

# Table of Contents

## Preface

<b>Foundation of the Standard Curve Database for Quantitative Analysis by Internal Standard Method Based on XRD</b>	
J.P. Wu, C.Y. Yao, L.Y. Cao, J.F. Huang, H.Y. He and H. Zhu	1
<b>Synthesis and Characterization of CoO<sub>2</sub> Nanosheets</b>	
C.X. Li, H.F. Xu, T. Feng, N. Zhang and Q. Li	5
<b>Synthesis, Structure and Properties of Super Fine LiMn<sub>2</sub>O<sub>4</sub></b>	
J. Song, B. Xu, D.X. Huang, C.X. Li and Q. Li	9
<b>Formation Mechanism of SrBi<sub>2</sub>Nb<sub>2</sub>O<sub>9</sub> Prepared by Melting Salt Method</b>	
B.R. Li, X.T. Liu, Y.S. Zheng and H.B. Chang	12
<b>Determination of Heavy Metals in Inorganic Materials by XRF</b>	
J. Song and T. Cheng	16
<b>Particle Shape Characterization of Inorganic Powders by SEM and Image Analysis</b>	
Z.M. Li, M. Tan, B. Jiang, Z.W. Chen and W.J. Si	18
<b>Determination of Particle Size Distribution of Nano-TiO<sub>2</sub> Coating Film by AFM and Image Analysis</b>	
Z.M. Li, Z.W. Chen, M. Tan, K.J. Xu and B. Jiang	22
<b>Application of Raman Spectroscopy on Size Driven Phase Transition in Bismuth Titanate</b>	
B.R. Li, B. Cao and C. Lu	25
<b>Mechanochemical Synthesis and Characteristics of Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub></b>	
H. Wu, C. Chen, D.Y. Jiang, T. Feng and Q. Li	29
<b>ZnFe<sub>2</sub>O<sub>4</sub> Modified by Fe(NO<sub>3</sub>)<sub>3</sub> for the Synthesis of Ionic Ferrofluids</b>	
A.R. Wang, J. Li, Q.M. Zhang and H. Miao	32
<b>XRD Study on D-Values of Modified PbTiO<sub>3</sub> Ceramics during Poling Process</b>	
Y.W. Zhang, X.G. Tang, A.X. Kuang and H.L.W. Chan	37
<b>Application of X-Ray Diffraction at the Study on the Preparation and Structure of α-Al<sub>2</sub>O<sub>3</sub> Nanocrystal</b>	
J. Li and B.W. Pan	41
<b>Effect of the Acidity on the Morphology and Composition of Nano-TiO<sub>2</sub>/ Cu Particles</b>	
S.G. Du, J. Yan, B. Wang and H.P. Cui	45
<b>Effect of Severe Plastic Deformation on Microstructures and Properties of AgCuO Composites</b>	
X.L. Zhou, J.C. Cao, J.T. Li, J.C. Chen, Y.Y. Peng, K.H. Zhang, J. Yu, H. Feng and D. Zhang	49
<b>Sol-Gel Preparation, Characterization and Photocatalytic Activity of Co Doped Nano-TiO<sub>2</sub></b>	
L.N. Meng, W.Y. Xu and T. Xu	54
<b>Nanostructure of a Glass-Like Carbon Characterized by X-Ray Diffraction and Electron Energy Loss Spectroscopy</b>	
Z.L. Zhang, R. Brydson, A. Westwood and B. Rand	58
<b>Novel Phase Transformation Phenomenon of Potassium Teteratitanate Nanofibres Synthesized from H<sub>2</sub>TiO<sub>3</sub></b>	
N. Zhang, H.F. Xu, Y.L. Li, Q. Li and C. Zhang	62
<b>Crystal Structure and Chemical Composition of BIMEVOX (ME=Mn)</b>	
X.H. Yu, H.X. Gu, G.Q. Shao, B.L. Wu, S.X. Ouyang, X.B. Li and J. Wang	66
<b>Analysis and Evaluation of the Comprehensive Property for Transparent Aluminum Oxynitride (ALON) Ceramics</b>	
J.Y. Niu, Z.W. Chen and L. Feng	70
<b>Structural Analysis of Multiphase La<sub>1-X</sub>Sr<sub>X</sub>Co<sub>1-X</sub>Fe<sub>X</sub>O<sub>3-δ</sub></b>	
Y.J. Gu, Z.N. Yang, Y.B. Chen, H.Q. Liu, H.K. Wu, L. Chen, M. Wang, L.L. Zuo, X.W. Huang, X.B. Liu, W.G. Wei, C. Lu, Y. Hu, Z. Guo and Z.W. Hu	74
<b>Characterization of Silicon Carbide Films Prepared by Chemical Vapor Deposition</b>	
