

# **7th Annual International Conference on Materials Science and Engineering (ICMSE 2019)**

IOP Conference Series: Materials Science and Engineering  
Volume 562

Hubei, China  
19 - 20 April 2019

Part 1 of 2

## **Editors:**

**Fadi Hage Chehade  
Ning Zhang**

**Ke Wang  
Fellah Mamoun**

ISBN: 978-1-5108-9389-4  
ISSN: 1757-8981

**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.**

This work is licensed under a Creative Commons Attribution 3.0 International Licence. Licence details:  
<http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2019)

For permission requests, please contact the Institute of Physics at the address below.

Institute of Physics  
Dirac House, Temple Back  
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481

Fax: 44 1 17 920 0979

[techtracking@iop.org](mailto:techtracking@iop.org)

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

## PART 1

### NANO-SCALE AND AMORPHOUS MATERIALS

<b>SYNERGISTIC EFFECT OF ETHYLENE GLYCOL AND ACTIVE SURFACE GROUP OF SBA-15 UNDER ULTRASOUND TO IMPROVE CATALYTIC PROPERTIES OF PD/SBA-15</b> .....	1
<i>Xuhui Liu, Xuefeng Bai</i>	
<b>FORMATION MECHANISM OF RUTILE IN SULFATE PROCESS</b> .....	7
<i>Zinan Wang, Kui Chen, Jiawen Zhu, Xiaokui Zhou, Farong Lin</i>	
<b>RESEARCH ON PHYSICS STABILITY OF EMULSIFIED ASPHALT MODIFIED BY NANO SILICA</b> .....	16
<i>Cong Li, Jie Li, Yubo Hu</i>	
<b>MICROWAVE IRRADIATION SYNTHESIZED COBALT-LOADED NITROGEN-DOPED ACTIVE CARBON AS AN EFFICIENT CATALYST FOR SELECTIVE OXIDATION OF ETHYLBENZENE</b> .....	21
<i>H J Zhan, W H Yang, M Q An, N Zeng, Y R Hu, X T Ma, L Zhao</i>	
<b>SYNTHESIS OF NI CO-LDH BY MICROWAVE AS THE ELECTRODE MATERIAL OF SUPERCAPACITOR</b> .....	29
<i>Bin Zhang, Weidong Xue, Rui Zhao</i>	

