²⁺, Dy³⁺	429
J.Y. Sun, Z.X. Liu and H.Y. Du	
Luminescent Properties of Ca_{2-X}BO₃:Cl:xDy³⁺ Phosphors for White Light-Emitting Diodes	434
Q.X. Yang, X.G. Fu and X.J. Wang	
Investigation of Factors Induced the Non-Intrinsic Optical Properties for Water-Soluble CdSe Semiconductor Quantum Dots	437
H.K. Qiu, Y. Shen, L.J. Wang, J.C. Zhang and K.F. Qin	
Fabrication and Luminescence Properties of CaMoO₄:Eu³⁺ Red Phosphors for White LED	441
Z.H. Liang, Y.Z. Feng, X.X. Liu and G.H. Peng	
Hetero-Epitaxial Defects and Optical Characteristics of SiCGe Layers Grown on 6H-SiC Substrate	445
T. Lin, N. Lin, L.B. Li, C. Yang, H.B. Pu and Z.M. Chen	

II. Electronic and Electrical Materials

Carbon Black-LaCoO₃ Composite Material as Counter Electrode for Quasi-Solid-State Dye-Sensitized Solar Cell	451
V. Somsongkul, A. Wongchaisuwat, A. Worayingyong and M. Arunchaiya	
Impact Study of Substrate Materials on Wireless Sensor Node RF Performance	455
L.Q. Zheng, A. Mathewson, B. O'Flynn, M. Hayes and C. O'Mathuna	
Protonation Degree of Doped Polyaniline with Sulfosalicylic Acid as Function of the Synthetic Method	462
H. Huang, Z.C. Guo, J.K. Li and B.M. Chen	

Controllable Spin-Polarization of Electronic Transport through a Magnetic Quantum Dot in the Influence of Microwave Field	466
Y.Q. Zhou, J.M. Yao, L.M. Kong and R. Wang	
Intrinsic Carrier Concentration in Strained Si_{1-x}Ge_x/(101)Si	470
J.J. Song, H.M. Zhang, H.Y. Hu, X.Y. Dai and R.X. Xuan	
Electrochemical Characteristics of Lanthanum Hexaboride in the Environments Containing S²⁻	473
S.Q. Zheng, C.F. Chen, R.J. Jiang and D.N. Wang	
Electron Mobility Model for Strained-Si/(001) Si_{1-x}Ge_x	477
J.H. An, H.M. Zhang, J.J. Song and X.Y. Wang	
Synthesis and Properties of Conducting Polyaniline by Co-Doping with Sulfosalicylic Acid and Sulfate Acid	481
H. Huang, Z.C. Guo and J.K. Li	
Template-Free Synthesis of CuInS₂ Hollow Nanospheres	486
H.M. Hu and C.H. Deng	
Comparison of Bonding of Bulk PZT to Silicon by Intermediate Glass Layer and by Intermediate Au Layer	490
J. Sun, Y.G. Li, J.Q. Liu, C.S. Yang, D.N. He, T.D. Van, K. Tanaka and S. Sugiyama	
Evidence of Responsivity and Breakdown Voltage Improvement in SiCGe/SiC Phototransistor with Charge Compensation Layer	494
L. Cao, H.B. Pu, Z.M. Chen, T. Lin and S.J. Zhou	
Switching Characters of SiCGe/SiC Heterojunction: An Optically Triggered Lateral Power Transistor with Charge Compensation Layer	498
H.B. Pu, L. Cao, Z.M. Chen, T. Lin and S.J. Zhou	
Analysis on the Characteristics of Transient Signal Transmission Based on GaAs Materials	502
W. Liu and T. Lan	
Influence of Fe Doping on the Oxygen-Ion Diffusion and Electrical Conduction of La_{1.95}K_{0.05}Mo_{2-x}Fe_xO_{9-δ}	506
C. Li, D. Li and Q.F. Fang	
An Interesting Result of Dielectric Property for Novel Polyimides with Fluorene Groups	511
Y. Yuan, B. Xie and Y. Wang	
Crystal Structure and Microwave Dielectric Properties of Ca[(Li_{1/3}Nb_{2/3})_{0.92}Zr_{0.08}]O_{3-δ-x}TiO₂ Ceramics	515
G. Xiong	
The Quantum Length Dependence of Conductance in Molecular Device: An <i>Ab Initio</i> Study	519
C.J. Xia, H.C. Liu and Y.T. Zhang	
The Effect of the Coating Layer and the Doped Ion Concentration on the Dielectric Properties of SiO₂-PANI Electrorheological Fluid	523
W. Zhou, S. Liang and Y.M. Sun	
Effect of Deputy Group Metal Ions on the Fluorescent Properties of the CPPO-H₂O₂-Rhodamine B System	527
H.Y. Du, W.D. Xu, W. Zhou and J.Y. Sun	
Research of Transparent Conductive Film Prepared with Polymer	532
L.H. Li, Z.Q. Xin, W. Zhao, X.J. Tang, P. Du, X.W. Hu and X. Leng	
Study on the Dielectric Properties of Phosphoric Acid-Based Geopolymers	538
L.P. Liu, X.M. Cui, Y. He and J.L. Yu	
Synthesis and Characterization of the PANI/ITO Conducting Nanocomposites	542
B.J. Zhu, X.W. Wang, M.F. Zhu, Q.H. Zhang, Y.G. Li and H.Z. Wang	
Codoping Effects and Electrical Properties in Sol-Gel Li-Al Doped Zinc Oxide	546
H.E. Nian, E.J. Kim, Y. Zhou, X.F. Ren, Y.N. Pang and H.B. Wang	
Research of Activated Carbon for Supercapacitor Prepared by Organic Template Method	551
Q. Fang, R.Q. Wang and M.G. Deng	
Fabrication and Electrical Properties of Grain-Oriented 0.91Pb(Zn_{1/3}Nb_{2/3})O₃-0.09PbTiO₃ Ceramics	555
W.X. Cheng, X.Y. He, D.Z. Sun, X.S. Zheng and P.S. Qiu	
Test Approach Based on Decision Diagrams for Delay Fault Caused by Crosstalk Interferences in Digital Circuits	559
Z.L. Pan and L. Chen	

