

3rd International Conference on Advances in Energy and Environmental Science (ICAEES 2015)

Advances in Engineering Research Volume 31

Zhuhai, China
25 – 26 July 2015

Part 1 of 2

Editor:

P. Yarlagadda

ISBN: 978-1-5108-1740-1

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© (2015) by Atlantis Press
All rights reserved.
<http://www.atlantis-press.com/php/pub.php?publication=icaees-15>

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: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PART 1

ELECTRIC POWER, ELECTRONICS AND AUTOMATION

DESIGN OF THE VOLTAGE DRIVER CIRCUIT FOR MAGNETO RHEOLOGICAL DAMPER	1
<i>Zongchun Bai, Xiaolan Lv, Liru Xia, Meina Zhang</i>	
RESEARCH OF BOUNDARY SECURITY MONITORING MODEL BASED ON BIG DATA FOR SMART GRID	9
<i>Xiaojuan Guan, Gaofeng He, Cheng Zhou, Weiwei Li</i>	
THE DESIGN OF DSP CONTROLLER BASED DC SERVO MOTOR CONTROL SYSTEM	14
<i>Haiyan Hu, Hong Gu, Chunguang Li, Xiaowei Cai, Juan Li</i>	
ORDERLY POWER UTILIZATION SYSTEM MODELING AND SIMULATION	20
<i>Yuejia Sun, Xiaojun Wang, Sheng Bi</i>	
BIG DATA PLATFORM FOR SMART SUBSTATION MONITORING SYSTEM	24
<i>Qiqiang Sun, Fangchun Di, Lixin Li</i>	
RESEARCH ON SOA BASED GIS SERVICE FOR SMART DISTRIBUTION SYSTEM	29
<i>Xi Zhang, Taifeng Kang, Xiaoping Xie, Fengqing Zhao, Shan Tang, Hu Huang</i>	
HARMONIC DETECTION AND CONTROL OF POWER SYSTEM BASED ON IMPROVED EEMD ALGORITHM	33
<i>Lei Chen, Guochu Chen</i>	
WIND POWER SHORT-TERM PREDICTION BASED ON SVM TRAINED BY IMPROVED FOA	39
<i>Feng Xiao, Guochu Chen</i>	
ENERGY CONSUMPTION OF LOW-ENERGY CONSUMPTION RESIDENTIAL BUILDING RETAINING STRUCTURE BASED ON DEST ANALYSIS	47
<i>Hui Jin Guo, Yuan Qi Li</i>	
THE OPERATION AND CONTROL STRATEGY OF ENERGY STORAGE SYSTEM IN THE MICRO-GRID	53
<i>Yuan Liu, Jianlin Li, Tiejiang Yuan</i>	
AN MODAL ANALYSIS OF NEW-TYPE COUPLING DISCS OF GENERATOR SET	60
<i>Xuguang Min, Tao Wan, Zhiling Liu</i>	
RESEARCH ON A PMSM CONTROL SYSTEM WITH MICROCONTROLLER	64
<i>Guozhe Yang, Feng Liu</i>	
THE IMPORTANCE ANALYSIS OF URBAN RAIL TRANSIT TRACTION ENERGY CONSUMPTION INFLUENCING FACTORS BASED ON GREY CORRELATION DEGREE	68
<i>Jiao Zhang, Xi Li</i>	
DESIGN OF A PRACTICAL SUBSTATION EQUIPMENT CONDITION MONITORING INTEGRATED SYSTEM	74
<i>Ruifeng Wei, Jun Yuan, Rongpu Zhao, Maokun Zhou, Hanhao Li</i>	
DESIGN OF MICRO-RIPPLE PWM-CUK EBW HIGH VOLTAGE STABILIZED SOURCE	79
<i>Yanping Qiao, Jinhai Mo, Wei Li</i>	
TWO-PATH RELAY SYSTEMS WITH INTER-RELAY INTERFERENCE SUPPRESSION	84
<i>Juanjuan Li, Xianyi Rui, Mengmeng Wang</i>	
CONSTRUCTION AND IMPLEMENTATION OF ENERGY CONTROL CENTER IN COLLEGES AND UNIVERSITIES	88
<i>Lin Liu, Xiao Yan, Shuo Yang, Lushan Hu</i>	
STUDY ON SHUNT ACTIVE POWER FILTER WITH IMPROVED CONTROL METHOD	95
<i>Yaheng Ren, Xiaozhi Gao, Runduo Wang</i>	
RESEARCH AND APPLICATION ON COGGING EFFECT OF PMSM	101
<i>Yaohui Li</i>	
HARMONIC ANALYSES WITH MEASURING ELECTROMAGNETIC FORCES AND TORQUES FOR MAGNETICALLY LEVITATED PLANAR MOTORS	105
<i>Shengguo Zhang, Shuo Zhang, Wanchun Liu</i>	
IMPROVED GENERALIZED DISJUNCTION DECOMPOSITION FOR CIRCUIT EVOLUTIONARY DESIGN	112
<i>Yong Lin</i>	

TECHNOLOGY OF UNINTERRUPTABLE SHORE-SIDE POWER SUPPLY FOR BERTHING VESSELS AND ITS APPLICATION	117
<i>Yan Qiong Song, Le Ming Xiao</i>	
A CONTROL STRATEGY OF THE DISTRIBUTED POWER SUPPLY TO REDUCE THE LOOP CLOSING CURRENT	122
<i>Ping Wang, Litao Yu, Qiang Wang</i>	
APPLICATION OF OPTICAL SWITCH BASED ON THE LIQUID-CRYSTAL MODULATED SELF-COLLIMATING PHOTONIC CRYSTALS.....	126
<i>Xiaohui Li, Huiyu Yang</i>	
RESEARCH ON THERMAL AGING PROPERTIES OF COMPOSITE INSULATING MATERIALS IN HIGH VOLTAGE SWITCHGEAR	130
<i>Yongyong Jia, Yanjun Jiang, Jinggang Yang, Guogang Zhang</i>	
GEOLOGICAL DISASTER DATA WAREHOUSE MODLE CONSTRUCTED BY POWER DESIGNER	137
<i>Jingli Huang</i>	
STUDY ON INTERNAL ELECTRIC FIELD SIMULATION ANALYSIS AND LOCAL OPTIMIZATION STRATEGIES OF HIGH VOLTAGE METAL ENCLOSED SWITCHGEAR	141
<i>Shan Gao, Yongyong Jia, Jinggang Yang, Hai Zou, Guogang Zhang</i>	
DAMPING CHARACTERISTICS ANALYSIS ON COMPLEX POWER GRID WITH MULTI-INFEED HVDC	149
<i>Zhijian Liu, Dongdong Wang</i>	
RESEARCH ON CONTROL STRATEGY OF THE VEHICLE ELECTRIC POWER STEERING SYSTEM BASED ON BRUSHLESS DC MOTOR	153
<i>Lina Feng, Rongwei Shen, Xiaofei Wu</i>	
A NOVEL FAULT ANALYSIS METHOD OF THE POWER GRID WITH DIFFERENT TYPES OF WIND TURBINES	157
<i>Peng Chen, Zhe Zhang, Xianggen Yin, Zengli Yang, Lijun Wang</i>	
THE CALCULATION AND ANALYSIS OF DISTRIBUTION NETWORK LOSS WITH PHOTOVOLTAIC POWERGENERATION CONNECTED	165
<i>Bi Wang, Yingying Sun, Feifan Lu, Xin Wu</i>	
METHOD FOR INSULATION DEFECT PATTERN RECOGNITION OF GAS INSULATED SWITCHGEAR BASED ON SUPPORT VECTOR MACHINE ALGORITHM.....	171
<i>Jun Xiong, Sen Yang, Guangmao Li, Xiaogui Wu</i>	
DISCUSSION ON APPLICATION OF NOISE POWER GENERATION TECHNOLOGY IN SHIP ENGINE ROOMS	178
<i>Lu Jiang, Zhiwei Zheng</i>	
TRANSMISSION LINE INTELLIGENT INSPECTION SYSTEM BASED ON GIS	182
<i>Changchun Zou, Qingyue Luo, Xiaofang Wang, Meimei Luo, Baiyang Liu</i>	
RESEARCH ON A NOVEL PLL BASED ISLANDING DETECTION TECHNOLOGY FOR MULTI GRID-CONNECTED INVERTERS.....	188
<i>Dong Xie, Dajin Zhang, Peng Gao</i>	
REGENERATIVE BRAKING CONTROL STRATEGY OF HYDRAULIC IN-WHEEL MOTOR DRIVE SYSTEM FOR HEAVY TRUCK	193
<i>Guanghan Li, Bing Pan, Dafeng Song, Sheng Li, Gongke Yang, Yanping Niu</i>	
PHOTOVOLTAIC MPPT RESEARCH BASED ON FUZZY-PID DUAL-MODE CONTROL.....	201
<i>Fei Wang, Xianxiang Li</i>	
TRANSMISSION LINE PULSE TESTING AND ANALYSIS OF ITS INFLUENCING FACTORS	208
<i>Xue Gu, Zhenguang Liang</i>	
DYNAMIC SIMULATION TESTING OF TRANSFORMER PROTECTION BASED ON ADPSS	213
<i>Jinli Xiao, Ruiming Fang</i>	
MULTI-PARAMETER OVERLOAD CAPACITY EVALUATION OF POWER TRANSFORMER BASED ON IMPROVED NEURAL NETWORK	217
<i>Yufeng Chen, Hui Wang, Zhihong Guo, Xiumin Du, Yi Yang, Chuanshuang He, Gehao Sheng</i>	
PREPARATION OF ELECTRICITY CONDUCTIVE ANTICORROSION COATINGS FOR GROUNDING GRID.....	225
<i>Tao Su, Zhiguang Guo, Hongyun Li, Qinjun Yu, Guogang Wang</i>	
RESEARCH ON LOW VOLTAGE RIDE THROUGH TESTING METHOD FOR WIND TURBINE BY ARTIFICIAL SHORT CIRCUIT	232
<i>Henan Dong, Zijiao Han, Shun Yuan, Feng Sun, Lingjie Zhang</i>	
ELECTROMAGNETIC TRANSIENT SIMULATION OF LARGE POWER TRANSFORMER INTERNAL FAULT.....	239
<i>Jun Liu, Shiwu Xiao, Qingsen Sun, Huaxing Wang, Lei Yang</i>	