### FUNCTIONAL AND STRUCTURAL MATERIALS

<b>EFFECT OF QUENCHING PROCESSES ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF A HIGH STRENGTH STEEL</b> .....	35
<i>Zhengtao Duan, Xinhua Pei</i>	
<b>DYNAMIC RESPONSE OF HIGH-PILED WHARF PILE SUBJECTED TO UNDERWATER EXPLOSION</b> .....	41
<i>Jinghan Liu, Ting Tang, Zhuobin Wei, Lingfeng Li, Yuanhao Zhang</i>	
<b>EFFECT OF CEO<sub>2</sub> ON ENAMEL COATINGS ON THE SURFACE OF CORTEN STEEL</b> .....	49
<i>Chaozheng Fan, Lida Luo, Qingwei Wang, Weizhong Jiang</i>	
<b>PREPARATION AND CHARACTERIZATION OF SIC/AL<sub>2</sub>O<sub>3</sub> COMPOSITES</b> .....	55
<i>Jinman Yu, Zhi Wang, Hao Wu, Liu Zhang, Fangfang Qi, Xueqian Zhang, Tongwei Liu, Xuye Wang</i>	
<b>THE SENSING MECHANISM STUDY OF POTENTIOMETRIC NO<sub>2</sub> SENSOR BASED ON VARYING WO<sub>3</sub> ELECTRODE THICKNESS</b> .....	61
<i>Bin Yang, Chuqi Huang, Hanyu Yu, Jinlong Xu, Jingxin Wang, Feng Xia, Chao Wang, Jianzhong Xiao</i>	
<b>STUDY ON CREEP RUPTURE STRENGTH OF FRICTION WELDED SUPER304H STEEL WELD JOINTS</b> .....	71
<i>Yuan Lu, Debiao Li, Xu Yang, Mo Chen, Cong Ding, Yaqin Sun, Sha Gong</i>	
<b>FIREPROOF MATERIAL DERIVED FROM RECYCLING INCINERATOR ASH USING ELECTRIC-ARC TECHNIQUE</b> .....	76
<i>Sheng-Fu Yang, To-Mai Wang, Qi-Zhen Xu, Heng-Yi Li</i>	
<b>EFFECT OF PEANUT SHELL BIOCHAR ON DYNAMIC CHANGES OF NUTRIENT ELEMENTS AND HEAVY METALS DURING SEWAGE SLUDGE COMPOSTING</b> .....	84
<i>Xingtao Chang, Jianzhi Yue, Yangyang Jia, Fuyang Chen, Hao Ma, Shaowei Li, Jianjun Hu</i>	
<b>SIMULATION AND MODELLING IN CRACKS PREVENTION OF EARLY AGE CONCRETE</b> .....	91
<i>Nannan Shi, Zhenbao Li, Yashuang Liu</i>	
<b>SOIL DESATURATION METHODS FOR THE IMPROVEMENT OF LIQUEFIABLE GROUND</b> .....	97
<i>Cheng Shi, Zheng Huang, Yundong Zhou, Jia He, Feng Yang, Lei Hang</i>	
<b>ASSESSMENT OF TYPICAL CONCRETE MATERIAL MODELS USED IN SIMULATION OF CONCRETE SLAB UNDER BLAST IN AIR</b> .....	104
<i>Lingfeng Li, Ting Tang, Zhuobin Wei, Jinghan Liu, Yuanhao Zhang</i>	
<b>EFFECT OF HYBRID ALUMINA/ALUMINIUM FOIL DOME DIAPHRAGMS ON SOUND PERFORMANCE OF LOUDSPEAKER</b> .....	110
<i>Christian Zung, Ran Cai, Igor Levitsky, Xueyuan Nie</i>	