F.T. Meng, S.Y. Du and Y.M. Zhang	78
<b>Preparation and Characterization of Titanate Nanotubes by Hydrothermal Method</b>	
Z.S. Chen, W.P. Gong, T.F. Chen, G.L. Huang and W.Y. Xu	82

<b>Effect of Nitrogen Pressure on the Morphology of Combustion Synthesized <math>\beta</math>-Si<sub>3</sub>N<sub>4</sub> Crystals</b>	86
W.K. Li and H.R. Zhuang	
<b>Effect of Compact Density on the Combustion Synthesizing Silicon Nitride Crystals</b>	89
S.S. Luo, W.K. Li and H.R. Zhuang	
<b>Microstructure of TiC/Nb-Ni Cermets Cladding Layer</b>	92
M.Y. Wang, Z.D. Liu and L.P. Zhao	
<b>Preparation and Characterization of La<sup>3+</sup> Doped TiO<sub>2</sub> Thin Films Derived by Innovative Ultrasonic-Sol-Gel Method</b>	96
W.Y. Xu, C. Yang, M.B. Luo, L.N. Meng and G.L. Huang	
<b>Methods for Determining the Interface Strength and Residual Stress of Laminated Ceramics</b>	100
Y. Qiu, Y.W. Bao, Y.H. Liu, X.F. Wang and L. Tian	
<b>Shape Effects of Indenter on the Depth-Sensing Indentation</b>	105
X.Y. Shi, L.Z. Liu and Y.W. Bao	
<b>Effect of Humidity on Delayed Propagation of Indentation Crack under Sustained Electric Field in Ferroelectric Ceramics</b>	109
L.W. Li, J.X. Li, Y.J. Su, W.Y. Chu and L.J. Qiao	
<b>Evaluation of Elastic Modulus and Strength of Glass and Brittle Ceramic Materials by Compressing a Notched Ring Specimen</b>	114
D.T. Wan, Y.W. Bao, X.G. Liu, H. Zhao and L. Tian	
<b>High Temperature Wear of Ti<sub>3</sub>AlC<sub>2</sub> Sliding against Al<sub>2</sub>O<sub>3</sub></b>	118
F. Jiang, S.F. Ren, J.H. Meng and J.J. Lu	
<b>Wear Behaviors of TiCN Cermet under Different Concentrations of Abrasive Slurries from Carborundum, Corundum and Silica Sands</b>	121
X.Y. Ren, Z.J. Peng, Z.Y. Wang, H.Y. Rong, Z.Q. Fu, C.B. Wang, L.H. Qi and H.Z. Miao	
<b>Wear Behaviors of Cemented Carbide Cermet YG8B under Different Concentrations of Abrasive Slurries from Carborundum, Corundum and Silica Sands</b>	125
H.Y. Rong, Z.J. Peng, C.B. Wang, J. Li, Z.Q. Fu, W. Yue, X. Yu and X.P. Lin	
<b>Solid Particle Erosion-Wear Behavior of Alumina Ceramics at High-Temperature</b>	129
X.J. Wang, M.H. Fang, H.R. Sun, S.P. Huang, Y.G. Liu and Z.H. Huang	
<b>Microstructure Transformation and Mechanical Properties of the Large-Bulk Solidified Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> (Y<sub>2</sub>O<sub>3</sub>) Micro-Nanocrystalline Composites Prepared by Combustion Synthesis under High Gravity</b>	132
Z.M. Zhao, L. Zhang, Y.G. Song, S.Q. Li and W.G. Wang	
<b>Effects of Aging on the Mechanical Properties of Dental Pigmented 3Y-TZP Ceramics</b>	136
Y.F. Yi, N. Wen, D. Bin, L.Q. Shao, C. Wang and J.M. Tian	
<b>Fracture Behavior of Silicon Carbide Measured by Different Test Methods</b>	140
L. Jiang, Y.H. Chen, F. Han and L. Jiang	
<b>Ultra-High-Hardness (Ti, W)C Matrix Metal Ceramics Prepared through Combustion Synthesis under High Gravity</b>	144
C.Z. Pan, L. Zhang, Z.M. Zhao, J. Zhang and G.L. Su	
<b>Influence of Substrate Hardness on Coating-Substrate Adhesion</b>	148
C. Zhang, T. Hu and N. Zhang	
<b>Fracture Toughness of CNTs/AlN Ceramics Tested by Indentation</b>	151
J.C. Kuang, H.L. Wang, X.G. Zhou and Y.J. Deng	
<b>Microhardness of Various Bullet-Proof Ceramics</b>	154
T. Ma, Z.L. Yan, J.M. Gao, Z.L. Zhou and J.C. Zhang	
