

5th International Conference on Environment, Materials, Chemistry and Power Electronics (EMCPE 2016)

Advances in Engineering Research Volume 84

Zhengzhou, China
11-12 April 2016

Editors:

Xingquan Xiao

Peikang Han

ISBN: 978-1-5108-3159-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by Atlantis Press
All rights reserved.
<http://www.atlantis-press.com/php/pub.php?publication=emcpe-16>

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the publisher:

Atlantis Press
Amsterdam / Paris

Email: contact@atlantis-press.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

SESSION 1. ENVIRONMENT, MATERIALS, CHEMISTRY

Application Progress of Biofloculant on Treatment of Heavy Metal Wastewater	1
<i>Ling Li, Yadan Guo, WenChao Yu, YueRan Ni, XueGang Wang</i>	
Study on the Effect of Herba Sarcandrae on Proliferation and Apoptosis of Prostate Cancer DU -145 Cell	6
<i>Xiuxia Wang</i>	
Effects of Water Deficit in Different Growth Stages and N Fertilizer Levels on Maize Growth and Water Use Efficiency in Northwest China	10
<i>Xiukang Wang</i>	
Discussion of Applications of Molecular Biological Techniques to the Field of Microorganism in Environmental Engineering	14
<i>Xinlei Li</i>	
Discussion and Exploration of Management Measures for Slope Stabilization of Open Pit Coal Mines	17
<i>Peng Zhang, Bo Liu, Yuanye Zhou</i>	
Synthesis of DSPDA for Second Order Nonlinear Optical Materials	20
<i>Li Shen, Wen Bing Yang, Ning Ren Jin, Miao lan Shen</i>	
The Calcination Temperature on the Electrochemical Properties of MnFe /C Composite Oxides	25
<i>Jiaheng Zhang</i>	
Effect of HiLo on Skeletal Muscle SDH of Rats	31
<i>Qian Zhen Yan</i>	
Research on Mechanical Properties of the Composites Polymer Fiber Reinforced: A Case Study	36
<i>Yanjie Zhou, Min Wen</i>	
An Optimized Preparation Method to Obtain High-quality RNA from the Buds of Sunflowers	41
<i>Hao Feng, XiBao Ma, Jun Yang</i>	
Study on Carbon - Oxygen Catalytic Combustion Mechanism Based on Density Functional Theory	49
<i>Yakun Qu, Xiaoguang Zhao, Yi Zhao, Zhenyu Dai, Han Zhou, Jun Long</i>	
Research on the Screening of Antifungal Lactic Acid Bacteria and Its Characteristics	55
<i>Xudong Zhang</i>	
Development and Application of Composite Materials in Civil Engineering	60
<i>Xiaofeng Shang, Jiabin Lin</i>	
The Application of Fiber Reinforced Plastic Ribs in Civil Engineering	63
<i>Xiaofeng Shang, Jiabin Lin</i>	
Palaeoclimate Environment of Susceptibility of Loess Section since 10KaBP in Xi'an ShaoLinyuan	66
<i>Yao Chen, Shu-sheng Dang</i>	
The Discussion of Air Conditioning Condensed Water Recycle	72
<i>Jun Dai, Yao Chen</i>	
The Best Injection Method to Save Water and Heat	78
<i>Yanping Xi</i>	
Analysis on Separation and Purification of Corosolic Acid and Antitumor Activity	83
<i>Shucai Liang</i>	
The Research on Anti-Tumor Related Effect and Its Mechanism of Herba Sarcandrae	87
<i>Xiuxia Wang</i>	
Study on Advances of Medicine and Its Active Ingredient on the Hair Follicle of Different Animals	93
<i>Guishan Zhang</i>	
Quality Control and Insulation Construction Technology of Exterior House Paint Decoration	97
<i>Xizhu Yin, Yalan Liu</i>	
Antimicrobial Activity and Mechanism of Schisandra Chinensis Extract	102
<i>Yu Han</i>	
Effects of Ozone Concentration and Relative Humidity on Secondary Organic Aerosol Formation from Reactions of 1,3-Butadiene with Ozone	107
<i>Ailing Ren, Shanshan Wang, Shuo Zhang, Miao Tian, Ruijing Yao, Shuo Li, Xuan Zhang</i>	
Pollution Characteristics of Volatile Organic Compounds Emitted from Penicillin Fermentation Workshop	112
<i>Bin Guo, Ruijing Yao, Zhao Du, Shuo Zhang</i>	
The Compressive Mechanical Properties and Constitutive Relation of Polyurethane Elastomer	117
<i>Shengjia Chen, Zhigang Li</i>	
Application of Polymer Grouting Reinforcement Technology in the Treatment of Slope Collapse	123
<i>Zhichao Zhang, Kan Liu, Longzhen Ye</i>	
Foaming When the Recycled Water Sludge is Reused for FGD	129
<i>Ziwei Li</i>	
The Spread of Ebola Virus Based On SEIHCR Model	133
<i>Zhaosheng Li</i>	
Adsorption Behavior of Zn (II) from Amidoxime Functionalized Mesoporous Silica SBA-15	137
<i>Jihua Wang</i>	