Implementation of ZnO Nanorods as Sensing Elements for a Surface Acoustic Wave Sensor C.F. Dee, K.C. Aw, B. Wright, X.D. Yan, C.W. Zou, W. Gao, M.M. Salleh, B.Y. Majlis and J.D. Lee	563
Template Synthesis of Activated Carbon for Supercapacitor R.Q. Wang, Q. Fang and M.G. Deng	568
Influence of the Distance between Target and Substrate on the Properties of TGZO Films Prepared by DC Magnetron Sputtering H.F. Liu, H.F. Zhang and A.P. Zhou	572
Preparation of Magneto-Optical Films TbFeCo by Magnetron Sputtering J.M. Zhang and Y. Zhang	576
Growth and Defects of Magneto-Optical YFeO₃ Single Crystal H. Shen, J.Y. Xu, A.H. Wu, M. Jin and G.J. Jiang	580
Preparation and Properties of Polyimide/SiO₂ Hollow Spheres Composite Films with Good Dielectric Property and Amazing XRD Spectra Y. Yuan, Y. Wang and B. Xie	584
Effects of Different Metal-Molecule Interface Conformations on the Electronic Transport in Molecular Junctions C.J. Xia, Y.T. Zhang and X.J. Zai	588
First Principles Investigation of Geometrical and Electronic Structure of Semiconductor Fe_{1-X}Co_XSi₂ W.J. Yan, S.Y. Zhou, F. Gui, C.H. Zhang, X.T. Guo and Y. Yang	592
Effect of LaCoO₃ Additive on the Electrochemical Behavior of Zinc Anode in Alkaline Solution R. Boonpong, A. Worayingyong, M. Arunchaiya and A. Wongchaisuwat	596
Microstructure and Electric Transport Characteristic of Microcrystalline Silicon Films Fabricated by Very High Frequency Plasma Enhanced Chemical Vapor Deposition X. Wang, R. Huang, J. Song, Y.Q. Guo, C. Song and Y.X. Zhang	600
Theoretical Investigation on the Electron Transport through Single Alkandithiol Molecules under Different Compression J.H. Yao, N. Li, J.R. Xiao and Y.W. Li	604
Effect of Li₂CO₃-V₂O₅ on the Sintering and Microwave Dielectric Properties of 0.6Mg₄Nb₂O₉-0.4SrTiO₃ Composite Ceramics C.J. Pei, G.G. Yao, X.L. Tian and H. Ma	608
Study on the Energy Structure of Amorphous Antireflection Er₂O₃ Films on Si(001) Substrates Y.Y. Zhu, Z.B. Fang, T. Ji and Y.S. Liu	612
First-Principles Study of Electron Transport Behavior through Porphyrin Molecular Wires Y.W. Li, J.H. Yao, X.S. Deng and X.X. Huang	616
Microstructure and Property Study of La₂Mo_{1.5}W_{0.5}O₉/Ag Composites C. Li, D. Li and Q.F. Fang	620
Electrical Properties of Hydrogen Terminated P-Type Diamond Film F.Y. Xia, L.J. Wang, J. Huang, K. Tang, J.J. Zhang and W.M. Shi	625
Influence of ZnO-B₂O₃-Na₂O Glass on Microwave Dielectric Properties of Ca[Li_{1/3}Nb_{2/3})_{0.8}Sn_{0.2}]O_{3-δ}-0.1TiO₂ Ceramics G. Xiong	629
Enhancement of Ionic Conductivity in La₂Mo₂O₉-Based Nanocrystalline Films Synthesized by a PVP Assisted Sol-Gel Method Z. Zhuang, D.M. Zhang, X.P. Wang and Q.F. Fang	633
Movement Realization of a Novel Fused Biconical Taper System Based on Electrical Heater C.J. Shuai, C.D. Gao, Y. Nie and S.P. Peng	637
Effect of Metallic Ions on Photoluminescence of Porous Silicon B.G. Zhai, M. Meng, Q.L. Ma and Y.M. Huang	641
Aggregation and Photoresponsive Behavior of Polyelectrolyte F.X. Qiu, Q. Zhang and D.Y. Yang	645
A Study on the Piezoelectric Properties of PZT and Doped PZT Thin Films by Sol-Gel Method J.M. Byun, J.S. Han, J.H. Park, S.E. Lee and H.C. Lee	650
Physical Analysis of Electric Field Effect on Metal-Induced Crystallization of a-Si G.W. Wang, H.X. Zheng, S.Y. Yao and F.S. Zhang	654

