Table of Contents

Preface and Committees

Chapter 1: Energy Materials and Material Applications with Analysis of Material Properties

Study on Biomass Energy Materials - Briquetting Fuel and its Applications in Power Generation	
Y.L. Li and Z.W. Wang	3
Finite Element Analysis of Energy Saving Jointing Method Base on Energy Materials: Clinching	
J.C. Zheng, X.C. He, J.N. Xu, K. Zeng, Y.F. Ding and Y.B. Hu	9
Design of Test Device for Carbon Dioxide Absorbents as Energy Materials Based on Pressure Sensor and Temperature Sensor	
B. Shao, Q.H. Yu and X.H. Li	13
Study of Improving Cleanness on Master Alloy of Energy Material D.G. Zhao, X.J. Cui, S.H. Wang and L. Chen	18
Study on CO ₂ Emission Constraint Based on New Energy Materials for Generation Permits Trade	
N. He, Z.F. Tan, S.X. Wang and Y. Hou	22
Magnetic Properties and Glass Forming Ability of Fe-B-Y-Nb-Zr Bulk Metallic Glasses S.X. Wang and Z.Y. Wu	27
Environmental Performance of Fluorite Used to Catalyze MgO Reduction in Pidgeon Process	
F.L. Han, Q.X. Yang, L.E. Wu, S.W. Guo and Y. Jiang	31
Study on Low-Temperature Oxidation's Endothermic Character of Coal with Comparative-Oxidation Method	
C. Lû, Y.Q. Liang and H.H. Li	39
Thermodynamic Research of Inclusion Forming in FeSiB Alloy Based on Energy Materials D.G. Zhao, X.J. Cui, S.H. Wang and H.J. Zhang	43
Neural Model of the Producing Process for Predicting Filtration Properties of Melt Blowing Nonwovens B. Zhao	47
An Analysis on Energy-Saving Generation Dispatch Considering Carbon Emission Limitation and the Development of New Energy Materials N. He, Z.F. Tan and J.Q. An	51
Tribological Behavior of Ball-Milled Expanded Graphite/B Powders in a High-Energy Mill	31
Y.S. Li	55
Chapter 2: Chemical Engineering	
Preparation and Properties of Magnesium Based Hydrogen Storage Alloy Mg ₂ NiH ₄ in Chemical Engineering	
L.L. Liu, J.J. Xin and F. Ma	61
Effect of Stabilizer and Molding Technics in Chemical Engineering on the Stabilization of Sulfate Rich Soil	
X.X. Deng, L. Dai and X. Huang	65
Determination of β-Sitosterol with Chemical Course and Material Applications in Jatropha Seed Oil by High Performance Liquid Chromatography S.Y. Liu and A. Maihemuti	69
A Kinetic Study on the Degradation of Erythromycin A in Acetone Solution with Chemical	
Technology S.Y. Liu and J.W. Zhu	73