HVDC ISLANDING TESTING ANALYSIS AND CONTROL PARAMETER OPTIMIZATION	245
<i>Jianming Wang, Jian Zhang, Yonghua Yin</i>	
APPLICATION OF JOINT TIME-FREQUENCY ANALYSIS ON PD SIGNAL BASED ON IMPROVED EEMD AND COHEN'S CLASS	252
<i>Xu Cheng, Fengyuan Yang, Shiyang Tao, Wenshan Wang</i>	
THE DESIGN OF A NEW TYPE OF APPARATUS FOR LARGE TURBO GENERATOR CORE LOSS TEST	261
<i>Ming Li, Fuchun Sun, Guangke Xu, Weiwei Zhang</i>	
A NEW TWO-STAGE PHOTOVOLTAIC GMPPT METHOD UNDER PARTIALLY SHADED CONDITIONS	266
<i>Shuran Jia, Qingyong Zhang, Yang Fang</i>	
RESEARCH ON CALIBRATION TEST METHOD OF INFRARED THERMAL IMAGER FOR POWER SYSTEM	271
<i>Weiwei Zhang, Guangke Xu, Ming Li, Dongdong Xu</i>	
STUDY ON THE FREQUENCY AND VOLTAGE COORDINATED CONTROL FOR WIND AND ENERGY STORAGE SYSTEM	275
<i>Shanying Li, Tao Wu, Haiying Xing, Tingjian Han, Tianzhi Cao, Xisheng Tang, Chao Gao</i>	
STUDY ON THE INFLUENCE OF DISTRIBUTION GENERATION ON OVER CURRENT RELAYS IN DISTRIBUTION NETWORKS	281
<i>Ning Zhou, Xiang Lei, Xiaorui Jing, Xiang He, Zaibin Jiao</i>	
ADAPTIVE OVERCURRENT PROTECTION SCHEME FOR DISTRIBUTION NETWORK WITH HIGH PENETRATION DG	287
<i>Xiaorui Jing, Xiang Lei, Jianwei Ma, Xiang He, Zaibin Jiao</i>	
EFFECT OF TIP SPEED RATIO OF REAR STAGE IMPELLER ON THE PERFORMANCE OF CONTRA-ROTATING WIND TURBINE	295
<i>Zhiqiang Li, Zhiming Li</i>	
THE FILTER DESIGN ON IMPEDANCE CONTROL OF VIA	300
<i>Xiaofei Xu</i>	
APPLYING RESEARCH ON FUEL CELL GENERATION SYSTEM	305
<i>Liming Wei, Xueying Lv</i>	
OPTIMIZATING LIGHTING EQUIPMENT OF SUBSTATION CONTROL PANEL	309
<i>Yongtao Shen, Liming Chen, Dong Pan, Xin Chen, Jingru Zhao, Qian Zhao, Jiangang Wang, Hui Liu, Kai Huang, Wei Bao, Wei Guo</i>	
MULTI-AGENT-BASED VOLTAGE COOPERATIVE CONTROL IN SMART GRIDS	313
<i>Jian Sun, Qiang Wang</i>	
STUDY ON MAXIMUM POWER POINT TRACKING TECHNOLOGY FOR PV SYSTEM USING PATTERN SEARCH ALGORITHM	318
<i>Wei Zheng, Yong Zhi, Shibin Chen, Fubo Liang, Yangjun Li, Qiao Wei, Yun Zhang</i>	
RELIABILITY EVALUATION OF HIGH VOLTAGE CIRCUIT BREAKER BASED ON IFAHP AND GA	323
<i>Peng Sun, Hongyun Jiang, Hong Yu, Xuyong Huang, Yiyun Sun, Xin Wang</i>	
A LARGE-CAPACITY DC-DC CONVERTER WITH INPUT-SERIES-INPUT-PARALLEL OUTPUT-SERIES-OUTPUT-PARALLEL CONNECTION	327
<i>Zhenghong Tu, Xin Wang, Yihui Zheng, Lixue Li, Guo Chen, Feng Zhu</i>	
FINITE ELEMENT ANALYSIS OF PERMANENT MAGNET SYNCHRONOUS MOTOR OF ELECTRIC VEHICLE	332
<i>Lingling Wang, Xin Wang, Yihui Zheng, Lixue Li, Wei Wang, Hao Wu</i>	
BI-DIRECTIONAL FULL-BRIDGE DC-DC CONVERTERS WITH PHASE-SHIFTING CONTROL AND ITS PHASE-SHIFTING RANGE ANALYSIS	336
<i>Jiabo Yuan, Xin Wang, Yihui Zheng, Lixue Li, Daqian Shen, Quanlun Deng</i>	
THE RESEARCH FOR DISO DC-DC CONVERTER BASED ON THE TOPOLOGY OF PUSH-PULL M2DC	340
<i>Wei Lin, Yihui Zheng, Lixue Li, Xin Wang, Chunming Zhao, Jianping Lie</i>	
DESIGN AND SIMULATION OF EV CHARGING DEVICE BASED ON CONSTANT VOLTAGE-CONSTANT CURRENT PFC DOUBLE CLOSED-LOOP CONTROLLER	344
<i>Cheng Zhang, Yihui Zheng, Lixue Li, Xin Wang, Jianyou Yu, Jingbo Yang</i>	
RESEARCH AND SIMULATION OF SCR SOFT-START ASYNCHRONOUS MOTOR	349
<i>Quan Li, Xin Wang, Jun Zhou</i>	
THE STUDY AND SIMULATION ON EFFECTS OF UHV ACCESS TO POWER GRID	354
<i>Mengyao Zhang, Xin Wang, Min Li</i>	

POWER DISTRIBUTION FEATURE OF COIL-BASED POWER-TAPPING FROM GROUND WIRE OF TYPICAL HV OVERHEAD TRANSMISSION LINE	358
<i>Yanbin Xie, Xiaofang Wang, Qingyue Luo, Jiafang Liu</i>	
A HIGH-POWER ULTRASONIC PULSER-RECEIVER FOR CONCRETE NON- DESTRUCTIVE TESTING	363
<i>Qingbang Han, Youpeng Xie, Cheng Yin, Xueping Jiang</i>	
COURSE TRACKING AND SIMULATION OF UNMANNED AMPHIBIOUS PLATFORM BASED ON ADAPTIVE FUZZY SLIDING MODE CONTROL	368
<i>Qingge Cai, Yulong Hua, Fuyong Cheng, Xingxing Niu</i>	
SIMULATIVE STUDY FOR THE IMPACT OF SIGNAL FREQUENCY ON PRECISION OF GROUNDING WIRE DETECTION IN 10KV DISTRIBUTION NETWORK	375
<i>Jun Lu, Lefeng Cheng, Tao Yu</i>	
RESEARCH ON CONSTRUCTION OF NEW-TYPE LOW VOLTAGE DISTRIBUTION AREA BASED ON SMART DISTRIBUTION TRANSFORMER TERMINAL	380
<i>Shuisheng Lai, Lefeng Cheng, Xueli Yang, Yuanmin Lin, Zhengjia Li</i>	
RESEARCH ON THE CALCULATED MODEL OF PROTECTIVE RELAYING OF CONSIDERING WIND POWER CONNECTED TO THE GRID	387
<i>Qing Yan, Dongliang Nan, Xiaoping Feng, Yuanzhen Yang, Xiaotong Cheng, Wei Cao, Li Zhang, Le Yu</i>	
LVRT RESEARCH BASED ON NOVEL ENERGY STORAGE CONTROL SYSTEM	394
<i>Juping Gu, Tianbo Qiu, Jianhong Zhu, Linlin Yuan, Yangyang Miao</i>	
DESIGN OF MICRO-GRID PROTECTION BASED ON THE COMMUNICATION SYSTEM	404
<i>Yalin Li, Qianshuang Wang, Jingtao Zhao, Tao Hong, Tao Yang</i>	