Electronic Structures of Oligomers of Pyrrole	658
B.G. Zhai, Q.L. Ma and Y.M. Huang	
Design of Novel Conjugated Polymer Poly(cyclopenta-1,3-Diene)	662
Y.M. Huang and Q.L. Ma	
Effect of Oxidant/Monomer Ratio on Conductivity of Ferric Chloride Oxidized Polypyrrole	666
Y.M. Huang, B.G. Zhai, Q.L. Ma and X.Y. Kong	
Test Scheduling Method Based on Cellular Genetic Algorithm for System on Chip	670
Z.L. Pan and L. Chen	
Relationship between Dopant 5-Sulfosalicylic Acid and Conductivity of Ammonium Persulfate Oxidized Polypyrrole	674
Y.M. Huang, Q.L. Ma, B.G. Zhai, F.F. Zhou and C.X. Pan	
Ionic Conductivity Measurements of LaF₃ Polycrystalline Powders	678
M. Zhou and Y.W. Tian	
Effects of Dopant 5-Sulfosalicylic Acid on Conductivity of Ferric Chloride Oxidized Polypyrrole	682
Y.M. Huang, F.F. Zhou, Q.L. Ma, M. Meng and C.X. Pan	
Preparation and Characterization of Conductive Polyaniline/Cerium Dioxide Composites	686
H. Huang and Z.C. Guo	
CdS-Intercalated Bentonite/Carbon Composite as Electrode for Sulfide Ion	690
K. Udomphan, A. Wongchaisuwat and L. Meesuk	
Transparent Conductive Electrode of Fluorine Doped Tin Oxide Prepared by Inkjet Printing Technique	694
W.Z. Samad, M.M. Salleh, A. Shafiee and M.A. Yarmo	
Microwave Dielectric Properties of Ca[(Li_{1/3}Nb_{2/3})_{0.95}Zr_{0.15}]O_{3+δ} Ceramics with Sm³⁺ Substitution at A-Site	698
G. Xiong	
Optimized Conductivity of Anthraquinone-2-Sulfonic Acid Sodium, 5-Sulfosalicylic Acid and Toluene-4-Sulfonic Acid Co-Doped Polypyrrole	702
Y.M. Huang, Q.L. Ma and X.Y. Kong	

III. Photonic Materials

Calculated Transmittance Spectra of One-Dimensional Photonic Crystals	709
Y.M. Huang, Q.L. Ma and Y.G. Cai	
High Birefringence Photonic Crystal Fibers	713
S.Q. Guo, M. Ge, P. Zhuang and L.P. Chang	
Transmission Spectra of One-Dimensional Photonic Crystals with Single Defect in Different Locations	717
B.G. Zhai, Y.G. Cai, Q.L. Ma and Y.M. Huang	
Effect of Surfactants on the Synthesis of Monodisperse Silica Spheres	721
H.L. Li, K.X. Li, L. Zhang, A.P. Fu, Y.C. Zhu, Y. Wan and X.S. Zhao	
Effect of Double Defects on Transmission Spectra of One-Dimensional Photonic Crystals	725
Y.M. Huang, Q.L. Ma, B.G. Zhai and Y.G. Cai	
Viewing Angle Dependent Transmittance Spectra of One-Dimensional Photonic Crystals	729
Y.M. Huang, B.G. Zhai and Y.G. Cai	
Transmission Spectra of One-Dimensional Photonic Crystal with a Centered Defect	733
B.G. Zhai, Y.G. Cai and Y.M. Huang	
Terminal Length Dependent Transmission Spectra for One-Dimensional Photonic Crystals with a Centered Defect	737
Y.M. Huang, B.G. Zhai, Y.G. Cai and Q.L. Ma	

IV. Electro-Optical Materials

Smart Windows with Different Thicknesses of V₂O₅ as Ion Storage Layers	743
S.N. Alamri and A.A. Joraid	
Study on Amphiphilic Molecules' Self-Assembling into Lamellar Phase Process	751
Y.M. Huang and W.W. Liu	