Extraction of Phytosterols from Jatropha Seed Oil by the Saponification and Acid	
Hydrolysis Method in Chemical Engineering S.Y. Liu, H. Lu, X. Guo, L.J. Sun and S.Y. Ge	77
The Application of ZR-Catalyst on Synthesis of Polyethylene in Chemical Engineering D.M. Zhao and X.P. Liu	81
The Research of Active Carbon on the Application of N-propyl Alcohol Reaction in Chemical Engineering	0.5
D.M. Zhao and X.P. Liu The Study of Dimethyl Maleate CP Synthesis by Strong Acid Cation Type in Chemical	85
Engineering D.M. Zhao and X.P. Liu	89
The Study of Epoxidation of Allyl Chloride Catalyzed by Silica-Based HTMS-3A in Chemical Engineering D.M. Zhao and X.P. Liu	93
The Study of Iron Catalyst for Ammonia Synthesis in Chemical Engineering D.M. Zhao and X.P. Liu	97
The Study of Methyl Isobutyl Ketone (MIBK) Synthesis by Acetone in Chemical Engineering	
D.M. Zhao and X.P. Liu	101
Preparative Separation of Xanthophylls from Corn Gluten Meal by Macoroporous Adsorption Resins in Biochemical Engineering M. Huang, L.Z. Jiang and Y.F. Wei	105
Effect of Antimony on the Corrosion Resistance of Steel in Acid Solution with High Chloride Concentration	
S. Chen, G.M. Li, X.Y. Wang and X.Q. Chen	109
The Discharge Characteristics of PEO Films in K_2ZrF_6 with NaH_2PO_4 Electrolyte W. Fu, L. Wang and L. Chen	115
Purification and Biochemical Characterization of Trypsin Inhibitor from Oyster Y.H. Zhao, M.Y. Zeng and X. Li	119
Chapter 3: Mining Engineering	
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining	
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun	127
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering	127 132
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering	132
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang	
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering	132
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining	132 137 142
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining Y.J. Zhang, X.Z. Meng and J.J. Cao	132 137
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining	132 137 142
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining Y.J. Zhang, X.Z. Meng and J.J. Cao A Review on Reagents and Processes of Fine-Grained Cassiterite Flotation in Mining Engineering S.Q. Liu, M. Zhang, W.P. Wang and B.X. Song Study on the Technique to Control Heat-Damage in Mine	132 137 142 147
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining Y.J. Zhang, X.Z. Meng and J.J. Cao A Review on Reagents and Processes of Fine-Grained Cassiterite Flotation in Mining Engineering S.Q. Liu, M. Zhang, W.P. Wang and B.X. Song Study on the Technique to Control Heat-Damage in Mine K. Zhang, J.S. Shang, B. Tang and P.Y. Guo The Study of Numerical Simulation about Roadway Bolting and Reinforcement to Jointed Rock Mass	132 137 142 147 151 155
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining Y.J. Zhang, X.Z. Meng and J.J. Cao A Review on Reagents and Processes of Fine-Grained Cassiterite Flotation in Mining Engineering S.Q. Liu, M. Zhang, W.P. Wang and B.X. Song Study on the Technique to Control Heat-Damage in Mine K. Zhang, J.S. Shang, B. Tang and P.Y. Guo The Study of Numerical Simulation about Roadway Bolting and Reinforcement to Jointed Rock Mass Z.Q. Kang, S.H. Yan and Q. Yan	132 137 142 147
Fatigue Life Prediction of Buckling String with Cracks in Horizontal Wells of Mining Engineering P. Wang, T. Yan, X.L. Bi and S.H. Sun Analysis on the Influence Factors of Well Deviation in Gas Drilling S.H. Sun, T. Yan, X.L. Bi and P. Wang Research and Application of Technical Pipe String with Integrating Layered Gas Production in Oil Production Engineering of Mining Engineering S.H. Huang Development and Research on Multi-Functional Sucker-Rod Pump Lifting Simulation Experiment System in Oil Mining Engineering H. Zhou Investigation of High Pressure Water Jet with Hydraulic Reaming Drainage Radius for Coal Seam Mining Y.J. Zhang, X.Z. Meng and J.J. Cao A Review on Reagents and Processes of Fine-Grained Cassiterite Flotation in Mining Engineering S.Q. Liu, M. Zhang, W.P. Wang and B.X. Song Study on the Technique to Control Heat-Damage in Mine K. Zhang, J.S. Shang, B. Tang and P.Y. Guo The Study of Numerical Simulation about Roadway Bolting and Reinforcement to Jointed Rock Mass	132 137 142 147 151 155

A Study for Piping Phenomenon of the Different Graded Sands on Slope in Mining Engineering of Civil Construction T.H. Chang, Y.H. Tang and N.C. Tung	171
Numerical Analysis of the Recovery Rate Influence with Stowing Roadway Mining in Daizhuang Shengjian Coal Mine	
C.S. Li, J.H. Yu, Y.Y. An and A.Q. Li	177
Magnetic Separation to Recover Iron Minerals from Flotation Tailings S.Q. Liu, X. Tong, J. Yang and J.G. You	183
Beneficiation of a Low Grade Titanomagnetite Ore in Mining Engineering S.Q. Liu, W.P. Wang, J. Yang and J.G. You	187