ENERGY DEVELOPMENT, RESOURCES UTILIZATION, AND ENERGY-SAVING TECHNOLOGIES

THERMAL MANAGEMENT OF THE DIE BONDING ARCHITECTURE IN 3D-ICS	410
<i>Kangjia Wang, Zhongliang Pan</i>	
DESIGN AND IMPLEMENTATION OF WATER-SAVING THERMOSTATIC MIXING VALVE	416
<i>Yali Tao, Zhiyong Liu, Cheng Wang</i>	
WIND POWER PREDICTION BASED ON FUZZY INFORMATION GRANULATION	420
<i>Nan Sheng, Guochu Chen</i>	
EFFECTS OF THE HORIZONTAL PROJECTION ON THE DISTRIBUTION OF THE FAÇADE TEMPERATURE	425
<i>Jiajia Fu, Yinqing Li, Jingyan Zhang</i>	
VISUALIZATION OF HVAC PIPELINE INTEGRATED ARRANGEMENT BASED ON BIM TECHNOLOGY	431
<i>Size Li, Zeqin Liu</i>	
WIND POWER REAL-TIME PREDICTION BASED ON IMPROVED TIME SERIES AND GREY MODEL	435
<i>Lanlan Chen, Zixia Pei, Anjia Mao, Yan Liu, Zhuohang Wu</i>	
STUDY ON AN ENVIRONMENTAL SIMULATION SYSTEM OF LOW/HIGH TEMPERATURE FOR GREAT SPACE	441
<i>Weike Pang, Tianping Liu, Jun Wang</i>	
HEAT METERING SYSTEM CHARACTERISTIC AND ENERGY-SAVING ANALYSIS BASED ON ON-OFF TIME AND AREA METHOD	447
<i>Jingting Wang, Rui Li</i>	
THE EVALUATION OF HEAT-TRANSFER COOLING PERFORMANCE OF PDMS/GLASS COMPOSITE LAMINATION INTERFACED WITH MICROFLUIDIC PINNATE-LIKE FLOWPATHS	452
<i>Yongchao Cai, Jiahuan Jiang</i>	
RESEARCH PROGRESS ON CATALYTIC PYROLYSIS TECHNOLOGY FOR LIQUID FUELS	458
<i>Ge Song, Weihong Zhou</i>	
NUMERICAL STUDY ON TWO-PHASE TURBULENT FLOW OF BLUNT COMBUSTOR WITH STRONGLY SWIRLING FLOW	462
<i>Zhiyi Lei, Xuesong Zhang</i>	
STUDY ON ENERGY SAVING POWER CONSUMPTION CHARACTERISTICS OF IDLE TIME IN THE UNIVERSITY	471
<i>Liming Wei, Xueying Lv</i>	
TWO DEGREES OF FREEDOM NONLINEAR OSCILLATIONS OF AN ENERGY HARVESTER	475
<i>Zuyao Wang</i>	

AN INVESTIGATION ON THE AERODYNAMIC PERFORMANCE EVALUATION AND THE LAYOUT OF WIND TURBINE IN THE TYPICAL MOUNTAINOUS TERRAIN	480
<i>Hongchuan He, Wei Yuan</i>	
SECURITY-CONSTRAINED ECONOMIC DISPATCH OF WIND POWER INTEGRATED POWER SYSTEM BASED ON INTERVAL OPTIMIZATION	489
<i>Hongmei Li, Hantao Cui, Zhaoxing Ma, Yanli Chai</i>	
APPLICATION OF CSAMT AND HIGH RESOLUTION SEISMIC PROSPECTING IN GEOTHERMAL SURVEY IN GUANTING	495
<i>Chenglin Yao, Zhongjun Deng, Yongmei Jia, Yubo Yang</i>	
A REVIEW OF THE BIOFUEL YIELD IN HYDROTHERMAL LIQUEFACTION OF DIFFERENT MICROALGAE	499
<i>Wenhan Song, Shuzhong Wang, Yang Guo</i>	
THE SYNERGETIC DEVELOPMENT ANALYSIS ON CHINA NEW ENERGY AUTOMOBILE ENTERPRISES DIVERSIFICATION STRATEGY - BYD AS AN EXAMPLE	505
<i>Yan Zhang</i>	

ENVIRONMENTAL ANALYSIS, ENVIRONMENT PROTECTION AND BIOLOGICAL PROTECTION

DISCUSSION ON ANTI-FLOATING STABILITY OF TALL BUILDING BASEMENT	512
<i>Zhanming Fu, Quan Bai</i>	
STUDY ON DYE WASTEWATER DEGRADATION BY FENTON REACTION UNDER THERMAL-ASSISTANCE	516
<i>Jingwen Ran, Shuibin Yang</i>	
ESTIMATING CARBON FRACTIONS OF PLANT AND SOIL ORGANIC MATERIALS FROM OZONATION CHEMILUMINESCENCE	521
<i>Pingping Fan, Guangli Hou, Yan Liu</i>	
CONTRAST OF TREATMENT ON SIMULATED WATER BY BIOLOGICAL AERATED FILTER AND MEMBRANE BIO-REACTOR	527
<i>Rong Lu, Fengshan Ma</i>	
COMPARATIVE STUDY ON THE MIGRATION OF HEAVY METALS IN THE SEWAGE SLUDGE TREATED BY SUPERCRITICAL/SUBCRITICAL WATER OXIDATION PROCESS	533
<i>Rui Ma, Yang Zhou, Lin Fang</i>	
COMPARE OF HETEROBASIDIUM INSULARE WITH WHITE ROT FUNGI IN DEGRADATION WASTEWATER OF PESTICIDE PLANT	540
<i>Li-Hong Yue, Yu-Jun Wang, Yue-Hua Zhang</i>	
RESEARCH ON CULTURAL AND CREATIVE INDUSTRY PARK LANDSCAPE DESIGN —— TAKING JI GUANG CREATIVE INDUSTRY PARK LANDSCAPE DESIGN AS AN EXAMPLE	545
<i>Xiu Mei Liu</i>	
A NEW CONSTRUCTION METHOD FOR DEEPLY BURIED METRO STATION IN RICH WATER STRATA	550
<i>Kai Zhao, Zhihong Hao, Furong Luo, Songmei Li</i>	
ANALYSIS OF TRACE ELEMENTS CONCENTRATIONS IN ATMOSPHERIC DEPOSITION IN HAERBIN CITY, NORTHEAST CHINA	554
<i>Na Li, Weizheng Han</i>	
STABILITY ANALYSIS AND TREATMENT MEASURES OF RAINFALL-INDUCED LANDSLIDES IN NINGZHEN AREA : A CASE STUDY FROM YONGNING TOWN IN PUKOU DISTRICT, NANJING CITY	560
<i>Ping Sun, Tao Xue, Mingxue Jiang</i>	
AN EXPERIMENTAL STUDY OF FUNCTIONAL EFFECT OF LOW-ECOLOGICAL DAM IN CHANNELIZED RIVER	564
<i>Wei Huang, Tingyu Li, Wei Ma</i>	
OPTIMIZATION OF SISHUI SCIENCE AND TECHNOLOGY NEW TOWN'S LOW-CARBON SPATIAL PLANNING BY URBAN CARBON SOURCE AND CARBON SINK	569
<i>Shilei Fu, Tiemao Shi, Tingting Xu</i>	
RESEARCH ON THE GREEN MODULAR DESIGN OF THE BALCONY	574
<i>Han Fang Liu, Li Qun Guan, Bing Kun Liu</i>	
EFFECTS OF INTERCROPPING DENSITY OF GALINSOGA PARVIFLORA ON CADMIUM ACCUMULATION OF SOYBEAN	578
<i>Lijin Lin, Fiyi Tang, Ming'An Liao</i>	