Influence of Sintering Technology on Microstructure and Mechanical Properties of ZrB₂-YAG-Al₂O₃ Ceramics	140
<i>Jie-Guang Song, Ming-Han Xu, Shi-Bin Li, Shi-Zhe Li, Ting-Ting Xia, Yao-Qi Li, Ning Wang, Si-Yuan Yu, Lin Chen</i>	
Investigation and Study on Roof Plants in Zhanjiang	144
<i>Shuang Liu, Chang-Chun Yuan, Ting Xuan, Zi-Ya Chen</i>	
The Characteristics of Different Derived Biochars and Their Sorption Behavior for Diethyl Phthalate (DEP)	150
<i>Peng Wang, Huang Zhang</i>	
Improvement on the Si/PEDOT:PSS Hybrid Solar Cells by Rear-sided Passivation with SiNx:H Layers	154
<i>Yiling Sun, Jichun Ye, Pingqi Gao, Yong Xiang</i>	
Zero Discharge of Wastewater Treatment Technology of Wet Desulfurization in Coal-fired Power Plants	158
<i>YunYang Wang</i>	
NBO Analysis Based on CPLD Between Water Molecules Hydrogen Bonds	162
<i>Ziwei Li</i>	
Separation of Waste Lubricating Oil by Molecular Distillation	166
<i>Zhaomei Meng, Zhongjun Fu, Zhendong Fan</i>	
Sedimentary Evolution of Fuyu Oil Layer in 401 Block, Sanzhao Depression, Songliao Basin	171
<i>Xin Liu, Zhaonian Chen, Lei Liu</i>	
Effects of Graphene Oxide on Dispersion Stability of Titanium Dioxide Nanoparticles	177
<i>Pingping Song, Yongpeng Wei, Xuesong Cao</i>	
Effect of Citric Acid on Toxicity of Graphene Towards Freshwater Algae (Chlorella Pyrenoidosa)	181
<i>Chuntong Guo, Pingping Song, Xuesong Cao</i>	
An Adiponitrile Additive Electrolyte Based on Lithium Difluoro (Oxalate) Borate for Lithium Batteries	185
<i>Shiyu Li, Dongni Zhao, Ruimeng Chen</i>	
Excellent Stability of Al-doped LiMn₂O₄ Prepared by a Sol - Gel Method	189
<i>Liping Mao, Songli Du, Shiyu Li, Zhengzhi Ren</i>	
Electrochemical Properties of Iron Substituted Lithium Manganese Phosphate Prepared by Sol-gel Method	193
<i>Qiuping Zhao, Xiangfei Li, Shiyu Li, Yuqin Tian</i>	
Investigation of the Benefits of Pulse Current for the Additive Manufacture of Ti-6Al-4V	197
<i>Guangsen Chen, Zhenshu Ma, Changmeng Liu</i>	
Shock-wave Synthesis of Alveolate Graphene	202
<i>Yazhu Lan, Pengwan Chen, Chunxiao Xu, Jianjun Liu</i>	
Beijing-Tianjin-Hebei Region Air Pollution Analysis	207
<i>Weichen Yang</i>	
Research on the Influences of High Salt Water on CaCO₃ Dissociation	211