The Anti-Glare Detector Based on Liquid Crystal	
S.W. Wang, Y.H. Tang, X.S. Yang, H.H. Zhang, Y.K. Xu, X. Zhang, Y. Liu, G. Gao, T. Wang and Z.K. Yang	755
Synthesis and Mesomorphic Properties of a Series of Cholesteric Liquid Crystals	
Q.L. Ma and Y.M. Huang	759
Phase Separation in Polymer Dispersed Liquid Crystal Device	
Q.L. Ma and Y.M. Huang	763
Effect of Magnetic Field on Molecular Orientation of Disklike Nematic Liquid Crystalline Polymer	
S.F. Fu, J. Bai, Q. Zhang and X.R. Qu	767
Fractal Features Grown from Isotropic Melt of a Cholesterol Liquid Crystal	
Q.L. Ma and Y.M. Huang	771
Effect of Magnetic Field on Shear Stress of Disklike Nematic Liquid Crystalline Polymer	
S.F. Fu, J. Bai and X.R. Qu	775
Laser Diffractions in Lyotropic Liquid Crystal Formed by Liquid Dishiwash	
Y.M. Huang and W.W. Liu	779
Experimental Fabrication of Small Flat-Panel Field Emission Lamp with Printed Carbon Nanotubes as Field Emitters	
C. Li and Z. Wang	783
Dependence of Phase Transition of a Bent-Core Liquid Crystal on the Heating Rate	
Q.L. Ma and Y.M. Huang	787
Fabrication of Small Triode-Type Cold-Cathode Field Emission Display with Staggered Gate-Electrode Layer	
Y.K. Li and Y.P. Liu	791
Transmittance of Polymer Dispersed Liquid Crystal Device	
Q.L. Ma and Y.M. Huang	795
Fabrication and Optimization of Printed Carbon Nanotube Field Emitters for Flat-Panel Display Device	
C. Wu, T.H. Li and T.Y. Guo	800
Dependence of the Morphology of Polymer Dispersed Liquid Crystal on Temperature	
Q.L. Ma and Y.M. Huang	804
Preparation, Morphological Characteristics and Electro-Optic Property of Polyimide and Hybrid	
G.Y. Wu, H.B. Wang, C. Yao and F.X. Qiu	808
Photoluminescence of Liquid Crystal Infiltrated Porous Silicon Film	
Y.M. Huang, Q.L. Ma and B.G. Zhai	812

V. Photovoltaic Materials

Improved Photovoltaic Efficiency of Polymer Photovoltaic Cells by Microwave Irradiation	
B. Kim, K.K. Lee, S.K. Lee and E.H. Lim	819
The Effect of Donor:Acceptor Ratio on the Generated Photocurrent of Inkjet Printed Blended Poly (3-Octylthiophene-2,5-Diyl) and (6,6)-Phenyl C₇₁ Butyric Acid Methyl Ester Bulk Heterojunction Organic Solar Cells	
V. Fauzia, A.A. Umar, M.M. Salleh and M. Yahaya	823
Effect of C₆₀ on the Photovoltaic Properties of Polypyrrole-C₆₀ Heterojunctions	
F.F. Zhou, Q.L. Ma, Z.R. She, Y.M. Huang and C.X. Pan	828
Synthesis and Photovoltaic Properties of Oligothiophene Derivatives with Liquid Crystal Properties	
L. Guan, J. Wang, M. La, Y.P. Zhong, P. Liu and W.J. Deng	832
Porous Silicon Based Solar Cells	
Y.M. Huang, Q.L. Ma, M. Meng and B.G. Zhai	836
Preparation and Characterization of Silicon Nanowire Arrays for Solar Cell	
W.B. Yang, J. Wun, M. Wei, C. Wang and C.Q. Xie	840
Solid State Photovoltaic Cells Using Poly-[2-Methoxy-5-(2-Ethylhexyloxy)-Phenylene Vinylene as Hole Transport Material	
S.Y. Quan, L.M. Yang, X.D. Zhang and C. Liu	844

Synthesis of TiO₂ Nanopowders and their Applications in Dye-Sensitized Solar Cell	848
J. Sun, Y.X. Wang, M. Xu, T.L. Ma and X.Y. Fan	
Improved Stability of Unsealed Quasi-Solid-State Dye-Sensitized Solar Cell Using Poly(3,4-Ethylenedioxythiophene) Film as Layer Electrolyte	852
S. Vivekaphirat, C. Saekung, S.H. Thang, A. Wongchaisuwat and M. Arunchaiya	
Fabrication and Characterization of Dye-Sensitized Solar Cell with Different Microstructure ZnO	857
Y.X. Wang, T.L. Ma, X.Y. Fan and X.Y. Li	
Effects of Phosphoric Acid on the Photovoltaic Properties of Photovoltaic Cells with Laminated Polypyrrole-Fullerene Layers	861
F.F. Zhou, Q.L. Ma, Y.M. Huang, Z.R. She and C.X. Pan	
Performance Improvement of Inverted Polymer Solar Cells Using V₂O₅ as an Anode Buffer Layer	865
L. Shen, X.D. Zhang, W.B. Guo, C.X. Liu, D. Wei and S.P. Ruan	