VALIDITY OF QUARTER-WAVELENGTH APPROXIMATION IN THE CASE OF TOHOKU-OKI EARTHQUAKE.....	582
<i>Tao Shang, Zhengru Tao, Baihui Zhu, Xiixin Tao</i>	
EFFECTS OF HYPERACCUMULATOR STRAW ON SOIL NUTRIENT AVAILABILITY AND SOIL ENZYME ACTIVITY OF CYPHOMANDRA BETACEA UNDER CADMIUM STRESS.....	588
<i>Jing He, Qianqian Ma, Lijin Lin, Ming'An Liao</i>	
DIFFUSION PATTERN OF ALIEN INVASIVE PLANTS ALONG COASTAL HIGHWAY IN LIAONING, CHINA	592
<i>Yan-Bo Zhao, Hong-Wei Yan</i>	
LAWS AND REGULATIONS AND RESEARCH STATUS WASTES DISPOSITION IN SUBSTATION	598
<i>Ke Du, Xueying Zhang, Lina Zhu, Linjuan Du, Yuwei Zang</i>	
HOW TO IDENTIFY AIRPORT CONFLICT HOT SPOTS	603
<i>Zhenghong Xia, Weijun Pan</i>	
THE EVALUATION OF WATER QUALITY AND SURVEY OF BENTHIC DIVERSITY IN THE BAIYANGDIAN LAKE (CHINA)	607
<i>Hongwei Wang, Fang Cai, Chunlong Zhao, Chaochen Yang</i>	
CITY ENVIRONMENT PULSATION RESEARCH BASED ON SPATIAL-TEMPORAL DATA MINING-AIR QUALITY AS AN EXAMPLE	611
<i>Xiang Li, Ling Peng, Tianhe Chi, Jing Shao, Shaolong Cui</i>	
STUDY ON THE RAPID DETOXIFICATION OF TANK-CLEANING OILY SLUDGE BY PSEUDOMONAS AERUGINOSA NY3.....	619
<i>Hongyun Nie, Maiqian Nie, Yan Wan</i>	
PROGRESS OF CARBON DIOXIDE REFORMING METHANE OVER CARBONACEOUS CATALYST TO SYNGAS.....	625
<i>Fengbo Guo, Wanli Jia</i>	
RESEARCH ON OPERATION MECHANISM OF CHINESE OCEAN ENERGY INDUSTRY TECHNOLOGY INNOVATION SYSTEM.....	631
<i>Yingying Ding, Xiaohong Song</i>	
RESEARCH ON NEW TYPE OF STARTUP POWER SOURCE FOR DIESEL GENERATOR SETS IN ALPINE REGION.....	637
<i>Song Liu, Chunming Wang, Yu Zhang</i>	
THE GROWTH TRAITS OF MICROALGAE FOR BIOFUEL AND ITS EFFECT ON NITROGEN AND PHOSPHORUS REMOVAL IN WASTE WATER.....	643
<i>Jiang Yu, Ziyi Su, Ping Wang, Yuting Zhou</i>	
THE STUDY OF THE RELATIONSHIP BETWEEN CLIMATE FACTORS AND GROWTH PERIOD OF SPRING WHEAT BASED ON APSIM MODEL	647
<i>Li Ning, Jingwen Xu, Junfang Zhao, Feiyu Pu, Surong Xiang</i>	
APPLICATION OF THE ART FARMLAND LANDSCAPE TO RURAL LANDSCAPE A STUDY CASE OF LANDSCAPE DESIGN AT XIHE VALLEY IN QIONGLAI,SICHUAN	651
<i>Feiyu Pu, Jingwen Xu, Junfang Zhao, Ning Li, Surong Xiang</i>	
THE DISTRIBUTION AND REMOVAL OF PHARMACEUTICAL CONTAMINANTS IN CLASSIC WASTEWATER TREATMENT PROCESS.....	655
<i>Hongbo Wang, Guorui Pang, Ning Ding, Pingping Jia, Ning Wang</i>	
CROP BIOMASS AND ROOT MORPHOLOGY IN MAIZE/SOYBEAN STRIP INTERCROPPING SYSTEM IN KARST REGION.....	660
<i>Hao Zhang, Fuping Zeng, Qiujin Tan, Guanghua Xu</i>	
AN ASSESSMENT OF THE EFFECT OF ABANDONED COASTAL WETLAND RESTORATION IN CHINA- ACHIEVEMENTS AND LESSONS	665
<i>Zhenglei Xie, Zebing Du, Hezi Zhang, Lixiong Xiang, Yuli Wu, Yinghui Jiang, Xiaoxiang Zhao, Shimei Li, Xiaoyang Yang, Kai Shan</i>	
EFFECTS OF 2-DIETHYLAMINOETHYL-3,4- DICHLOROPHENYLETHER ON CADMIUM TOLERANCE AND ACCUMULATION OF AN ENERGY PLANT, HEMP (CANNABIS SATIVA L.).....	681
<i>Gangrong Shi, Caifeng Liu, Zheng Zhang</i>	
RECOGNITION MARKS AND CORRELATION PRINCIPLES OF SINGLE SAND BODIES IN DISTRIBUTARY CHANNEL OF SHALLOW DELTA PLAIN	687
<i>Tingting He, Xin Tan, Dongxu He, Chao Yu</i>	
CHANGES IN SOIL MICROBIAL BIOMASSES AND THEIR QUOTIENTS OVER THE SUCCESSION OF KARST ROCKY DESERTIFICATION.....	691
<i>Lianwu Xie, Yanling Deng, Bin Wang, Haijiao Qin, Jiqian Fang, Fuxiang Cao, Lichao Wu</i>	

EFFECTS OF SMOKING ON RAT PEPTIC ULCER	698
<i>Shu Jing, Wei Sun, Weihai Jiang</i>	
THE STUDY ON THE REMOVAL OF ULTRAFINE PARTICLES	702
<i>Daolai Cheng, Meng Cai, Fang Zhao, Huimin Hu, Junfeng Yao</i>	
STUDY ON THE PREPARATION AND PERFORMANCE OF APEG-AMPS-MA POLYCARBOXYLATE SUPERPLASTICIZER	708
<i>Jinming Wang</i>	
THE RECHARGE METHOD OF LANDFILL LEACHATE TREATMENT	712
<i>Yu Tian, Wenwei Zhang, Jianhua Tang, Wen Li</i>	
EKC IN HUBEI PROVINCE AND ITS INFLUENCING FACTORS ANALYSIS	717
<i>Huiyuan Liu, Ailin Zhang</i>	
THE INDUSTRIAL RESEARCH ON THE CO-DISPOSAL OF MUNICIPAL SLUDGE USING NEW DRY PROCESS CEMENT KILN	723
<i>Hongyu Zhang, Li Han, Jun Gu, Haibing Liu, Wentao Cai</i>	
RESEARCH ON THE DETECTION METHOD FOR ABNORMAL DATA OF WASTEWATER TREATMENT PLANTS BASED ON STATISTICAL THEORY	727
<i>Liang Guo, Ying Zhao, Fuyi Cui</i>	
ADSORPTION OF U (VI) BY ANAEROBIC SLUDGE EXTRACELLULAR POLYMERIC SUBSTANCES (EPS) IN WASTEWATER	732
<i>Shiyou Li, Fan Xiong, Shuibo Xie, Shichao Yuan, Taotao Zeng</i>	
RESEARCH ON STATUS AND STRATEGY OF WETLAND TOURISM DEVELOPMENT	737
<i>Jianbo He, Zhen Wang</i>	
TEMPORAL DISTRIBUTION OF TYPICAL PETROLEUM POLLUTANTS IN OIL-POLLUTED SOIL OF GUDAO REGION	741
<i>Xiaohua Ren, Xiaoli Sun</i>	
EXPERIMENTAL STUDY OF THE MULTIPLE FACTORS OF CU-MO BULK FLOTATION	746
<i>Xiaoying Guan, Yongsheng Song, Wenjuan Li</i>	
STUDY ON DISTRIBUTIONAL PATTERN AND FUNISTIC COMPOSITION OF THE MIRIDAE (HEMIPTERA) FAMILY IN THE HULUN BUIR CITY, INNER MONGOLIA OF CHINA	752
<i>Kai Shi, Yuanyuan Li, Yanqin Zhao</i>	
INFLUENCE OF SO₂, NO AND SOOT DUST IN FUEL GAS ON MICROALGAE ZY-1 GROWTH	759
<i>Lihong Yue, Weigong Chen, Pengyang Qi</i>	
RESEARCH ON ROADWAY SURROUNDING ROCK CONTROL TECHNOLOGY USING O- ARCH COMBINATION SUPPORT SCHEME	763
<i>Maoyuan Wang, Tianshu Lin, Leijia Yin, Yang Yang, Lei Yang</i>	
THE IMPACT OF CARBON EMISSION TRADE ON POWER GENERATION	769
<i>Haichao Wang, Dunnan Liu, Xiaoyue Yang, Yuhang Ying</i>	
INDUSTRIAL PRACTICE OF SEWAGE SLUDGE PUMP DIRECTLY INTO CEMENT KILN	775
<i>Haibing Liu, Jun Gu, Li Han, Ping Wang, Nan Zhang, Wentao Cai</i>	

PART 2

EFFECTS OF BATROXOBIN INJECTION ON PROGRESSIVE ISCHEMIC STROKE AND SERUM MMP-2 AND MMP-9 EXPRESSIONS	779
<i>Weihai Jiang, Wei Sun, Shu Jing</i>	
RESEARCH ADVANCE ON DRAW SOLUTION IN FORWARD OSMOSIS PROCESS	783
<i>Boyu Liu, Jiang Yu, Donglang Li, Dan Lv, Juan Zhang</i>	
THE IMPACT OF MN²⁺ ON ANAMMOX	788
<i>Yafeng Li, Chi Zhang, Lu Zheng</i>	
GIS-BASED QUANTITATIVE STUDY OF SOIL EROSION IN MIYUN COUNTY, BEIJING	792
<i>Jing Zhao, Jing Zhang, Binbin Guo</i>	
EFFECTS OF DTPA ON CADMIUM ACCUMULATION OF GALINSOGA PARVIFLORA	796
<i>Lijin Lin, Zhihui Wang, Ming'An Liao</i>	
RESEARCH ON NITRIFICATION AND DENITRIFICATION KINETICS OF THREE-PHASE BIOLOGICAL FLUIDIZED BED WITH FOUR STEP-FEED PROCESS	800
<i>Bing Wang, Lan Fang</i>	
EVOLUTION OF PATENT CITATION NETWORK FOR HYBRID RICE BREEDING	805
<i>Tianhua Song, Qingpu Zhang</i>	
PILOT STUDY ON ADVANCED TREATMENT OF WASTEWATER PRODUCED BY PRESSURIZED COARSE COAL GASIFICATION	810
<i>Jingzhi Zhang, Linlin Xing, Jiame Zuo, Anping Jiang, Kai Wang</i>	