<i>Xiaoyu Weng</i>	
How to Understand PM_{2.5}	213
<i>Bowen Wei</i>	
Methane Release Analysis on Gas Hydrate at the Okhotsk Sea Slope Based on SONIC Technology	219
<i>Hechao Zang, Zhili Hua, Bo Liu</i>	
Densification Technology of Al₂O₃/Fe Metallic Ceramic Materials Prepared via Powder Metallurgy Method	226
<i>Jie-Guang Song, Yu-Jun Zhou, Rui-Hua Wang, Shi-Bin Li, Shi-Yuan Yu, Yao-Qi Li, Ning Wang, Xiang-Yun Huang, Jin-Yun Cheng</i>	
Analysis of Main Factors of PM_{2.5}	231
<i>Zhuo Chen</i>	
A Thin, Angle-insensitive, Broadband Microwave Absorber Based on Metamaterial	235
<i>KeTao Zhou, Jin Pan, Rong Pan</i>	
Methods Review of Recycling Mercury from Waste Mercury Chloride Catalyst of PVC Production	241
<i>Zinan Xie, Xia Wang</i>	
Highly Stable Mesoporous Ge@C Sphere Anodes for Lithium-ion Batteries	245
<i>Chen Cheng, Jing Xu, Kai Xie</i>	
The Research on the Effect of Water Content on Soil Shrinkage	250
<i>Rui Ma, Huanzhuang Tao, Jingju Zhang, Dan Huang, Fangli Cheng</i>	
Review On The Application Of Boron Nitride Nanotubes	254
<i>Youjun Wang, Hao Chen, Yanjiao Li</i>	
Migration and Transformation of Persistent Organic Pollutants (POPs) in the Atmosphere	259
<i>He Zhang</i>	
Practical Analysis of the Contemporary New Technology of Coking Coal	263
<i>Chengtao Chen</i>	
A Facile Fabrication of Fe₂O₃/C Composite As Anode for Lithium Ion Batteries	267
<i>Mingru Su, Yunjian Liu, Aichun Dou, Zhiqiang Zhang, Fagen Peng</i>	
Effect of Organo-Functionalized Silica Particles on the Mechanical Properties of PU	271
<i>J.Y. Liu, D.L. Sun, R.Y. Hong</i>	
Synthesis and Evaluation of Mn-Fe Binary Oxide Adsorbents for Arsenic Removal	280
<i>JieFei Li, Mei Xue</i>	
Orthogonal Experiment Analysis of Carbon Nanotubes Oxidation Process	286
<i>Hongwei Lu, Liming Zou, Yizhe Wei, Yongjing Xu</i>	
Study on Mechanical Properties of Basalt Fiber Reinforced Concrete	291
<i>Jian-Jun Li, Zhi-Ming Zhao</i>	
Statistics for Machining of High-strength Materials	296
<i>Zhiyuan Wu, Zhikun Tan, Shuhui Wang, Xiaoqing Dong</i>	
Quantum-dot-based Immunofluorescent Imaging of Cancer Marker P53 Detection in Breast Cancer	301
<i>Wanying Xing, Qiang Li, Xing Ren, Guang Sun</i>	