<b>High Temperature Creep Behavior of <i>In Situ</i> TiC/Ni Composites</b>	157
B. Li, Z.D. Liu, S. Wang and Y. Chen	
<b>Finite-Element Simulations of Residual Stresses Developed in Ti<sub>3</sub>AlC<sub>2</sub> Diffusion Bonds with a Si Interlayer</b>	161
X.H. Yin and H.D. Wang	
<b>DEM Simulation of Machining Damage in SiC Pre-Stressing Cutting Process</b>	165
S.Q. Jiang, Y.Q. Tan, G.F. Zhang and D.M. Yang	
<b>Cracking Stress of Fiber-Eutectics and Transformation Particles Composite Ceramic</b>	170
X.Q. Liu, X.H. Ni, S.Q. Zhang, Z.G. Cheng and L. Zhao	
<b>Two Dynamic Fracture Problems Concerning Bridging Fiber Pull-Out of Composite Materials</b>	173
N.C. Lü, Y.H. Cheng and Y.T. Wang	

<b>Bridging Toughening Mechanism of Fiber Eutectics and Transformation Particles Composite Ceramic</b>	178
X.H. Ni, X.Q. Liu, B.H. Han, G.H. Zhong and T. Sun	
<b>Effective Elastic Constants of Fiber-Eutectics and Transformation Particles Composite Ceramic</b>	182
B.F. Li, J. Zheng, X.H. Ni, Y.C. Ma and J. Zhang	
<b>Binding Performance of a Zirconia Framework Material and Veneering Porcelain</b>	186
L.Q. Shao, B. Deng, Y.F. Yi, Q. Liu, W.W. Zhang and N. Wen	
<b>Electrical Properties of ZnO Film Prepared by Thermal Oxidation Method</b>	190
Y.H. Liu, Z. Yan, Y. Lu and X.Y. Zhou	
<b>Electrical Properties and UV-Visual Spectra of (Na<sub>0.535</sub>K<sub>0.48</sub>)NbO<sub>3</sub> Ceramics Doped with Bi<sub>2</sub>O<sub>3</sub> and Fe<sub>2</sub>O<sub>3</sub></b>	194
Y.Q. Liu, Z.Q. Gong, L. Ma, D.F. Xu and D.Z. Sun	
<b>Electrical Characteristics and Microstructures of Eu<sub>2</sub>O<sub>3</sub>-Doped Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> Thin Films</b>	197
X.A. Mei, M. Chen, K.L. Su, A.H. Cai, J. Liu, W.K. An, Y. Zhou and M. Jia	
<b>Preparation and Properties of Niobate Thin Films from Nanosheets</b>	201
J. Chu, Y.L. Li, B. Xu, N. Zhang and Q. Li	
<b>Fabrication and Piezoelectric Anisotropy of PFCs</b>	204
J. Liu, Y.Q. Qiu, C.F. Chen, Y. Luo and P. Chen	
<b>High Discharge Rate Lithium Ion Batteries with the Composite Cathode of LiFePO<sub>4</sub>/Mesocarbon Nanobead</b>	208
Y.J. Gu, C.S. Zeng, Y.B. Chen, H.K. Wu, H.Q. Liu, L. Chen, M. Wang, L.L. Zuo, X.W. Huang, X.B. Liu, J. Zhang, C. Lu, Y. Hu, Z. Guo and Z.W. Hu	
<b>Ferroelectric Properties and Microstructures of Pr<sub>6</sub>O<sub>11</sub>-Doped Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> Thin Films</b>	211
M. Chen, X.A. Mei, K.L. Su, A.H. Cai, J. Liu, W.K. An and Y. Zhou	
<b>Depolarization Behavior of Lead-Free (Bi<sub>1/2</sub>Na<sub>1/2</sub>)TiO<sub>3</sub>-Based Ferroelectrics with Different Li<sup>+</sup> Introduction Sources</b>	215
N. Lei, M.K. Zhu, L.F. Wang, P. Yang, Y.D. Hou and H. Yan	
<b>Defects of GaAs Crystals Grown by the Pulling-Down Method</b>	219
M. Jin, J.Y. Xu, Q.B. He, Y.Z. Fang, H. Shen, G.J. Jiang and Z.Y. Wang	
<b>Effect of Sample Shape and Size on the Thermal Shock Resistance for Ultra-High Temperature Ceramics</b>	223
T. Zeng, S. Yan, Y. Gu, L.L. Jiang, D.N. Fang and Y. Gao	
<b>Sintering Behavior of Ceramic Green Body by Thermal Analysis Techniques</b>	226
H.Q. Zhou, H.N. Xiao and X.Y. Hu	
<b>Steady Thermal Stress in a Ceramic/FGM/Metal Composite EFBC Plate Considered Temperature Dependency</b>	231