STUDY ON PROPERTY OF GEL-EMBEDDED NITROBACTERIA CARRIER AND ITS APPLICATION IN TREATING URBAN SEWAGE	816
<i>Jingzhi Zhang, Xuelian Zhao, Jinquan Liu, Xiangshun Jing, Kai Wang, Jiane Zuo</i>	
EVALUATION ON THE STABILITY OF MUDDY TIDAL FLAT	825
<i>Jingzhi Zhang, Xuelian Zhao, Jinquan Liu, Xiangshun Jing, Kai Wang, Jiane Zuo</i>	
PHOSPHORUS REMOVAL FROM WASTEWATER BY FIVE AQUATIC PLANTS.....	829
<i>Xiaoyun Fu</i>	
RESEARCH ON HIGH-EFFICIENT BALCONY GREENING BASED ON THE CONCEPT OF LOW-CARBON GREEN BUILDINGS.....	834
<i>Jinkun Sun, Jing Liu, Feng Wu, Hongfen Nian</i>	
THE ISSUES IN CHROMIUM-CONTAINING WASTEWATER TREATMENT BY SODIUM PYROSULFITE.....	838
<i>Zhiyong Wu, Jie Feng, Zuoqin Tang</i>	
THE SEPARATION OF A PHENOL-DEGRADABLE BACTERIUM AND ITS APPLICATION ON COKE WASTEWATER TREATMENT BY USING MICROBIAL FUEL CELL TECHNOLOGY.....	841
<i>Peng Guo, Yuhan Du, Li Zhang, Lijian Guo, Fang Lv</i>	
A NUMERICAL SIMULATION OF METHANE-AIR MIXTURE EXPLOSION UNDER NORMAL AND ELEVATED INITIAL TEMPERATURES	846
<i>Na Gao</i>	
DISTRIBUTION OF ROOT CARBON STORAGE OF SALIX GORDEJEVII AT DIFFERENT FOREST AGE	851
<i>Juan Wang, Yue Feng Guo, Yun Feng Yao, Jun Tang</i>	
INHIBITION BEHAVIOR OF COMPOUND CORROSION INHIBITORS FOR CARBON STEEL IN NATURAL SEAWATER	856
<i>Fu Qiang, Xiaogang Yang</i>	
THE STUDY OF A NEW TYPE OF MICRO-ELECTROLYSIS TECHNOLOGY ON NITROBENZENE WASTEWATER TREATMENT	862
<i>Jing Wang, Xin Luo, Yiping Huang, Yang Liu</i>	
KUZNETS CURVE OF CARBON EMISSIONS IN CHINA.....	867
<i>Xu Yang, Dasha Fan, Pan Luo</i>	
URBAN PARK PLANNING ON SPATIAL DISPARITY BETWEEN DEMAND AND SUPPLY OF PARK SERVICE	871
<i>Shaoli Liu</i>	
ANALYSIS THE INFLUENCE OF GRASSLAND DEGRADATION IN DU MENG COUNTY OF HEILONGJIANG PROVINCE.....	876
<i>Limei Zhang, Lingjun Meng, Xueping Zhang, Shufeng Zheng</i>	
EFFECT OF 1-MCP TREATMENTS ON ‘HANFU’ APPLES DURING LONG COLD STORAGE.....	882
<i>Xiaoming Li, Ying Zhu, Baiqing Zhang, Baodong Wei</i>	
SUITABILITY EVALUATION OF COLD WATER PADDY FIELD FOR RICE PLANTING IN JIANGHAN PLAIN.....	887
<i>Qingjun Deng, Yuru Chen</i>	
URBAN ENVIRONMENTAL PULSATION RESEARCH BASED ON WAVELET DECOMPOSITION ENHANCED ARMA MODEL.....	892
<i>Xiang Li, Ling Peng, Tianhe Chi, Congcong Wen, Yizhi Xu</i>	
VARIATION OF ALGAE SCUM IN ELECTRO-COAGULATION-FLOTATION (ECF) PROCESS.....	908
<i>Liang Tian, Tian Xu, Xiaoxiao Lu, Jinrui Xu</i>	
THE INVESTIGATION OF BENTHIC MACROINVERTEBRATES IN BAIYANGDIAN LAKE	913
<i>Hongwei Wang, Likun Yang, Chunlong Zhao, Zhaojin Cui, Haitao Zhao, Weifeng Tang, Qianqian Liu</i>	
GROWTH INHIBITION OF PROROCENTRUM MINIMUM BY ULVA PERTUSA KJELLM UNDER DIFFERENT N AND P NUTRIENT LIMITATIONS	916
<i>Hengjiang Cai, Zhihua Zhang, Junxin Zhang</i>	
PHENOLATION OF ALKALI LIGNIN OF WHEAT STRAW IN IONIC LIQUID.....	920
<i>Zhiguo Zhang</i>	
IMPROVEMENT OF TWO-DIMENSIONAL GEL ELECTROPHORESIS CONDITIONS FOR RIN MUTANT TOMATO FRUIT	924
<i>Ling Li, Yuanyuan Song, Yifeng Wang, Baoxin Zheng, Tieling Liu</i>	
EFFECTS OF GRAFTING ON PHOTOSYNTHETIC CHARACTERISTICS OF POTENTIAL CD-HYPERACCUMULATOR SOLANUM PHOTEINOCARPUM UNDER CD STRESS.....	929
<i>Fuyi Tang, Lijin Lin, Ming’An Liao</i>	
THE EFFECT OF GAS ENERGY PROPAGATION VELOCITY ON THE TRANSPORT SECURITY	934
<i>Sun Song</i>	

THE BUILDINGS EXPLOSION VENTING RESEARCH FOR THE GAS RESOURCE UTILIZATION	939
<i>Tianhui Zhao, Ruliang Zheng</i>	
RESEARCH ON CONSTRUCTION FEATURES, DILEMMA AND IMPROVEMENT COUNTERMEASURES OF ECOLOGICAL ENVIRONMENTAL PROTECTION IN SHANGHAI	944
<i>Guodong Yan, Guowei Yan</i>	
A RESEARCH ON THE VERTICAL TRANSFER PROCESS OF CU IN JIAOZHOU BAY	950
<i>Dongfang Yang, Fengyou Wang, Sixi Zhu, Yunjie Wu, Xiuqin Yang</i>	
AGGREGATION, DIVERGENCE AND HOMOGENEITY OF CU IN MARINE BAY BOTTOM WATERS	954
<i>Dongfang Yang, Sixi Zhu, Yunjie Wu, Xiuqin Yang, Fengyou Wang</i>	
IMPACTS FROM HUMAN ACTIVITIES AND NATURAL BACKGROUND TO ZN CONTENTS IN JIAOZHOU BAY	958
<i>Dongfang Yang, Fengyou Wang, Sixi Zhu</i>	
RESEARCHING ON THE METHOD OF RAYLEIGH WAVE EXTRACTION	963
<i>Xufang Zhu, Bing Yan</i>	
EXPRESSION, PURIFICATION AND BINDING ACTIVITY OF RIPENING INHIBITOR (RIN) PROTEIN OF TOMATO FRUIT	968
<i>Ling Li, Lu Liang, Yunxi Liu, Yanxiu Liu, Xiaodan Li, Tieling Liu</i>	
EXPLORATION ON CULTURE LANDSCAPE DESIGN OF UNIVERSITY CAMPUS 20	972
<i>Zhizhong Su, Jianing Li, Jingzhong Li</i>	
NUMERICAL SIMULATION OF FLUCTUATION FALLING FILM ABSORPTION	982
<i>Mingyue He, Hongtao Gao</i>	
ANALYSIS OF DISTRIBUTION OF CHLOROPHYLL-A AND SEA-ICE IN THE SOUTHERN OCEAN USING MODIS DATA	988
<i>Chao Song, Chen Zeng, Qian Li</i>	
THREE FIELDS USED IN LUBRICATING OIL FOR DEMULSIFICATION	992
<i>Ye Peng, Tao Liu</i>	
GAS PREDICTION OF SINO-SINGAPORE TIANJIN ECO-CITY BASED ON ARMA MODEL	996
<i>Yizhi Xu, Peng Ling, Xiang Li, Gaosheng Li, Shaolong Cui</i>	
EXPERIMENTAL STUDY ON OVERTOPPING FAILURE MODE OF REINFORCED TAILINGS DAM	1001
<i>Yishu Zhao, Xiao Zhou, Xiaofei Jing, Kehui Liu, Chen Ye, Xiaoshun Zhang</i>	
INTERCROPPING DIFFERENT DENSITY OF GALINSOGA PARVIFLORA CAN INCREASE CADMIUM ACCUMULATION IN RADISH	1007
<i>Qianqian Ma, Xuena Yu, Lijin Lin, Ming'An Liao</i>	
RESEARCH ON THE DIFFICULTIES AND PATH OF REALIZING THE GREEN DEVELOPMENT OF THE AUTOMOBILE ENTERPRISES UNDER LOW CARBON ECONOMY	1011
<i>Xiu-Rong Liu</i>	
EFFECT OF SUPERSULPHATED CEMENT ON SULFATE ATTACK OF CEMENT MORTAR	1016
<i>Quanlin Niu, Rui Zhang</i>	
EMPIRICAL STUDY ON MFCA INTRODUCED IN SEKISUI CHEMICAL GROUP AND ITS ENLIGHTENMENT	1020
<i>Benyue Zhang, Jiana Liu</i>	
EFFECTS OF ARRANGEMENTS OF SPHERICAL PARTICLES IN THE SPHERE MODEL ON ROCK AND SOIL POROSITY	1025
<i>Xueqing Wang, Zibo Miao, Junjie Yu, Chongfan Li, Yi Chen, Dongchao Xue</i>	
CFD AND EXPERIMENTAL STUDIES ON THE IMPACT OF IMPELLER TYPE ON FLOW FIELD AND FLOC SIZE EVOLUTION IN A STIRRED TANK	1030
<i>Pengfei Ren, Jun Nan</i>	
POLICY AND LEGISLATION OF CHINA'S LOW-CARBON DEVELOPMENT	1039
<i>Boyu Zhu</i>	
THE ESTABLISHMENT OF CHINA LOW-CARBON LEGISLATION AND SYSTEM	1045
<i>Boyu Zhu</i>	
THE PHYSIOLOGICAL CHANGE OF TWO PEONY VARIETIES IN DARK-INDUCED SENESCENCE LEAVES	1051
<i>Yanwei Cheng, Mingxin Guo, Haiyan Feng, Wenqian Li, Huanling Zhang, Kai Gao, Yanzhao Zhang, Jianming Han</i>	
STUDY OF THE EFFECT OF CALCIUM ION IN DARK-INDUCED SENESCENCE LEAVES OF PEONY	1056
<i>Yanwei Cheng, Jiaojiao Zhang, Hongxia Liu, Jiawei Zhang, Kai Gao, Huanling Zhang, Yanzhao Zhang, Pengcheng Fu, Jianming Han</i>	