VI. Other Functional Materials

Fabrication and Electric Transport in MgB₂ Doped with Nanosized Carbon-Based Core-Shell Structures	871
V. Sandu, G.V. Aldica, S. Popa, E. Cimpoiasu, F. Dumitrache and E. Sandu	
Synthesis by Stille Cross-Coupling Procedure and Electrochemical Characterization of Branched Polymers Based on Substituted 1,3,5-Triarylbenzenes	876
K.R. Idzik, R. Beckert, E. Tauscher, P. Ledwon, S. Golba, M. Lapkowski, P. Raptia, L. Dunsch and J. Frydel	
Self-Assembly of ABC-Type Amphiphilic Fluorinated Triblock Copolymers in Different Mixed Solutions	880
X.D. Tang and J. Xu	
Structure and Magnetic Properties of Fe-Doped TiO₂ Nano-Crystals by Nonaqueous Synthesis	883
C.F. Li, L. Yue, W. Jin, T. Zhang, H. Wang, Q. Xu, J.W. Wang, J. Shi, R. Xiong and D. Yin	
Properties of the Colossal Magnetoresistivity and its Field Sensitivity of the Mixed-Valence Manganites Nd_{0.52}Sr_{0.48}MnO₃	890
S.W. Ren, T.S. Liu and Z.H. Li	
Preparation and Characterization of Hybrid Graphene-ZnS Nanoparticles	894
H. Huang, H.H. Yu, L.D. Zhou, E.D. Gu and D.S. Jiang	
Optical Fiber Hydrogen Sensor Based on Magnetron Sputtered Pd/V₂O₅ Films	898
L.D. Zhou, J.S. Huang, Y. Shi, Y.W. Wu and H.H. Yu	
New Cross-Coupling Control of Independent Linear Contour Errors Based on Backlash	902
S.B. Wang and X.H. Liu	
A Simple and Novel Method for Large-Scale Preparation of Stable Copper Nanoparticles	906
Y.L. Wen, W. Huang and B. Wang	
Preparation of Ag₂S Thin Films by Electro-Deposition	910
X.Y. Guo, S.Y. Cheng, P.M. Lu and H.F. Zhou	
One-Pot Synthesis of Multi-Branched FeO(OH) Nanorods	914
D.H. Sun, J.L. Zhang, D.X. Sun and Y. Hao	
Study on the Relationship between Transparency and Mineral Compositions of Shoushan Stone	918
G.J. Jiang, Q. Tao, W.D. Liu, J.Y. Xu, H.Y. Zhao, Y.F. Xiong, Y.Z. Fang and C. Zhang	
Preparation and Characterization of Europium(III) Complexes with Cinnamic Acid by Microwave Process	922
M.H. Wan and X.H. Liu	
A New Underwater Acoustic Sensor Based on Fiber Bragg Grating Packaged with Polymer Material	926
Z.Z. Li, Y. Zheng, W.G. Dai and Y.C. Wang	
Influence of Polymer Material on the Sensitivity of Packaged Fiber Bragg Grating	930
Z.Z. Li, R.G. Sun, Q.J. Liu and Y.C. Wang	
Molecular Simulation of Hydrogen Storage on All-Silica ZSM-5 Zeolite	934
X.M. Du and E.D. Wu	

Composite Material of Glass Fiber Powder Reinforced Plastic Coating	939
J. Zhang, H.J. Su and J. Yu	
Analysis of Barium-Bearing Glass Doped with Chromium Oxide	943
K. Won-In, J. Dutchaneepheth, S. Pongkrapan, N. Sirikulrat and P. Dararutana	
Bending Angle Estimated Based on Inherent Strain Theory during Laser Forming	947
J. Zhou and H. Shen	
Synthesis of Ethyl Cellulose-Based Thermal- and Photodual- Responsive Copolymer via ATRP and their Aggregates in Aqueous Solution	952
X.D. Tang, D.J. Zhou and N.F. Han	
Plasmonic Responses of Gold Nanoparticles on Organic Vapor: Shape Effect	956
S. Nengsih, A.A. Umar, M.M. Salleh, M. Yahaya, M. Oyama and B.Y. Majlis	
Research on Cu-Fe Laser and Tungsten-Arc Inert-Gas Hybrid Welding	961
N.W. Liu and Y.S. Wang	
Preparation of TiO₂/Ga₂O₃ Nanowires by a Sol-Gel-Solvothermal Method	965
Y.H. Wang, D.J. Wang, A.J. Song, Z.G. Zhang and S.T. Song	
Single-Layer Silica Anti-Reflective Films Modified with Polytetramethylene Glycol	969
H. Tian, D.J. Yang and Y. Xu	
The Stability of μc-Si:H Materials	974
Z.W. Zhao, Y.L. Liu and X.Y. Liu	
Hanle Effect in Semiconductor with Weak Spin-Orbit Coupling	978
Y.L. Mi, X.Q. Zhao and L. Wang	
One Step Solvothermal Synthesis of Flower-Like β-In₂S₃ Microstructures	982
C.H. Deng, H.M. Hu and G.Q. Shao	
Template-Free Microwave-Assisted Preparation of ZnO Spherical Microcrystals	986
C.H. Deng, H.M. Hu and G.Q. Shao	
A 2D Simulation of Grain Boundary Geometry for Normal Grain Growth	990
X. Luo and W. Zhao	
Nonlinear Infrared Transmission through and Reflection off Antiferromagnetic Sandwich	995
J. Bai, S.F. Fu, S. Zhou, L. Niu and X.Z. Wang	
Evaluation of Properties of Lapped PZT Ceramics and Silicon Cantilever Based on Eutectic Bonding and Dicing Process	999
Y.G. Li, J. Sun, J.Q. Liu, C.S. Yang, D.N. He, K. Tanaka and S. Sugiyama	
Fivefold Twin Center in CVD Diamond Film	1004
Y.S. Huang, C.P. Luo, W.Q. Qiu and H.W. Liu	
Effects of Vacancies on the Thermal Expansion of Mercury Indium Telluride Crystals	1008
L.H. Wang	
Study on the Tri-Functional Copolymer Containing 1,3,4-Oxadiazole, Carbazole and Terbium Complex	1012
W. Wang, L.J. Liu and M.J. Lin	
Fabrication Multi-Layer Polymer Microstructures by X-Ray Lithography with Alignment	1016
Y.G. Li and S. Sugiyama	
Study on the Corrosion Productions Formed on the Surface of Lanthanum Hexaboride in the Sour Gas Environments	1020
P.Y. Wang, S.Q. Zheng, C.F. Chen, R.J. Jiang and D.N. Wang	
Synthesis of Plate-Like SrTiO₃ Particles	1024
W. Zhao, R.C. Pan and H. Xue	
Low Temperature Sintering of (Ca_{0.9375}Sr_{0.0625})_{0.25}(Li_{0.5}Sm_{0.5})_{0.75}TiO₃ Microwave Dielectric Ceramics	1028
Y.M. Li, H. Zhang, Z.M. Wang, Y. Hong and Z.Y. Shen	
Electrochemically Deposited Aluminum in Template of Porous Silicon Film	1032
B.G. Zhai, Q.L. Ma, M. Meng and Y.M. Huang	
Structural Transition and Magnetic Properties of (Sr_{2-3x}La_{2x}Ba_x)FeMoO₆	1036
Z.F. Xu, J. Liang, J. Pei, Y.Y. Yin and C. Li	
Transparent Conducting TGZO Thin Films Deposited by DC Magnetron Sputtering at Room Temperature	1041
H.F. Liu and H.F. Zhang	