Y.J. Xu, D.H. Tu and J.H. Jia	
<b>Fabrication of Silicon Nitride Ceramics with Magnesium Silicon Nitride and Yttrium Oxide as Sintering Additives</b>	235
G.J. Jiang, J.Y. Xu, H. Shen, Y. Zhang, G.H. Peng, H.R. Zhuang, W.L. Li, S.Y. Xu and Y.J. Mao	
<b>Thermal Dehydration Kinetic Mechanism of Aluminum Sulfate Hydrates</b>	238
G.H. Bai, P. Xu, P.C. Li and T.S. Wang	
<b>Preparation and Negative Thermal Expansion Property of ZrWMoO<sub>8</sub></b>	245
J. Yang, Q.Q. Liu, C.L. Zang and X.N. Cheng	
<b>Thermal Stability of CrAlN Coatings</b>	249
M. Zhu and M.S. Li	
<b>Accuracy Research on the Measured Values of the Ceramic Material's Normal Temperature Infrared Emissivity</b>	253
X.Y. Gu, T. Luo, S.L. Wu and J.M. Wu	
<b>Preparation and Properties of Porous Barium Ferrite</b>	257
S.F. Zheng, G.X. Xiong, H.Q. Huang and L.J. Luo	
<b>Comparative Study on Mn-Zn Ferrites by One-Step Synthesis and Conventional Two-Step Synthesis</b>	260
Q.K. Xing, Z.J. Peng, X.L. Fu, Z.Q. Fu, C.B. Wang, L.H. Qi and H.Z. Miao	
<b>Preparation of Rare-Earth Permanent Magnetic Strontium Ferrite by Microwave Sintering Process</b>	264
H.H. Jiang, M.L. Jin, Z.Y. Wang, Q.Z. Chen and H.C. Qian	

<b>Structure and Luminescence Characteristics of Yttrium Hydroxide Nanosheets Doped with Eu<sup>3+</sup></b>	269
L. Zhang, D.Y. Jiang, Z.L. Liu and Q. Li	
<b>Microstructure and Luminance Properties of Integrated Translucent Alumina Tube Used in Metal Halide Lamps</b>	272
L. Feng, Z.W. Chen and J.Y. Niu	
<b>Luminescence Properties of Eu<sup>2+</sup> Doped Ca-<math>\alpha</math>-SiAlON Phosphor</b>	277
L. Li, C. Zhang, T. Feng, H.F. Xu and Q. Li	
<b>Preparation and Photocatalysis of Sulfur-Doped Nano-TiO<sub>2</sub>/Ti Film</b>	281
Y.L. Jiang, Y. Liu, L.J. Yang, G.Q. Li and H.L. Liu	
<b>Photocatalytic Activity of F<sup>-</sup>/ SiO<sub>2</sub>/TiO<sub>2</sub> Nanowires</b>	284
S.H. Zhang, J.J. Wang, B. Xie and Y. Wei	
<b>Structural and Optical Properties of 6H-SiC Helium and Oxygen Implanted at 700 K</b>	287
H.H. Zhang, W.M. Gao, Y.L. Shen and B.S. Li	
<b>Influence of Background Material on 3 Veneered All-Ceramic Core Materials</b>	293
R.J. Lu, T.T. Ma, Y.F. Yi, L.Q. Shao, J.M. Tian, K.L. Hou, N. Wen and B. Deng	
<b>Relative Translucency Test of 3 All-Ceramics System Core Material</b>	298
B. Deng, Y.F. Yi, L.Q. Shao, J.M. Tian, K.L. Hou, T.T. Ma, R.J. Lu and N. Wen	
<b>Test of Relative Translucency for Three Veneered All-Ceramic Systems Core Material</b>	302
T.T. Ma, Y.F. Yi, L.Q. Shao, J.M. Tian, K.L. Hou, B. Deng, R.J. Lu and N. Wen	
<b>Vibration and Temperature Measuring Experiments on Multilayer Piezoelectric Actuator</b>	306
X.C. Chu, L.D. Ding, X.Y. Meng and L.T. Li	
<b>Density of Li<sub>2</sub>TiO<sub>3</sub> Solid Tritium Breeding Ceramic Pebbles</b>	310
Y.C. Zhang, Z.S. Wu, S.M. Wang, X.J. Wan and Y.H. Liu	
<b>Evaluation of Glass Infiltration Speed within Dental CAD/CAM Alumina at Different Temperatures</b>	314
J. Liu, H.X. Lu, L.Q. Shao, B. Deng, Y.F. Yi, J.M. Tian, W.W. Zhang and N. Wen	
<b>Relative Solubility of MgO in MgO(7.8mol%)-ZrO<sub>2</sub> Powders Prepared by Coprecipitation</b>	318
J.F. Xia, Z.L. Liu, Q. Li and D.Y. Jiang	