SIMULTANEOUS NITRIFICATION AND DENITRIFICATION ASSOCIATED PHOSPHORUS UPTAKE PROPERTIES OF SLUDGE SUBJECTED TO EBPR WITH EFFICIENT MICRO AERATION.....	1061
<i>Juan Ma, Xiaojun Yu, Lu Song, Hongwei Sun, Daniel R. Noguera</i>	
CONCEPTION OF NATIONAL CARBON TRADING SYSTEM TAKE CHINA FOR EXAMPLE.....	1070
<i>Li Wei</i>	

ENVIRONMENTAL MATERIALS AND ADVANCED MATERIALS

RESEARCH ON THE DURABILITY OF NORMAL STRENGTH CONCRETE CORRODED BY DIFFERENT ENVIRONMENTAL FACTORS.....	1074
<i>Xiaoping Su, Jianxing Wang, Li Zhang</i>	
STRESS ANALYSIS OF DOUBLE-ROW CORRUGATED STEEL PIPES.....	1079
<i>Chi Zhang, Shui Wan</i>	
ADSORPTION KINETICS OF COPPER BY BIOCHARS.....	1084
<i>Huiying Guo, Fang Yang, Zhengqi Cheng, Yanzhi Yin</i>	
TEST STUDY ON UNIAXIAL COMPRESSIVE STRENGTH OF FINE SANDSTONE AFTER HIGH TEMPERATURE.....	1090
<i>Chongbang Xu</i>	
APPLICATION RESEARCH OF FRP COMPOSITE MATERIAL FOR BUILDING BASED ON TEST EVALUATION.....	1096
<i>Liang Yu, Xiang-Mei Ren, Mao-De Li</i>	
INTERPHASE EFFECT ON THE INTERFACIAL DEBONDING BEHAVIOR IN SHORT-FIBER-REINFORCED RUBBER COMPOSITES.....	1102
<i>Xiaoming Yu, Boqin Gu, Bin Zhang, Lili Chen, Jiahui Tao</i>	
EFFECT OF CARBON NANOTUBES COMBINED WITH HEXAPHENOXYCYCLOTRIPOHOSHAZENE ON THE FLAME RETARDANCY OF EPOXY RESIN.....	1109
<i>Jitang Zhang, Wanxi Zhang, Jicai Liang, Dongbo Guan</i>	
REMOVAL OF CR (VI) FROM AQUEOUS SOLUTION USING CAMELLIA OLEIFERA ABEL SHELL-BASED ACTIVATED CARBON.....	1115
<i>Rui-Yun You, Ya-Qing Huang, Shan-Yu Zheng, Yu-Dong Lu</i>	
EFFECTS OF DIFFERENT AL CONTENTS ON AS-CAST MICROSTRUCTURE AND PROPERTIES OF MG-AL-SI-SR ALLOY.....	1120
<i>Baichang Ma, Jinwei Wang, Jixue Zhou, Yunteng Liu, Dongqing Zhao, Linlin Zhang, Shouqiu Tang, Yuansheng Yang</i>	
STUDY ON PREPARATION AND PROPERTIES OF FE₂O₃ NANOPOWDERS.....	1125
<i>Bianfang Zhang, Yingming Shen, Minghui Du</i>	
THE UNIVERSAL CALIBRATION OF POLYALUMINOCARBOSILANE AND DETERMINATION OF MARK-HOUWINK CONSTANT.....	1130
<i>Dafang Zhao, Xiaodong Li</i>	
THE THERMAL CONDUCTIVE PROPERTY OF TDI BASED THERMOPLASTIC POLYURETHANE/GRAPHENE NANOPATELETS COMPOSITE.....	1134
<i>Danqing Chen, Jie Yan</i>	
STUDY ON PREPARATION AND PROPERTIES OF U3160/3266 COMPOSITES BY EX-SITU TOUGHENING METHOD.....	1139
<i>Li Yan, Xuefeng An</i>	
CURING REACTION MECHANISM OF BISPHENOL A (BPA) EPOXY BY WAY OF NON-ISOTHERMAL DSC AND PHENOMENOLOGICAL MODEL.....	1145
<i>Juan Zhao, Guang Ye Liu</i>	
RESEARCH ON CURING MECHANISM OF BISPHENOL-A EPOXY RESIN BY DSC.....	1149
<i>Juan Zhao, Guang Ye Liu</i>	
DISPERSION OF CARBON NANOTUBE (CNT) IN BISMALIMIDE(BMI) TO PREPARE CNT/BMI FOAM.....	1153
<i>Xiao-Li Liu</i>	
THE COMPARATIVE STUDY OF LASER-MAG HYBRID WELDING AND MAG WELDING OF ATMOSPHERIC CORROSION RESISTANT STEEL SMA490BW.....	1158
<i>Xiangyang Wu, Zhiyi Zhang, Weihua Zhang, Weilin Chen, Yong Chen</i>	
EFFECTS OF DIFFERENT GASES ON ELECTRICAL PROPERTIES AND RELIABILITY OF GE MOS CAPACITORS WITH GEOX/GEOXNY AS GATE DIELECTRIC.....	1167
<i>C. X. Li, Y. Z. Zhang, J. H. Zhu</i>	