Study on the Correlation between Fe²⁺ and Peridot's Yellow Green Color and Quality Evaluation of Color Based on CIE1976 L*a*b* Uniform Color Space	307
<i>Jun Tang, Ying Guo, Xiangxiang Lai, Yimin Liu, Qi Wu</i>	
The Reactivities In Different HgCl Substitution Sites Of PCDDs/PCDFs	313
<i>Zhengyang Gao, Peng Ji</i>	
Highly Efficient and Sensitive Detection of Chloramphenicol Based on Chemiluminescence Immunoassays with Functionalized Fe₃O₄@SiO₂@Au Magnetic Nanoparticles	321
<i>Linyu Wang, Manwen Yao, Xiangyi Fang, Zhuo Xu</i>	
Device Performance of Multilayer MoSe₂ Field Effect Transistors	327
<i>Qi Li, Xueao Zhang, Hang Yang</i>	
Effect of Temperature on Dicamba Degradation Using Ozone-fly Ash Combined Technology	332
<i>Lan Chen</i>	
Kinetics Analysis of Dicamba Degradation using O₃-Fly Ash Combined Process at Different pH values	336
<i>Lan Chen</i>	
Study on the Influence Factors of the Adsorption of Cr³⁺ by Steel Slag	340
<i>Jian Mei Zhou</i>	
Treatment of Wastewater Containing Zinc by Steel Slag Adsorption	344
<i>Jian Mei Zhou</i>	
Synthesis of Gold Nanoparticles Using Integrated Modular Microfluidic Reactor	348
<i>Guojun Liu, Wen Hong, Xiaohan Pei, Tengfei Wang, Chunxiu Tang, Shihai Liang, Feng Jiang, Yanyan Zhang</i>	
Facile Preparation of Polymer Nanotube Using Self-assembled Metal Nanotube As Sacrificial Template	354
<i>Lei Wang, Yuxin Guo, Xianjun Cao, Gonghao Lu, Xue Li</i>	
Structural Stability and Elastic Constants of Precipitate Phases of Mg-5%Al Alloy with Combined Ca and Sr Addition from First-principles Calculations	359
<i>Suqin Luo, Aitao Tang, Weiwei Du, Bin Jiang, Hanwu Dong, Xia Wu, Fusheng Pan</i>	
Study on Preparation and Photocatalytic Properties of Cu₂O/TiO₂ Composites by Precipitation Method	368
<i>Chunhua Yuan</i>	
The I-beam Steel Temperature Field Analysis in Cooling Control Process After Hot Rolling	373
<i>Zhan Wang, Fenglong Zhu, Ju Wang, Haibo Wang</i>	
Synthesis of 2-Diethylenetriamine Methylene-4-Nonylphenol Asphalt Emulsifier and its Investigation by Online FTIR Spectrophotometry	379
<i>Laishun Shi, Cunfei Ma, Fang Tian, Yang Qin, Man Guo, Qian Dong</i>	
Preparation and Properties of PLA/Clay Composites	385
<i>Hongjuan Zheng, Zhengqian Sun</i>	
Constructed Amphiphilic Gel As Natural Auxiliary Medium to Mimick Remineralized Dental Hydroxyapatite	390
<i>Kun Tian, Yuanyuan Liu, Xiaoyun Feng, Xiaohua Ren, Chuhan Liao, Qin Du</i>	
Comparison of Antioxidant and Anticancer of the Extracts from Various Habitats of Selaginella Doederleinii	397
<i>Gang Wang, Sanhua Li, Honglian Zhou, Die Guo, Mengmei Shen, Yingbiao Tian</i>	
A Review Study: Development of Microbial Enhancing Oil Recovery Technology	403
<i>Wenfeng Song, Desheng Ma, Kangyun Wu, Xiaofang Wei, Ying Xu</i>	
Analysis of Dew Condensation and Related Meteorological Factors	410
<i>Xinyue Zhu, Yingying Xu</i>	
Dynamics Analysis for Polymer-fiber Composites Based on Shear-ellipsoidal Extensional Force Field	414
<i>Zan Huang</i>	
Annual Change of Pb Contents in Jiaozhou Bay During 1979-1983	419
<i>Dongfang Yang, Xiancheng Qu, Yu Chen, Shubo Fang, Yinjiang Zhang</i>	
Background Level of Cu in Jiaozhou Bay and Open Sea	423
<i>Dongfang Yang, Danfeng Yang, Huazhong He, Sixi Zhu, Ming Wang</i>	
Seasonal Variations of Pb Contents and Pollution Levels in Jiaozhou Bay in the Early Stage of Reform and Opening-up	428
<i>Dongfang Yang, Yu Chen, Shubo Fang, Yinjiang Zhang, Xiancheng Qu</i>	