<b>Effect of Heat Treatment Temperature on Properties of SiO<sub>2</sub>-ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> Coatings on Stainless Steel Substrate</b>	321
S.X. Liu, Q.P. Wang and Y.M. Nie	
<b>Biocompatibility of HAP/Ti Gradient Coating by Microarc Oxidation and Biomimetic Process</b>	325
D. Zhang, B.P. Zhang, Z.G. Li, L. Wang, B. Liu and J.Q. Wang	
<b>Phase Transformation of Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-ZrO<sub>2</sub> Composite Membranes</b>	329
Q.P. Wang, X.S. Tian, S.X. Liu, W.H. Wu, Z.H. Huang and J.S. Zhang	
<b>Oxidation Properties of Nd-<math>\alpha</math>-Sialon Ceramics</b>	334
F. Ye, C.F. Liu, Y. Zhou and J.M. Zhou	
<b>Oxidation-Resistance of (Ti,Al,Cr,Y)N Coatings Prepared by Arc Ion Plating</b>	338
M.S. Li, Y.Z. Fan and S.J. Zhang	
<b>The Exploring Research of the Determination Method of Magnesium Oxide Hydration</b>	342
Z.P. Zhang, C. Zhang, D.X. Huang, D.Y. Jiang, R.J. Zhang and Z. Yun	
<b>Dissolution of Fused Magnesia in Alkaline Solution</b>	346
Y.J. Chen, J. Song, Q. Li and D.Y. Jiang	
<b>Experimental Analysis of Surface Defects Detection Method Based on Ultrasonic Signal</b>	349
X.G. Li, Z.Q. Wang, Z.Y. Chen, L.M. Zhou and K. Yang	
<b>Application Progress and Vision of Bioceramics Utilized in Bone Tissue Engineering</b>	352
Y. Liu	
<b>Microwave Hydrothermal Preparation of Uniform Nanocrystalline Anatase</b>	357
Z.Q. Chen, W.J. Zeng, W.K. Li, Z.H. Zhou and H.Y. Yu	
<b>Measurement and Distribution Pattern of Temperature Field within the Preform during CLVI</b>	361
W.C. Sun, H. Li, Q. Fu and S.Y. Zhang	
<b>Microstructure and Properties of Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2(n)</sub> Composite Ceramics Prepared by Microwave Sintering</b>	364
W. He, Y.L. Ai, C.H. Liu, J.P. Zhang and J.Y. Ding	

<b>Properties of Pressureless Sintered SiC-TiB<sub>2</sub> Composites</b>	369
Y.H. Chen, L. Jiang and X.H. Jia	
<b>Preparation and Properties of 3Y-TZP Ceramic Tools</b>	373
Z.W. Chen, L. Feng and J.Y. Niu	
<b>Effect of Molybdenum on the Microstructure and Mechanical Properties of TiC/Ni Cermet Cladding Layers</b>	378
M. Liu and Z.D. Liu	
<b>Optimization of Sintering Temperature and Doping Level of Cr<sub>2</sub>O<sub>3</sub> in ZnO-Pr<sub>6</sub>O<sub>11</sub>-Based Varistor Ceramics</b>	382
H. Feng, Z.J. Peng, Z.Q. Fu, W. Yue, X. Yu, C.B. Wang, L.H. Qi and H.Z. Miao	
<b>TiB<sub>2</sub>-(Ti,W)C Eutectic Composite Ceramics Prepared by Combustion Synthesis under High Gravity</b>	386
X.G. Huang, L. Zhang, Z.M. Zhao, C.Z. Pan and G.L. Su	
<b>Al<sub>2</sub>O<sub>3</sub>-Reinforced Feldspar Ceramic Composite Material</b>	390
G.L. Zhang, G.Q. Qin, H. Gao and C.T. Shao	
<b>Large-Bulk Solidified Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>(Y<sub>2</sub>O<sub>3</sub>) Prepared by Self-Pressure Assisting Combustion Synthesis under High Gravity</b>	394
G.L. Su, Z.M. Zhao, L. Zhang, X.G. Huang and C.Z. Pan	
<b>Zinc Oxide Thin Films Grown by RF Magnetron Sputtering on Nanostructure Al Thin Layer/Glass and Glass Substrates</b>	398
T.Z. Liu, S.W. Duo, H. Zhang and M.J. Ran	
<b>Influences of Argon Atmosphere on Ceramic Coatings on Ti Alloy by Micro-Arc Oxidation in Na<sub>2</sub>SiO<sub>3</sub> Solutions</b>	404
J.X. Zhang, G.D. Hao and J.L. Ji	