PATTERN RECOGNITION OF PARTIAL DISCHARGE IN XLPE CABLE BASED ON PHASE DISTRIBUTION.....	1171
<i>Yubing Duan, Hao Zhang, Jun Yong, Bo Yang, Xiaoli Hu, Xiaobin Sun, Hailei Meng, Xinyan Feng, Yongpeng Xu</i>	
APPLICATION OF WEIBULL DISTRIBUTION FOR DETECTION AND IDENTIFICATION PARTIAL DISCHARGE IN XLPE CABLE.....	1175
<i>Xiaoli Hu, Jun Yong, Bo Yang, Minglin Liu, Hailei Meng, Xiaobin Sun, Yubing Duan, Xinyan Feng, Yongpeng Xu</i>	
ATOMIC ABSORPTION SPECTROSCOPY FOR THE DETERMINATION OF HEAVY METALS IN POLYETHYLENE MOULDING MATERIALS USING ANDERSON–DARLING STATISTICS AND TOP-DOWN UNCERTAINTY ESTIMATES.....	1180
<i>Dekui Bai, Quanhong Ying, Ni Wang, Jinhui Lin</i>	
EFFECT OF METHYL ACETATE ON LOW-TEMPERATURE PERFORMANCE OF $\text{LiCO}_{1/3}\text{Ni}_{1/3}\text{Mn}_{1/3}\text{O}_2$ CATHODE AND GRAPHITE ANODE.....	1187
<i>Hui Zhang, Jiahui Chen, Cuihua Li</i>	
ENHANCED ELECTROCHEMICAL PERFORMANCE OF HIGH VOLTAGE SPINEL CATHODE BY USING FLUOROETHYLENE CARBONATE AS AN ELECTROLYTE ADDITIVE.....	1191
<i>Jiahui Chen, Hui Zhang, Cuihua Li</i>	
SYNTHESIS OF Fe_2SiO_4@C NANOCOMPOSITES VIA A SOLID STATE REACTION BY CONTROLLING CALCINATING TEMPERATURE.....	1195
<i>Qingtang Zhang, Langlang Lu, Songwang Ge</i>	
STUDY ON SPECTROPHOTOMETRIC DETERMINATION OF TRACE COPPER AFTER FLOTATION SEPARATION USING SODIUM CHLORIDE-AMMONIUM THIOCYANATE-DODECYL DIMETHYL BENZYL AMMONIUM CHLORIDE SYSTEM.....	1199
<i>Changqing Tu, Xinrong Wen</i>	
SIMULATING AQUEOUS ADSORPTION OF POLYCYCLIC AROMATIC HYDROCARBONS ON GRAPHENE AND GRAPHENE OXIDE QUANTUM DOTS.....	1204
<i>Yiwen Liu, Zhuang Wang, Se Wang, Hao Fang</i>	
STUDY PROGRESS IN THE PREPARATION COAGULANT BY INDUSTRIAL WASTE.....	1208
<i>Guangwen Zhang, Yang Liu, Puxuan Zhang</i>	
STUDY ON ULTRASOUND-ASSISTED EXTRACTION OF FLAVONOIDS FROM NAVEL ORANGE PEEL.....	1215
<i>Xiaokang Li, Yangqin Jiang, Kejun Wang, Jiong Chun, Balian Zhong</i>	
A RESEARCH ON IMPLEMENTING GPS TO SYNCHRONIZE SAMPLING IN A DISTURBED PHASE DIFFERENCE'S HIGH-PRECISION MEASURE SYSTEM FOR INSULATION TESTING.....	1219
<i>Dengfeng Ju, Weizheng Zhang, Xiaomin Yin, Xing Zhou, Zhongjing Li, Guojian Ji, Di Su, Xiaohui Liu</i>	
AN INTERCONNECTED HIERARCHICAL POROUS CARBON MATERIALS PREPARED BY POLYMER PRECURSOR AND ITS APPLICATION AS ELECTRODE IN SUPERCAPACITORS.....	1224
<i>Fen Ran, Yongtao Tan, Lingbin Kong, Long Kang</i>	
MINING PLANTS FOR BIODIESEL IN CHINA.....	1228
<i>Chunlin Long, Jun Yang, Zhi Wang, Lijuan Ma</i>	
SYNTHESIS AND DENITRATION PERFORMANCE RESEARCH OF MANGANESE OXIDE NANOWIRES LOADED BY CERIUM OXIDE AS LOW TEMPERATURE SCR CATALYST.....	1233
<i>Jiusheng Wang, Mojie Sun, Guoqing Song</i>	
THE FATIGUE LIFE ANALYSIS OF THE BATTERY BRACKET.....	1237
<i>Meishi Zhou, Huaixian Yin, Tiezhu Zhang, Hongxin Zhang, Gaojun Liu</i>	
PHOTOCATALYTIC DEGRADATION OF SELECTIVE HERBICIDES USING $\text{Ag}/\text{AgCl}/\text{Ag}_3\text{PO}_4$ PLASMONIC NANOCATALYST UNDER VISIBLE IRRADIATION.....	1242
<i>Xiaodan Zhao, Donghui Chen, Tianxia Zhou</i>	
STUDY ON THE MECHANICAL PROPERTIES OF THE SURFACE LAYER THICKNESS AND THE VISCOELASTIC PROPERTIES OF THE GEOTHERMAL REGENERATION.....	1248
<i>Jiangang Qiao, Xiaomin Liu</i>	
FURFURAL FORMATION FROM CORN COBS IN A ONE-POT METHOD CATALYZED BY ZSM-5.....	1253
<i>Jian Du, Hongling Gao, Jing Guan, Guang Yu, Yuedong Zhang, Haisong Wang, Xindong Mu</i>	
MICROWAVE-ASSISTED PREPARATION OF AMINO MODIFICATION MONTMORILLONITE AND THE CAPTURING PERFORMANCE OF CARBON DIOXIDE.....	1258
<i>Na Li, Zhebin Yu, Zhanghao Chen</i>	
STUDY ON PREPARATION PROCESS OF PD-NI ALLOY NANO-CATALYST FOR CATHODE REDUCTION IN DIRECT NABH_4 - H_2O_2 FUEL CELL.....	1262
<i>Zaoxi Yu, Dan Zheng, Tingfang Yang</i>	
PREPARATION AND ANTIOXIDANT ACTIVITY OF LYCIUM BARBARUM POLYSACCHARIDE IRON COMPLEX.....	1266
<i>Liming Jin, Fangning Guo, Ai-Li Jiang, Wenzhong Hu</i>	

SIX PRISM TYPE $CE_{0.7}LA_{0.3}O_{2-8}$ SOLID SOLUTION PREPARED BY REVERSE CO- PRECIPITATION METHOD WITH DOUBLE PRECIPITANT	1270
<i>Hongrui Hao, Xue Han, Ronggui Guo</i>	
INFLUENCE OF ELECTRICAL JOINT COMPOUND ON THE TEMPERATURE RISE OF ELECTRICAL EQUIPMENT	1277
<i>Jie Chen, Zhicheng Zhou, Jianjun Liu, Wei Lian</i>	
EXPERIMENTAL STUDY ON THE IMPROVEMENT OF SCHISANDRA AND EPIMEDIUM EXTRACT ON THE MEMORY ABILITY IN MICE.....	1281
<i>Jiahong Li, Chunmei Wang, Bing Li, Jinghui Sun, Weijing Sun</i>	
EXPERIMENTAL RESEARCH ON ANTI-SEEPAGE PERFORMANCE OF MODIFIED CLAYS BASE ON FLY ASH LANDFILL WASTE	1285
<i>Xuejing Sun, Zhanghua Wang</i>	
KINETIC AND INFLUENCE FACTORS ON DEBROMINATION OF DECABROMODIPHENYL ETHER BY ORGANO-MONTMORILLONITE SUPPORTED NANOSCALE ZERO-VALENT IRON.....	1289
<i>Zhihua Pang, Jinrong Qiu, Li Liu, Yutao Lei</i>	
HIGH-TEMPERATURE CORROSION OF WATER-WALL IN SUPERCRITICAL BOILER.....	1294
<i>Ling Pan, Guangyuan Ma, Shunan Cao</i>	
STUDY ON FINGERPRINT CONSTRUCTION OF PU'ER RAW TEA BY GC-MS	1299
<i>Na Wu, Shijuan Xu, Xianlan Chen, Shaoping Feng, Dushu Huang, Yanchang Wang, Wei Liu</i>	
RESEARCH ON THE MECHANICAL AND ACOUSTIC PROPERTIES OF POROUS ALUMINUM FOR NOISE REDUCTION IN SUBSTATION	1304
<i>Haoyang Du, Xin Su, Xin Chen, Jingkai Nie, Xiaofeng Kong, Qingshan Xu, Bin Wang, Yonghe Tang</i>	
EXPERIMENTAL STUDY ON SOME PROPERTIES OF A LOW-CARBON CEMENT	1309
<i>Quanlin Niu, Rui Zhang</i>	
DEVELOPMENT OF A NUMERICAL WELL TEST SIMULATOR FOR POLYMER- SURFACTANT FLOODING AND THE PRESSURE TRANSIENT RESPONSE STUDY	1313
<i>Zhichun Jia, Daolun Li, Detang Lu</i>	
THE SIMULATION OF VISCOUS FINGERING BY DIFFUSION-LIMITED-AGGREGATION MODEL BASED ON PRESSURE-ORIENTED RULE	1317
<i>Wei Tian, Detang Lu</i>	
HIERARCHICAL Fe_3O_4/TiO_2 HOLLOW MICROSPHERES AND THEIR APPLICATIONS IN PHOTOCATALYSIS AND PHASE-CHANGE MATERIALS.....	1321
<i>Jie Li, Hongyi Gao, Shuang Fan, Zongrui Jiang, Yukun Jiang, Xinru Li, Sheng Wang, Li Tan</i>	
NANOENCAPSULATION OF N-OCTADECANE PHASE CHANGE MATERIAL WITH POLYANILINE SHELL FOR THERMAL ENERGY STORAGE	1325
<i>Shuang Fan, Hongyi Gao, Qiming Xu, Huanqiu He, Lili Lu, Junyao Shen, Yu Xiao, Li Tan</i>	
CONVENIENT PREPARATION OF SUPERHYDROPHOBIC ORMOSIL POWDER.....	1329
<i>Baiyu Li, Xiaogang Gao, Zaiman Liu</i>	