SESSION 2. POWER AND ELECTRONICS

Spectrum Analysis of Anode Rod Current in 300kA Aluminum Reduction Cells Based on Hilbert-Huang Transform	432
<i>Shuiping Zeng, RuiQiang Li</i>	
Design of Embedded Industrial Robot Based on PLC Servo Control	437
<i>Yuhan Jie</i>	
Discussion on Urban Rail Transit Electromechanical System Joint Debugging	442
<i>Guowei Wu</i>	
Study on Modern Automotive Electronic Technology Characteristics and Development Trend	447
<i>Zhufeng Chen</i>	
Research on Applications of Solar Power in Countryside	452
<i>Mai Huang</i>	
Selected Harmonic Elimination Pulse Width Modulation Based on the Homotopy Algorithm	456
<i>Xiaoci Wang</i>	
Performance Impact Research of Mobile Communication System from DTX Setting	461
<i>Shuizhen Xie</i>	

Study on Fast Charging Method of Lead-Acid Battery for Electric Vehicle	465
<i>Yuanpeng Zhu</i>	
Research on the Key Technologies of Avionics Communication System	469
<i>Haili Sun</i>	
A Maintenance Strategy of Improving the Reliability of Relay Protection Based on Markov Model	473
<i>Ruizhe Wang</i>	
Establishment and Implementation of Heating State Assessment of High-voltage Disconnecting Switch Based on RBF Neural Network	480
<i>Haokai Xie</i>	
The Management of Electric Power Harmonic	486
<i>Tong Xu</i>	
Analysis of the Working Principle of 12 Pulse Inverter Bridge	491
<i>Guangyang Zhou</i>	
Study on Application of Mobile Converting Station on the Construction of Smart Grid	496
<i>Deyun Wang</i>	
Study on Impact of New Energy Wind Power Access to Electric Power System	500
<i>Yinping Zhou</i>	
Research on the Low Power and Low Voltage CMOS Integrated Circuit Design Patterns and Methodologies	505
<i>Zhen-bang Xu, Hong Shi</i>	
Simulation Analysis of Control Strategy and Commutation Failure in HVDC Transmission System	509
<i>Peizhe Li, Liangeng Ban, Huawei Wang</i>	
Characteristics of Chua's Circuit Based on Memristor and Responses to Stimulating Signals	513
<i>Yujie Cao, Shuai Ye, Chunxiao Hu, Zhikuo Tao</i>	
UEFI Firmware Storage System Analysis	517
<i>Weiming Wu, Hui Wu, Jiongjiang Lan, Wenxin Lai, Qing Su</i>	
Quantitative Research of Water Resources Based on Sustainable Development	522
<i>Xiaomeng Du</i>	
Research on Harmonic Analysis and Simulation of Grid Connected Synchronous Motor	526
<i>Jian Huang, Bingyang Luo</i>	
Real-time Signal Processing for Shipborne FOG Based on Lifting Wavelet Analysis	531
<i>Bin Yi, Qiliang Bao</i>	
Multiple Sets of Pulse Adjustment Control Technique Based on Input Voltage Feed-forward Compensation for DC-DC Converters	536
<i>Ming Qin, Jingchao Li</i>	
The Comprehensive Evaluation of Water Resources Condition	545
<i>Ben Niu</i>	
Research on Vehicle Overtaking Behavior Under Right-hand Traffic Rule	549
<i>Xiaohan Qi</i>	
Separation of Communication Signals Based on Underdetermined Blind Source Separation	553
<i>Xiaotao Guo, Xing Wang, Ying Zhang</i>	
The Development of Multi-functional Alternating Current Grid Simulator	559
<i>Yan-Yu Zhang</i>	
The Research of the Technology for the Cascaded H Bridge Converter to Eliminate Specific Harmonic of the Step Form	564
<i>Yu Zhang</i>	
The Vertical Conductivity of Aquifers	568
<i>Yingwang Zhao</i>	
Geometry Optimization of a Latent Heat Thermal Energy Storage Unit Using RT27	572
<i>Jingju Shen, Pierre Neveu, Shuiming Shu, Quentin Falcoz</i>	
Solar Radiation Assessment In China And Validation Of McClear Model (Article Retracted)	N/A
<i>Chao Liu, Christophe Vernay, Shuiming Shu</i>	
The Research on Running Characteristics of A New Type of Radiant Air Conditioning Combined with Fresh Air System	577
<i>Yingning Hu, Xuan Yao, Weiming Zhong, Yan Wang, Shanshan Hu, Chaojian He</i>	
The Study of Multi Machine Equivalent Model Of Wind Farm Based On The Wind Speed	584
<i>Qing Liu</i>	
Analysis of Electrolytic Process Parameters Based on Orthogonal Test Method	588
<i>Ning Sun, Daolin Jiang</i>	
5G Mobile Communication Technology	594
<i>Huajun Chen, Lina Yuan</i>	
3D Substation Modeling Based on BIM Technology in China	599
<i>Xiaoqiang Hu, Baojian Zhao, Chenglei Sun</i>	
A Multi-outputs DC Power Module	604
<i>Fengchen Li, Dongguang Zuo, Longtao Hu</i>	
A Method for New Energy Electric Vehicle Charging Hole Detection and Location Based on Machine Vision	607
<i>Hui Zhang, Xiating Jin</i>	
Constraints of Developing Natural Gas Combined Cooling, Heating and Power (CCHP) Systems	615
<i>Ke Li</i>	
Pulse Train Controlled PCCM Buck-Boost Converter	619
<i>Ming Qin, Fangfang Li</i>	