<b>Fabrication and Characterization of Anode-Supported SDC Film Electrolyte and its Single Cell</b>	407
X.B. Li, J. Wang, X.H. Yu, H.X. Gu and G.Q. Shao	
<b>Fabrication and Microstructure of the Fe<sub>3</sub>Al/Al<sub>2</sub>O<sub>3</sub> Composites by Pressureless Sintering</b>	411
T. Jiang and K.W. Pan	
<b>Preparation and Characterization of Fe<sub>3</sub>O<sub>4</sub>@Au Nanoparticles Used as Precursor of Ferrofluids</b>	415
D.C. Li, Z.L. Zhang and S.L. Zhang	
<b>Effect of Sintering Systems and Colloidal Silica Sols on the Mechanical Properties of Oriented Silica-Based Ceramic Core Materials</b>	418
J.B. Yu, Z.M. Ren, B.Q. Wang and Y.W. Zhang	
<b>Pyramid Shaped Pyrolysis Flame Catalyst Synthesis of Carbon Nanotubes</b>	421
Z.Y. Ding, B.M. Sun, Y.C. Liu, B.H. Xu and Y.H. Guo	
<b>How Can Ceramic Small-Medium Enterprises Access to Finance in China?</b>	427
R.H. Hua and L.W. Zhou	
<b>XPS Studies on Light-Yellow Glass Prepared by Sol-Gel Dip-Coating</b>	430
X.G. Yu, K.Y. Zeng, S.S. Luo, H.W. Ma, W.Y. Bi, H.F. Zhao and Y.N. Gao	
<b>Characterization of Ultrafine Glassy Powder for Al-Si-Ca-P-O-F Polynary System by Liquid Precipitation</b>	433
G.C. Yuan, Q.G. Wu, G.X. Zeng and Z.Y. Ling	
<b>Microstructure and Crystallization of MAS Glass-Ceramics Containing Alkali Oxides</b>	437
Z.H. Xiao, J.E. Zhou and Y.Q. Wang	
<b>Effect of Heat-Pressing on the Microstructure and Properties of a Novel Lithium Disilicate Glass-Ceramic</b>	441
J. Gao, J.H. Chen, F. Wang, Z.X. Deng, F. Li and D. Wu	
<b>Crystal Phase Formation and Mechanical Properties of Lithium Disilicate Glass-Ceramics for Dental Restoration</b>	447
X. Zhang, Y.W. Hu, Y. Wu and W.J. Si	
<b>Indentation Fatigue and <i>In Situ</i> Inspection of Damage Evolution for Glass</b>	451
H.B. Zhou, Y.W. Bao, Y. Qiu, L. Chen, X.F. Wang and K.M. Li	
<b>Testing and Evaluation of Infrared Radiation Property of Cordierite Based Glass-Ceramic Materials</b>	455
S.M. Wang, Y.C. Zhang, F.H. Kuang, Q.Z. Yan, C.C. Ge and L.H. Qi	

<b>A New Type of Colored Alumina/Glass Composite Biological Safety Assessment – Cell Toxicity and Hemolysis Tests</b>	459
B. Deng, H.X. Lu, L.Q. Shao, Y.F. Yi, J. Liu, K.L. Hou, W.W. Zhang and N. Wen	
<b>A New Type of Colored Alumina/Glass Composite Biological Safety Assessment - Oral Mucous Membrane Irritation and Skin Sensitivity Tests</b>	462
H.X. Lu, B. Deng, L.Q. Shao, Y.F. Yi, J. Liu, W.W. Zhang and N. Wen	
<b>Corrosion Behaviors of Borosilicate Glasses in Various Leaching Agents</b>	466
P.P. Wu, C. Zhang, H.F. Xu, D.X. Huang, B. Xu and D.Y. Jiang	
<b>Comparison of Leaching Characteristics of Lead in Waste CRTs</b>	470
J.H. Cheng, J. Zhang and D.J. Wen	
<b>Determination of Silicon-Carbide Content in 95 Silicon-Carbide Brick</b>	475
H.J. Cao and Z.M. Zhang	
<b>Determination of SiO<sub>2</sub> Content in Boron-Containing Silica Refractories by Hydrofluoric Acid Gravimetry</b>	478
J.P. Xu	
<b>Existence Forms of Magnesium Oxide in Steel Slag by Chemical Phase Separation</b>	481
Z.F. Li, Z.H. Zhou and L.F. Shan	
<b>Effects of Carbonation on Steel Slag Products</b>	485
H.Z. Wu, J. Chang, Z.Z. Pan and X. Cheng	
<b>Influence of the Slag Replacement Percentage on the Compressive Strength and Products of Slag Based Geopolymers</b>	489
L.R. Yang and M.Z. Duan	