<b>REVIEW ON THERMAL CONDUCTIVITY OF THE GRAPHENE REINFORCED RESIN MATRIX COMPOSITES .....</b>	<b>117</b>
<i>Haiyun Zhang, Danyong Wang, Juncong Liu, Huazhen Wei, Fangbiao Liu, Jingli Xu, Shuhu Li, Zhenming Qin, Jianfen Guo, Ronghui Wang, Huamin Jia, Jianqin Zhang, Yadong Liu</i>	
<b>EFFECT OF COOLING CONDITIONS ON METALLOGRAPHIC MICROSTRUCTURE OF 38MNVTI NON-QUENCHED AND TEMPERED STEEL.....</b>	<b>123</b>
<i>Hui Zeng, Yuanfang Chen, Luwei Dai, Tao Zhang, Ling Liu, Dandan Tao</i>	
<b>CORROSION RESISTANCE OF HOT-DIP ZN55AL COATED STEEL SHEET TREATED BY CR(III) CONVERSION COATING AGAINST CHLORIDE-CONTAINING MEDIA .....</b>	<b>129</b>
<i>Jie Pan, Yan Li</i>	
<b>FROM THE RERU-RICH <math>\delta</math> PHASE TO THE INTERGROWTH OF THE P AND THE S PHASES IN RU-BEARING NI-BASE SUPERALLOYS .....</b>	<b>135</b>
<i>Chunhui Wang, Yanhui Chen, Jingyang Chen, Fei Xue, Wei Li, Luyan Yang</i>	
<b>PREPARATION AND CHARACTERIZATION OF MONODISPERSE MAGNETIC CARBON MICROSPHERES WITH CONTROLLABLE SHELL THICKNESS AND HIGH WATER SOLUBILITY .....</b>	<b>143</b>
<i>Shengji Liang, Kui Chen, Jinling Han, Bin Wu</i>	
<b>RESEARCH ON DYNAMIC RESPONSE TEST OF SUBGRADE VIBRATOR FOR HIGH-SPEED RAILWAY .....</b>	<b>150</b>
<i>Ruixue Qian, Jiangang Yi, Xinyuan Chen</i>	
<b>OPTIMIZING CONTROL FOR 20CRMNTIH(FQ) BLOOM INTERNAL QUALITY BY EMS.....</b>	<b>155</b>
<i>H G Li, T M Chen, L Chen</i>	
<b>STUDY ON PREPARATION TECHNOLOGY AND ANTIFREEZE PERFORMANCE OF SLAG MICROPOWDER PUMICE LIGHTWEIGHT AGGREGATE CONCRETE .....</b>	<b>162</b>
<i>Jiansuo Ma, Shangwen Qi, Huanqin Cai, Yanming Cui</i>	
<b>FABRICATION A PHOTORESPONSIVE FILM FOR CONTROLLED PESTICIDE RELEASE .....</b>	<b>169</b>
<i>Qing Xu, Guohua Liu, Tianhong Feng, Yuanjing Zhou</i>	
<b>EMULSIFIED ASPHALT DOSAGE DETERMINATION METHOD OF AC-13 COLD-MIXED ASPHALT MIXTURE .....</b>	<b>174</b>
<i>Zhaohui Sun, Guangpeng Zhang, Kai Li</i>	
<b>STRONG AND DUCTILE IN SITU TITANIUM MATRIX COMPOSITES REINFORCED BY TITANIUM BORIDE WHISKERS .....</b>	<b>179</b>
<i>Hao Wu, Zhenhua Liu, Zhipeng Xu, Haibo Hu</i>	
<b>MECHANICAL SPECTRA IN VARIOUS WELD AREA OF AN EXTRUDED AL-12.7SI-0.7MG ALLOY WITH MIG WELDING .....</b>	<b>185</b>
<i>N Yu, Y Geng, J W Ji</i>	
<b>ACHIEVING MINIMUM LENGTH SCALE IN HEAVISIDE-BASED MORPHOLOGICAL FILTERS .....</b>	<b>192</b>
<i>Longfei Qie, Shikai Jing, Ruichao Lian, Lei Wang</i>	
<b>PREPARATION, CHARACTERIZATION AND VISIBLE LIGHT PHOTOCATALYTIC ACTIVITIES OF SAMARIUM-DOPED MIXED CRYSTALLINE PHASE TIO<sub>2</sub> NANOPARTICLES .....</b>	<b>198</b>
<i>Fuchang Peng, Qi Lai, Wei Chang, Yan Cui</i>	
<b>THERMAL EFFECT ON BAND GAPS OF 1D METALLIC PHONONIC CRYSTALS.....</b>	<b>205</b>
<i>Man Lan, Xiuyun An</i>	
<b>INFLUENCE OF CASTING TEMPERATURE OF LOW CARBON STEEL ON THE INTERFACE LAYER OF COMPOSITE PROTECTIVE PLATE .....</b>	<b>210</b>
<i>Hui Gao, Wenbing Zhang, Shumei Chen, Kuilong Lyu</i>	
<b>INFLUENCE OF SPACE RADIATION MODEL UNCERTAINTIES ON THE SOLAR ABSORPTANCE EVALUATION OF OSR SECOND REFLECTOR.....</b>	<b>215</b>
<i>Zicai Shen, Yan Xia, Yuming Liu, Dongbo Tian</i>	
<b>APPLICABILITY ANALYSIS OF NEW TYPE OF WATERPROOF AND DRAINAGE PARTITION THEORY FOR TUNNELS .....</b>	<b>221</b>
<i>Guang Luo, Weizhen Bai, Yun Zhang</i>	
<b>THE MICROSTRUCTURES FOR HOT COMPRESSIVE DEFORMATION OF MB15 MAGNESIUM ALLOY AND AL<sub>18</sub>B<sub>4</sub>O<sub>33</sub>W/MB15 MAGNESIUM MATRIX COMPOSITES .....</b>	<b>226</b>
<i>Chunyan Wang</i>	
<b>INFLUENCE OF THE MECHANICAL PROPERTIES OF B<sub>4</sub>C/AL COMPOSITE WITH GRAPHENE NANOSHEET DOPPING.....</b>	<b>231</b>
<i>Liu Zhang, Zhi Wang, Guopu Shi, Qinggang Li, Junyan Wu</i>	