Influence of the Sputtering Pressure on the Properties of TAZO Films Prepared by DC Magnetron Sputtering	1045
H.F. Liu and C.K. Yuan	
Triply-Responsive Poly(N,N-Dimethylaminoethyl Methacrylate) with an Azobenzene Moiety	1049
X.D. Tang, X. Wang and Y.Y. Dou	
Wet-Chemical Processing and Angle-Dependent Optical Properties Characterization of Mica/TiO₂/Al₂O₃/M₂O₃ (M = Fe, Cr, Co) Pigments	1053
H.Y. Du, C.X. Liu and J.Y. Sun	
Synthesis and Characterization of D-Galactopyranose-Containing Amphiphilic Block Copolymers via ATRP	1057
X. Wang, Y.Y. Dou, M.S. Pei and X.D. Tang	
Microstructure and Wear Resistance of Laser Cladding of Ni-Based Alloy on Copper Substrate	1061
Y.S. Wang, N.W. Liu and F.D. Zhu	
Study on Surface Coating of BaO- B₂O₃-SiO₂ Glass-Ceramic Powders with Al₂O₃ for Water-Based Tape Casting	1065
Y. He, X.M. Cui, L.P. Liu and Z.Y. Liang	
Study on Theoretical Basis and Process Optimization for Solar Grade Silicon Fabrication	1069
Y.C. Gao and B.T. Zhao	
Analysis of Stress in Aircraft Components Using Lock-In Thermography	1073
X. Liu, J.Y. Liu, X.D. Li and G.Y. Zhang	
Fabrication the Texture Zinc Oxide Thin Films and its Application in Hydrogenated Amorphous Silicon Solar Cell	1077
Y.H. Hu, H.J. Xu, H. Gao and Y.C. Chen	
Preparation and Properties of Zn_{1-x}Co_xO Magnetic Microspheres	1081
Z.F. Liu, Q.H. Zhang, L.Y. Chen, Y.G. Li and H.Z. Wang	
Fabrication of 1-3 Type Multiferroic Nanostructured Composite Films by Chemical Methods	1085
X. Zeng, X.Y. He, D.Z. Sun, W.X. Cheng, P.S. Qiu and X.S. Zheng	
Preparation and Characterization of Silver Myristate/AgBr Composite Particles	1089
Y.L. Li, J.N. Ning, Y.M. Chen, G.F. Liu and G.Q. Zhang	
Modified Rod in Tube Technique for Fabrication of Tellurite Glass Preforms	1093
G.H. Liao, J.J. Xing, Q.L. Chen and Q.L. Chen	
Investigation and Preparation of the SCR Catalysts Nano-Co/Ce-V-Zr-TiO₂	1097
X.F. Ren, F. Wang, Y. Zhou, H.E. Nian, Y.N. Pang and H.B. Wang	
Effect of the Type of Alcohol on the Properties of ZnO Nanopowders Prepared with Solvothermal Synthesis	1103
Y.X. Wang, J. Sun and X. Yu	
Synthesis and Antibacterial Activity of Acylated Chitosan	1107
J.T. Wang and Z.R. Lian	
The Important Role of Oxidant in Copper Interconnection Chemical Mechanical Polishing for GLSI	1111
X.Y. Liu, Y.L. Liu, X.H. Niu, Z.W. Zhao and Y. Hu	
Bulk PZT Thick Film Preparation on Silicon Wafer and its Application for MEMS Power Generator	1115
G. Tang, J.Q. Liu, Y.G. Li, H.S. Liu, C.S. Yang, D.N. He, V.D. Dao, K. Tanaka and S. Sugiyama	
Electrodeposition of Ni and Ni-Cu Nanowires in Rectified Porous Anodic Alumina Membrane	1121
Y. Zuo, J. Tang, X.T. Li, Y. Zhao, H.L. Gong and S.L. Qiu	
Controlled Synthesis of Fe₃O₄ Nanosheets via P123 Micelle Template	1125
D.H. Sun, D.X. Sun and Y. Hao	
Preparation of the Kondo Insulators FeSi by Magnetron Sputtering	1129
J.M. Zhang, Q. Xie, V. Borjanović, Y. Liang, W.X. Zeng, D.P. Fu, D.J. Ma and Y. Wang	
Growth and Etching Studies of MgO-Doped LiNbO₃ Single Crystal	1133
X.H. Li, J.Y. Xu, M. Jin, H. Shen, B.L. Lu and Z.Y. Wang	
Measurement of Absorption Spectrum of Media by Grating Spectrometer	1137
H.C. Liu, X.A. Yan, C.J. Zhu, C.J. Xia, H.W. Yu, J.F. Wu and G.S. Xu	