<b>A New Apparatus and Method for Thermal Expansion Determination of Large Refractory Samples at High Temperature</b>	493
Y.C. Yin, S. Ge and N. Li	
<b>Mineralogy and Physical and Chemical Characteristics of Coal Ash from Yang Zonghai Power Plant</b>	497
F.R. Zhai, Z.Z. Yi, Q. Cai, H.B. Song, L.L. Zhang and Q.B. Wang	
<b>Modification of CaO Refractory for Melting Titanium Alloys and its Hydration Resistance</b>	502
T.T. Sun, M. Jiang, C.H. Li, X.G. Lu and W.D. Liu	
<b>Assessment of Anhydrous Ethanol Extraction to Determine the Ionic Concentration of Hardened Cement Pastes</b>	506
M.J. Wu, W. Yao, W. Wang and Y.Q. Wei	
<b>Ultrasonic Monitoring of Hydration Using Embedded Piezoelectric Transducers</b>	510
L. Qin, Q.Q. Zhong, S.F. Huang and X. Cheng	
<b>Influence of Testing Methods on Setting Time of Foam Concrete</b>	514
X.G. Yu, Y.R. Wei, S.S. Luo, K.Y. Zeng, D.J. Li, H.F. Wang, Y.X. Li and X.T. Wei	
<b>Nuclear Magnetic Resonance Studies on Microstructure of Cement Pastes</b>	518
D. Jin, W. Yao, A.M. She and X.Y. Liu	
<b>Needle-Penetration Method for Cement Paste Agglomeration</b>	522
W.J. Tan, J. Chang and Z.M. Ye	
<b>Influence of Cement Coarse Particle on the Self-Healing Ability of Concrete Based on Ultrasonic Method</b>	526
Z.Q. Li, Z.H. Zhou, D.Y. Xu and J.H. Yu	
<b>Pore Structure and Microstructure of Foam Concrete</b>	530
X.G. Yu, S.S. Luo, Y.N. Gao, H.F. Wang, Y.X. Li, Y.R. Wei and X.J. Wang	
<b>Durability Assessment of Hot Dip Galvanized Reinforcement Concrete</b>	533
Q. Jiang, Y.J. Liu and R.P. Liu	
<b>Nanoindentation Size Effects for Calcium Silicate Hydrate</b>	537
W. Yao and K. Liang	
<b>Temperature Effect on Breakage Behavior of Cement Clinker by Compression</b>	541
L. Chen, H.Z. Xiang, C. Zhang and Y.W. Bao	
<b>On the Testing Strength Curve of Clay and Fly Ash Lightweight Aggregate Concrete by Rebound Method</b>	545
L.X. Gao, L.J. Kong and L. Xu	
<b>Influence of Protective Layer Thickness on the Mechanical Properties of Reinforced Concrete Beam</b>	549
W.H. Li and F.H. Ma	

<b>On the Experimental Methods for the Determination of Elastic Modulus and Hardness of Cement Particles by Nanoindentation</b>	554
K. Liang, W. Yao, D. Song and L. He	
<b>Absorbing and Mechanical Properties of Cement-Based Composites with Nano-Titanic Oxide Absorbent</b>	558
G.X. Xiong, M. Deng, H.Q. Huang and M.S. Tang	
<b>Bond Behaviour of Concrete Block Including Steel Mesh of Various Rib Pattern and Bar Size</b>	562
J. Yang, Q. Du and Y.W. Bao	
<b>Seebeck Effect in Graphite-Carbon Fiber Cement Based Composite</b>	566
H.Y. Cao, W. Yao and J.J. Qin	
<b>Electromagnetic Shielding Effectiveness of Cement-Matrix Composite Containing Nickel Fiber</b>	570
L.J. Luo, G.X. Xiong, S.F. Zheng and M. Deng	
<b>Testing Methods of Adiabatic Temperature Rise in Concrete</b>	574
J. Wang, B.G. Ma, X. Wu, W. Yang and R.X. Zhao	
<b>Electrochemical Characterization of Steel Concrete under Multi-Factors Influence</b>	578
Y.J. Liu, Q. Jiang, C.Z. Zhao and P.Y. Zhao	
<b>Detecting the Efficiency of Cathodic Protection in Reinforced Concrete by Use of Galvanostatic Pulse Technique</b>	584
J. Xu and W. Yao	
<b>Temperature Prediction in the System K<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub></b>	590