**RESOURCES DEVELOPMENT AND UTILIZATION, ECOLOGICAL ECONOMY, LOW CARBON
ECONOMY, AND SUSTAINABLE DEVELOPMENT**

INDUSTRIAL HERITAGE CONSERVATION IN URBAN TRANSFORMATION FOR SUSTAINABLE DEVELOPMENT	1333
<i>Qianyi Zhu</i>	
THE EVALUATION SYSTEM OF GREEN MINING BASED ON QUANTUM IMMUNE ALGORITHM AND NEURAL NETWORK	1341
<i>Dongwang Zhong, Linna Li</i>	
THE EVALUATION ON GREEN MINE CONSTRUCTION LEVEL OF FANSHAN PHOSPHATE IN HEBEI PROVINCE	1347
<i>Qingjun Zhang</i>	
A PROBE INTO THE DEVELOPMENT LAWS OF LARGE GAS FIELDS.....	1354
<i>Yuping Sun, Jialiang Lu, Hongjun Tang</i>	
THE RELATIONSHIP BETWEEN IRON CONSUMPTION AND ECONOMIC DEVELOPMENT	1359
<i>Xiaowei Gu, Xiaohong Huang, Qing Wang, Fengbo Wang</i>	
A METHOD TO DIVIDE FLOW UNITS OF CARBONATE RESERVOIR.....	1364
<i>Jianxin Li, Kongchou Li, Shuqin Wang, Man Luo</i>	
STUDY OF SUSTAINABLE DEVELOPMENT AND ITS IMPLEMENTATION PATH.....	1369
<i>Xuan Shen, Hao Wang, Yan Shen, Bo Li, Xilin Jiang</i>	

MEASURING THE IMPACTS OF URBANIZATION ON ENERGY CONSUMPTION AND ECONOMIC GROWTH IN CHINA: A COMPUTABLE GENERAL EQUILIBRIUM ANALYSIS	1373
<i>Xiaodong Zhou, Jinghua Sha, Shuai Zhong</i>	
ACCUMULATION CHARACTERISTICS AND EXPLORATION PRACTICES OF LITHOLOGIC RESERVOIRS AT EASTERN MARGIN OF THE PRE-CASPIAN BASIN.....	1380
<i>Yankun Wang, Junzhang Zheng, Zhen Wang, Shutang Jin, Man Luo</i>	
STUDY ON SUSTAINABLE DEVELOPMENT OF SHAANXI ECONOMY BASED ON EVALUATION FUNCTION	1387
<i>Qunwei Wang, Gangqiang Cha</i>	
STRATEGIC CHOICE FOR NATIONAL ADJUSTMENT OF RENEWABLE ENERGY IN CHINA	1396
<i>Lihua Tang</i>	
RESEARCH ON ENVIRONMENTAL IMPACT PREDICTION OF SUSTAINABLE DEVELOPMENT OF WETLAND RESOURCE	1401
<i>Juan Dai, Yue Zeng, Lingyun Li, Miao He, Xiuling He</i>	
STUDY ON LAND USE CHANGE IN GE YU CITY NATURE RESERVE.....	1406
<i>Lingjun Meng, Fang Liu, Zhongke Feng, Jinying Gu</i>	
POLICY IMPLICATIONS OF SHALE GAS RESEARCH IN COLLABORATION NETWORK ANALYSIS	1412
<i>Jie Liu, Tiejun Ma</i>	
THE RESEARCH ON PRODUCING MODES OF WELL AH2 IN JINZHOU OILFIELD	1416
<i>Xu Zhang, Wei Hua Liu, Jie Liang, Yu Pan, Teng Lv</i>	
THE RESEARCH PROGRESS OF CONVERSION OF LAND USE AND ITS EFFECTS AT SMALL REGION EXTENT.....	1420
<i>Kun Dong, Xueru Zhang</i>	
RESEARCH ON THE LAND-SAVING MEASURES FOR TRAMCAR DEPOTS	1424
<i>Shu Dong</i>	
RELATIONSHIP BETWEEN CITY AND ENERGY BASED ON ECONOMICS THEORY	1429
<i>Mingsheng Li</i>	
IP INTERMEDIATE GRADIENT AND RESISTIVITY SOUNDING APPLICATION IN ANOMALIES EVALUATION OF A TIN POLYMETALLIC MINING ANOMALIES EVALUATION	1436
<i>Yubo Yang, Zhongjun Deng, Chenglin Yao, Yongmei Jia</i>	
NUMERICAL SIMULATION OF A MODIFIED MULTIPLE FRACTURED WELL MODEL IN TIGHT GAS RESERVOIRS	1440
<i>Chunyu Xu, Detang Lu</i>	
A STUDY ON PROBLEMS IN FACILITATION OF URBAN AND RURAL INTEGRATION AND COUNTERMEASURES	1445
<i>Dongxin Wang, Yang Geng Dong</i>	

WATER ENVIRONMENT, WATER RESOURCES, PROTECTION AND EXPLOITATION

EFFECTS OF HYDROPOWER CONSTRUCTION ON SPATIAL-TEMPORAL CHANGE OF LAND USE AND LANDSCAPE PATTERN A CASE STUDY OF JINGHONG, YUNNAN, CHINA.....	1449
<i>Shiyi Jiang, Heping Zeng, Minxia Cao, Zhantai Wang, Huiqun Huang</i>	
THE RESEARCH OF RUNOFF VARIATION CHARACTERISTICS OF WEI RIVER BASIN	1456
<i>Junping Liu, Wei Wang, Junjie Zhou, Xianbai Zou</i>	
EXPERIMENTAL STUDY ON THE FLOOD CONTROL IMPACT OF THE NEW BUILT YELLOW RIVER BRIDGE IN LANZHOU-CHONGQING RAILWAY	1462
<i>Wen Sun, Jing Li, Wenshe He</i>	
THREE-DIMENSIONAL NUMERICAL SIMULATION OF STORM SURGE DISASTER	1469
<i>Cheng Wang, Xiaoling Wang, Zhengyin Zhou, Xuefei Ao, Mengqi Zhao</i>	
APPLICATION RESEARCH OF MULTI-BEAM BATHYMETRIC AND UAV AERIAL TECHNOLOGY ON MOUNTAIN RESERVOIR CAPACITY MEASUREMENT	1473
<i>Sheng Nan, Suigao Ye, Weifan Zhong</i>	
PRIMARY ATOMIZATION IMPLEMENTATION OF UNLIKE-DOUBLET IMPINGING JETS IN NUMERICAL SIMULATION	1482
<i>Ying Feng, Qinghuang Huang, Qiong Li, Peiyong Wang</i>	
RESEARCH ON THE DYNAMIC SOIL MOISTURE CONTENTS USING HYDRUS-3D MODEL	1488
<i>Zhan Liang, Jing Zhang, Binbin Guo</i>	
STUDY ON FLOW AND REACTION CHARACTERISTICS IN A SWIRLING WATER RAMJET	1493
<i>Lijing Liu, Zhiqiang Li</i>	

MULTI-CRITERIA DECISION ANALYSIS FOR DESIRED CONTAMINATED GROUNDWATER REMEDATION STRATEGIES BASED ON TOPSIS METHOD	1499
<i>F. Shao, L. X. Ren, L. Liu, H. W. Lu</i>	
RUSLE AND GIS-BASED ASSESSMENT OF SOIL EROSION IN THE MOUNTAIN AREAS OF BEIJING, CHINA	1503
<i>Weiwei Zhang, Hong Li</i>	
EFFECTS OF EM TECHNOLOGY ON URBAN RIVER WASTEWATER PURIFICATION	1509
<i>Y. L. Shao, Jing Ma, Yao Lu, Junqi Mao, Haochen Yan, L. H. Chen, X. H. Shao</i>	
IRRIGATION DECISION-MAKING METHODS BASED ON MULTI-SOURCE IRRIGATION INFORMATION FUSION.....	1515
<i>Zhifang Chen, Jinglei Wang, Jingsheng Sun, Ni Song, Xiaolei Wu</i>	
ANALYSIS OF THE CHARACTERISTICS OF LANDSCAPE PATTERN CHANGES IN THE ESTUARY OF THE YELLOW RIVER.....	1525
<i>Wenli Yang, Min Zhang, Xiaotian Chen, Dong Fan, Yaolin Li, Fengran Zhang, Peng Guo, Guotao Dong</i>	
THE STUDY OF CHINA'S WATER RESOURCES GOVERNANCE EMPHASIS AND MODEL INNOVATION DURING THE THIRTEENTH FIVE-YEAR PLAN PERIOD	1529
<i>Limin Dong, Guojun Li, Xu Chen, Ping Dong</i>	
RESEARCH REPORT ON THE PROTECTION OF DRINKING WATER SOURCES IN KITE ROCK RESERVOIR.....	1533
<i>Ping Dong, Xin Xiang, Limin Dong</i>	
THE RESEARCH ON THE PROBLEMS RELEVANT FOR WATER RESOURCES IN COAL MINES.....	1537
<i>Xuejun Zhu, Kai Zhao, Daoyong Zhu</i>	
ANALYSIS ON THE RELATIONSHIP BETWEEN THE VIRTUAL WATER AND ECONOMIC DEVELOPMENT IN JING-JIN-JI REGION.....	1544
<i>Ning Liu, Jinghua Sha, Hongliang Zhang</i>	
THE EFFECTS AND ADAPTIVE DESIGN METHODS OF URBAN SPACE TOWARD FLOOD.....	1551
<i>Rui Nie, Lijie Wang, Ping Zhang, Xiuping Zhao</i>	
Author Index	