Expectation and Review of Control Strategy of Wind Turbines Yaw System	626
<i>Jiatong Song</i>	
Simulation Analysis of Run Vibration on Vehicle-mounted Optics Image Stabilization System	630
<i>Dongwei Li, Huiyan Chen, Guoquan Ren, Jun Han</i>	
Research on Control Strategy for Battery System of Photovoltaic Power System Based on Bi-directional DC/DC Converter	639
<i>Xin Li, Pu Xie</i>	
Optimization Strategy of Load Control Based on Power Consumption Efficiency	643
<i>Ruixiang Fan, Benren Pan, Benren Pan, Jianbo Xin, Xiaohui Xu, Nayan Yu</i>	
Comprehensive Assessment of Power Demand Side Management (PDSM) Based on PCA-fuzzy Synthetic Evaluation	647
<i>Zhu Xu</i>	
Strategies of Adding Hot Water When Bathing	652
<i>Yiming Li, Qiming Chen</i>	
Review on Waste Heat Utilization Technology of Circulating Water in Power Plant	657
<i>Ning Dong</i>	
Smart Home Smoke Detection and Relay Contract based on STM32	662
<i>Hao Yin</i>	
Grouped and Segmented Equalization Strategy of Serially Connected Battery Cells	666
<i>Haolin Li, Guojing Dong, Qingliang Hong</i>	
High-Precision Tension Control Method for Starting and Stopping of Optical Fiber Winding Based on Trajectory Planning	671
<i>Zhonglin Guo, Jianhui Zhao, He Xu</i>	
Design and Implementation of a 2.45GHz Circularly Polarized Microstrip Antenna for Wireless Energy Harvesting	676
<i>Chuang Hu, Yawen Dai</i>	
Pattern Recognition of Electric Vehicle Charging and Discharging Based on the Closeness Degree	681
<i>Xi Chen</i>	
Design of the GIF Antenna Based on Phased-Array Technology	685
<i>Yang Ji, Hong-bin Ren, Jing-xin Liu</i>	
Research on Spherical Subsurface Imaging with Holographic Penetrating Radar	693
<i>Mintai Li, Chunlin Huang</i>	
Hazards of Electromagnetic Radiation Pollution and Its Mechanism	699
<i>He Zhang</i>	
Study on Cooling Fluid Under the Condition of the Existence of Outside Force	702
<i>Kanru Cheng</i>	
The Operation Characteristics and Open-Loop Method of 1000/500/220kV Three-level Electromagnetic Loop Network	708
<i>Qiang Yu, Qing He, Junchuan Jia, Jun Yi, Jingzhe Tu</i>	
When ECAD meets MCAD - The Design Pattern of Innovation	714
<i>Jing Wang, TingTing Liu</i>	
Research on The Problem of Magnetic Saturation Controllable Reactor Operating Characteristic	720
<i>Zhen An, Baodong Bai, Dezhi Chen</i>	
Flexible Techniques for Blind Signal Separation	724
<i>Yongjian Zhao, Manlan Hao</i>	
Kurtosis Based Techniques for Signal Extraction	728
<i>Yongjian Zhao, Manlan Hao</i>	
Parameter Identification and Simulation of Synchronous Generator in an Isolated Power System	732
<i>Pu Xie, Man Cao, Zhengchun Liu</i>	
An Angle Estimation to Landmarks for Autonomous Satellite Navigation	739
<i>Qing Xue, Hongwen Yang, Jian Wang</i>	
Analysis and Calculation of Induced Lightning Over-voltage in Wind Farm	745
<i>Jian Wu, Lidong Wu</i>	
Design of Instrument for Measuring the Electrical Conductivity of Ice Cores	751
<i>Qihong Wang, Jingbiao Liu, Chunlei An, Jianguang Shi</i>	
Joint Optimal Transmitted Power and Transmitted Antenna Number for Energy-Efficient Massive MIMO Systems	757
<i>Panpan Miao, Yanhui Lu, Shouyi Yang, Shunran Wang</i>	
Analysis and Conversion of Phase Noise and Timing Jitter in Crystal Oscillator	763
<i>Yan Wang</i>	
The Influence of Structural Parameter on the Properties of PCF	767
<i>Lei Hu</i>	
High Resolution DOA Estimation for Vehicular Radar and Communication Integration System	772
<i>Juan Ma, Xiaoyou Yuan, Heng Ye, Yan Zhou, Nengda Ci, Pengshuai Sun, Zhinian Luo</i>	
Wind Power Business Day-ahead Market Strategy Bidding Considering Allowable Deviation and Wind Speed Distribution	777
<i>Yi Song, Xiangyu Zhang, Dan Li, Zhengyu Xue, Zhongfu Tan, Zhengdong Du</i>	
Principles and Supporting Agreement for the Transparent Task Model of Electricity Price Issuing and Transformer District Tests	783
<i>Gang Wang, Xiaohua Liu, Xiaofei Dai, Lequn Zhang</i>	