J. Zhan, X.F. Zeng and W.L. Zhang	
<b>A Method for the Determination of Ceramic Paste Plasticity</b>	594
W.L. Zhang and J.G. Jin	
<b>Improved Settling Height Method for Characterizing the Stability of Suspension</b>	598
Q.B. Chang, X. Wang, J.E. Zhou and Y.Q. Wang	
<b>Investigation of Inorganic-Intercalated Vermiculite by X-Ray Diffraction</b>	602
C.F. Wang, H.Z. Gu and F. Zhou	
<b>Preparation and Structural Characterization of CMC/MMT Nanocomposite</b>	606
C.X. Zhai, Y. Li, X.D. Ma, S.Z. Wei and L.J. Xu	
<b>Identification of Natural Tourmaline and Similar Gems by Diffuse Reflection Fourier Transform Middle Infrared Spectrum</b>	610
L. Shen, J. Hu, X.Q. Zhu and W.J. Zhang	
<b>Nanoindentation Characterization of Calcium-Silicate-Hydrate with Different Curing Conditions</b>	613
D. Song, W. Yao, K. Liang and L. He	
<b>Thermal Decomposition of Dolomite</b>	617
Q.F. Fang, H.W. Zhang and Y. Guo	
<b>Contribution of Green Jadeite-Jade's Chroma Difference Based on CIE 1976 L*a*b* Uniform Color Space</b>	620
Y. Guo, J. Zhang and T. Mo	
<b>Cr<sup>3+</sup> Effect on the Correlation between Lightness Difference and Color Difference of Ruby Red</b>	624
Y. Guo, X. Li and L. Tian	
<b>Mechanism of Polymerization Reaction during the Solidification of Meta-Kaolin Based Mineral Polymer</b>	628
Y.M. Nie, H.W. Ma, S.X. Liu and F.S. Niu	
<b>Identification of Rhinoceros Horn and its Substitutes</b>	636
S.Q. Li, E.D. Zu and L.J. Liu	
<b>Analysis of Pore Structure on Carbon Powder of Hemp Straw</b>	640
L.X. Meng, J.M. Gao, T. Ma and Z.L. Yan	
<b>Microstructure and Properties of Metal-Ceramic Composite Coating by Laser Surface Alloying on 9CrSi Steel</b>	643
W.Y. WANG, X.M. Dong, J.P. Xie, J. Xu and L.L. Li	
<b>Effect of Brazing Process on Alumina/Carbon Steel Interface Microstructure and Joining Strength</b>	647
Y. Li, X.Y. Wang, S.Z. Wei, X.D. Ma and L.J. Xu	

<b>Computational Simulation of the Joint Shape after as-Reflowed Soldering</b>	
N. Zhang, L. Tian, Y.W. Shi, J. Lin, Y.P. Lei and H.Y. Zhao	651
<b>Holding Strength of Bond to Diamond Grain within Vitrified Abrasives</b>	
Z.X. Li, R. Zhang, X.F. Yang and X.R. Deng	657
<b>Effect of how PDC Macro Interface Structure on the Performance of the Resistance to Impact</b>	
W.J. Fan, F. Liu and C.X. Zhou	660
<b>Semi-Quantitative Characterization of Residual Stresses of Polycrystalline Diamond Compacts</b>	
F. Liu, W.J. Fan and C.X. Zhou	665
<b>Prestressed Ceramics Lateral Confined by Aluminum Alloy</b>	
B.C. Xu, L. Zhang, M.H. Ye, R.X. Duan and K.L. Zhao	669
<b>Preparation and Magnetic Properties of Carbon Encapsulated Fe-Cu Alloy Nanoparticles</b>	
J. Xue, H.K. Xiang, H.Q. Ding, S.L. Pang, X.H. Wang and H. Cao	673
<b>Structure and Properties of UV-Curable Waterborne Polyurethane/Acrylate Composite Resin</b>	
Z. Wu, Q. Guo, R.P. Jia and F.W. Liu	677
<b>Relationship between Backpressure and Light-Off Characteristic of the Three-Way Catalyst</b>	
X.K. He, J. Hu, Y.B. Ji, W.Y. Yang and J.L. Sun	682
<b>Atomic Oxygen Effects of Polyimide/Silica Hybrid Films in Low Earth Orbit Environment</b>	
S.W. Duo, M.M. Song, Y. Luo, T.Z. Liu and W.M. Gao	686
<b>Repairing Technology of Aluminum Alloy with Compound Metallic-Membrane Plating</b>	
M.H. Ye, B.C. Xu and Z.Z. Guan	690