Magnetic Properties of Ferrous Ferric Oxide Confined in Porous Silicon	1142
Y.M. Huang, B.G. Zhai, Q.L. Ma and M. Meng	
Growth and Ferroelectric Properties of PZNT Single Crystals from High Temperature Solution	
J.Y. Xu, H. Shen, S.J. Fan, M. Jin, B.L. Lu and M.L. Shi	1146
Solvothermal Synthesis of CuInS₂ Porous Microspheres	
H.M. Hu and C.H. Deng	1150
Preparation and Characterization of Spin-Coated Tetra-(tert-butyl) Phthalocyanine Copper Films	
B. Wang, Y.Q. Wu, Z.M. Chen, C.Y. He and W.B. Duan	1154
Morphological Character and Statistical Property of Random Surface of ZnO Thin Film Prepared by RF Magnetron Sputtering	
N.Y. Zhang, Q.S. Huo, L.X. Han, G. Fu, J.Q. Zhao and F.X. Wang	1159
Synthesis of Nickel Hydroxide with Different Morphologies Using an Ionic Liquid	
C.Y. Xu and Y.X. Hua	1163
Preparation and Characterization of Nickel Complex [Ni(1-MeIm)₆(BF₄)₂] in Ionic Liquid	
J.S. Sun and C.Y. Xu	1167
Nanocrystalline Silicon Films Grown at High Pressure in Very High Frequency Plasma Enhanced Chemical Vapor Deposition System	
Y.Q. Guo, R. Huang, J. Song, X. Wang and Y.X. Zhang	1171
Synthesis and Characterization of Silver Nanoparticles Coated Titanium Dioxide Nanowires	
K. Zhang, L. Yu, Z.X. Lu and G. Song	1175
Study of the Dynamic Modulation Transfer Function of Modified Super-Wide-Angle Sagnac Imaging Interferometer	
Y.H. Tang, T. Peng, L. Qin, X.D. Duan, O.Y. Qu, X.G. Cao and Q.J. Jia	1179
A Novel Method for the Fabrication of Infrared Focal Plane Arrays Based on the Amorphous Silicon	
H. Liu, W.G. Liu, C.L. Cai and S. Zhou	1183
Phosphorus Content Dependent Sliding Wear Behaviors of Electroless Ni-P Deposits	
Y.H. Cheng, Z.C. Zhu, Z.T. Han and Y. Zou	1187
Applications of GPRS in the Mine Monitoring and Control System	
J.Y. An, L. Zhang and S.B. Ma	1192
Sinterability and Microwave Dielectric Properties of Li₂CO₃-V₂O₅ Added Mg₄Nb₂O₉-CaTiO₃ Composite Ceramics	
C.J. Pei, G.G. Yao, H. Ma and X.L. Tian	1196
A New Method for Calculating the Velocity Resolution of Television-Based Detection System	
Q. Guo, F.G. Wang and X.Y. Lu	1200
Study on the Evolution of Surface Morphology of Hetero-Epitaxy Growth of ZnO Thin Film	
J.Z. Xiao, J.A.C. Paixão and Q.J. Jia	1205
Properties of ZnO/Diamond Film Heterojunction	
F.Y. Xia, L.J. Wang, J. Huang, K. Tang, J.J. Zhang and W.M. Shi	1209
Growth of Undoped GaAs Single Crystal by Pulling-Down Method	
M. Jin, J.Y. Xu, Q.B. He, Y.Z. Fang, H. Shen, Z.Y. Wang and G.J. Jiang	1213
Structure and Electrochemical Performance of Amorphous Nickel Hydroxide Doped with La and Al	
C.J. Liu, C.X. Xing, S.J. Chen and Y.W. Li	1217
Response Sensitivity of Faraday Magneto-Optical Effects of Ferrofluid	
S.B. Wang, C.B. Yu, L. Du, C.X. Sun and J. Yang	1221
Thermal Curable Silver Conducting Paste Used for the Preparation of the Tag Antenna Coils of the Radio Frequency Identification	
W.C. Xu, S.Y. Luo, L.X. Huo and X.L. Zhang	1225
Structure and Low Melting Property of Vanadate Tellurite Glass	
S.Y. Luo, W.C. Xu, X.L. Zhang and L.X. Huo	1229
Technology of Ultrasonic and Pulse Electrodeposition for ZnSe Thin Films	
C.G. Zhang, K.Z. Li and J. Miao	1234