The Simulation of the Buoy for Oscillating Wave Energy Converter with Flow 3D	788
<i>Jinghai Zhu, Xuejiao Feng, Jinxiang Fu, Xiang He</i>	
Application of Photovoltaic Power Generation in the Construction of Conservation Oriented Campus	794
<i>Zhi-jun Yang, Ping-ping Han</i>	
Numerical Analysis of Solar Chimney Power Plant System: Algeria As a Case Study	803
<i>Rayan Rabehi, Abia Chaker, Zeroual Aouachria, Tingzhen Ming</i>	
Research on Energy Consumption Evaluation Methods for Production Process of Large Transit Crude Oil Depot in Alpine Region	809
<i>Lin Yang, Lixin Wei, Xinyang Li, Lina Shan, Jiyang Zou</i>	
Design of the Tractor Driving Simulator Turn Signal Circuit	816
<i>Chuanyi Chang</i>	
Design of SDRAM Controller IP Core Based on FPGA	821
<i>Yonggang Chen, Yawen Li, Caizhen Zhang</i>	
Research of Data Fusion Method of High Power Transient Electric Field Signal	827
<i>Xiang Chen, Yangyang Wang, Zheng Li</i>	
Research on Detection Method of AC/DC Charging Interface Consistency of Electric Vehicles	831
<i>Kang Li, Chang Liu, Lu Xia, Bin Li, Yanmin Wang, Jing Zhang</i>	
Power System Simulation and Preliminary Modeling Based on the Smart Grid Core Standards	837
<i>Yue Zhao, Jingjin Cao</i>	
Tracing the Unreliability and Recognizing the Weak Parts of Shipboard Power System	841
<i>Dan Mei, Gongbao Wang, Zhihao Ye</i>	
Pressure Effect Due to Arcing Faults of Shipboard MV Switchboard	846
<i>Shuang Cao, Lijun Fu, Ling Zhang, Zhihao Ye, He Gong, Yuzhou Hu</i>	
Bus Protection in Ship MVDC Power System	851
<i>Yangting Xiao, Zhihao Ye, Muyi Yin, Yuzhou Hu</i>	
The Research of Interactive Emission-line Stars Recognition for LAMOST Low Quality Spectra	857
<i>Lipeng Bi, Jingchang Pan, Cong Liu, Guozhou Ge</i>	
Wind Turbine Gearbox Fault Early Warning Based on NEST	862
<i>Xiao Yan, Changliang Liu</i>	
Short-Term Wind Power Prediction Based on Empirical Mode Decomposition and Extreme Learning Machine	868
<i>Jiajia Wu, Changliang Liu</i>	
The Power Plant's Comprehensive Evaluation of Energy Saving Based on Entropy and ELECTRE Method	874
<i>Pengfei Wang, Changliang Liu</i>	
A Millimeter-wave Radar Signal Processing Method Based on FPGA+DSP	880
<i>Dejun Chen, Yang Liu, Yu Yin, Dong Liu</i>	
Author Index	