Effect of Different Reaction Solvents on the Hydrophobic and Structural Properties of Silica Cryogels	1238
L.F. Su, L. Miao, S. Tanemura and G. Xu	
ZnO/SiO₂ Nanocomposite Cryogels Prepared by Vacuum Freeze Drying	1242
L.F. Su, L. Miao and S. Tanemura	
Effect of Different Washing Treatments on the Formation of Titanate Nanotubes	1247
C.Y. Liu, L. Miao, R. Huang and S. Tanemura	
Prepared and Microwave-Absorption Properties of BN Coated Ni Nanocapsules	1252
G.M. Shi, S. Lian, G. Song and J.B. Zhang	
Synthesis and Magnetic Properties of CoAl₂O₄ Coated Co Solid Solution Nanocapsules	1256
G.M. Shi, G. Song, S. Lian and J.B. Zhang	
The Stochastic Resonance of the Single-Mode Laser with the Color Noises Correlation Period Modulation and Signal Modulation	1260
X.D. Yan and D.Y. Chen	
Preparation and Properties of Cationic Starch with High Degree of Substitution	1264
Q.X. Liu, J.L. Li and W.C. Xu	
Preparation of Starch Polyacrylamide Graft Copolymer and its Application in Paper Packaging Material	1268
Q.X. Liu, W.C. Xu and J.L. Li	
Effects of Heat Treatment on Growth of BaSi₂ Film on Si(111) Substrates	1273
Z.Y. Yang, Z.T. Hao and Q. Xie	
Trace Addition of Ammonia and Water on the Growth of Cabon Nanotubes Prepared by PECVD Method	1277
Y.B. Fu, W.C. Xu and D.L. Li	
Thermal Expansion Property of P₂O₅ Doped Lithium Aluminosilicate Glass-Ceramic Synthesized by Sol-Gel Process	1281
Z.H. Xiao, W.Y. Luo and S.L. Wang	
Effect of Heat Treatment Conditions on Microstructure and Infrared Transmission Property of Germanate Oxyfluoride Glass-Ceramics	1285
Z.H. Xiao and S.L. Wang	
Syntheses and Thermo-Decomposition Process of the Co-Doping VO₂(M) Precursor	1289
A.H. Bi and J.H. Zhu	
Effect of Substrate Temperature on the Properties of Al-Doped ZnO Films by RF Magnetron Sputtering	1293
Y.B. Wu, S. Lei, Z. Wang, R.H. Zhao, L. Huang and H. Li	
Interface Properties of Au/CdZnTe Formed by Different Method	1298
K.F. Qin, L.J. Wang, J.J. Zhang, J.H. Min, X.Y. Liang, J. Huang, K. Tang and Y.B. Xia	
Numerical Simulation and Experiment on Assemble Nozzles' Flow Field in Laser Cutting	1302
J. Hu, Q.Q. Cao and J.W. Luo	
Simulation Study of Microstructure Transition of Liquid Ge during Rapid Cooling Solidification	1306
C.Y. Zhu and Q. Xie	
Structure and Piezoelectric Properties of (1-X)K_{0.49}Na_{0.51}NbO_{3-X}LiTaO₃ Lead-Free Piezoceramics	1310
Y.M. Li, L. Jiang, Z.Y. Shen, R.H. Liao and Z.M. Wang	
Effect of Heat Treatment on Structural and Optoelectronic Properties of GaN Epilayers	1314
J.P. Mei, X.J. Xie, Q.Y. Hao, X. Liu, J.J. Xu and C.C. Liu	
Investigation on Preferential Chemical Etching of Dislocations in Sapphire	1318
X.J. Xie, Y.Y. Li, M. Wang, L.M. Liang, Q.Y. Hao and C.C. Liu	
Studying the Quantum-Well Structural Photonic Crystal with Odd-Number Channeled-Filterring Phenomena	1321
Q.H. Lu, Y.J. Gao and A. Su	
Synthesis and Characterization of Superparamagnetic NiFe₂O₄ Nanoparticles	1325
D.H. Sun, D.X. Sun and Y. Hao	
Finite Element Analysis on the Fatigability of the 4G1 Engine Support with Software ANSYS	1329
X.G. Fu and X.J. Wang	

Pavement Performance and Anti-Aging Property of Microscale Flyash/SBS Modified Asphalt

X.D. Tang, X.L. Kong, Z.G. He and J. Li

1333

Spin and Charge Currents from Applying a Microwave Field to a Quantum Dot

Y.Q. Zhou, J.M. Yao, L.M. Kong and R. Wang

1337