<b>NUMERICAL SIMULATION STUDY ON INFLUENCE OF STRUCTURAL INTERSPACE ON ANTI-PENETRATION PERFORMANCE OF GFRP AND STEEL COMPOSITE ARMOR SYSTEM.....</b>	<b>236</b>
<i>Yuanhao Zhang, Zhongqing Cheng, Hailiang Hou, Xi Zhu, Jinghan Liu, Lingfeng Li</i>	
<b>ANALYSIS OF EFFECTS OF WINTER CONSTRUCTION TREATMENTS ON FIBER CONCRETE SAMPLES USING AN IMPROVED BOX DIMENSION METHOD.....</b>	<b>242</b>
<i>Yi Li, Cong Guan</i>	
<b>EFFECTS OF TEMPERATURE ON MECHANICAL PROPERTIES AND ELEMENT DIFFUSION OF Ti<sub>3</sub>SiC<sub>2</sub>/AL<sub>2</sub>O<sub>3</sub> COMPOSITES .....</b>	<b>249</b>
<i>Fangfang Qi, Xueqian Zhang, Binze Yang, Jinman Yu, Xuye Wang, Zhi Wang</i>	
<b>RESEARCH ON THE METHOD OF WIRE IMPACT SUSPENSION TYPE SPANNING FRAME.....</b>	<b>255</b>
<i>N Jia, Y J Xia, J C Wan, Y S Hu</i>	
<b>INVESTIGATION ON COUPLING PHYSICAL MECHANISM BETWEEN ACOUSTIC AND STRUCTURAL VIBRATION OF ELASTIC CAVITIES AT SUPERSONIC SPEED .....</b>	<b>261</b>
<i>Ye Yang, Dangguo Yang, Xiangshen Wang, Fangqi Zhou</i>	
<b>QUV ACCELERATED AGING EFFECTS ON THE STRUCTURE AND PROPERTIES OF POLYETHER POLYURETHANE FIBERS .....</b>	<b>267</b>
<i>Yanping Zhong, Gexin You, Sidi Cai, Bo Yang</i>	
<b>SYNTHESIS AND PROPERTIES OF 2-ACRYLAMIDE-2-METHYL PROPANE SULFONIC ACID -GRAFT-GUAR.....</b>	<b>274</b>
<i>Xiaowei Du, Pengyuan Wang, Jianye Liu, Chunmei Niu</i>	
<b>EXPERIMENTAL RESEARCH ON ULTRA-HIGH PERFORMANCE CONCRETE (UHPC).....</b>	<b>281</b>
<i>Xinhua Zhang, Hongzhan Zhang</i>	
<b>THE ANALYSIS AND DESIGN OF SMALL AIR PURIFIER .....</b>	<b>286</b>
<i>Zhiwei Zhu, Hongyan Jin</i>	
<b>INFLUENCES OF COOLING RATE AND DENDRITE MORPHOLOGY ASSUMPTIONS ON THE CRACKING SUSCEPTIBILITY OF TERNARY AL-CU-SI ALLOYS DURING SOLIDIFICATION .....</b>	<b>290</b>
<i>Guangwei Zhao, Chong Ding, Chen Jian</i>	
<b>EFFECT OF FLY ASH AND SILICA FUME ON MECHANICAL PROPERTIES OF HIGH-PERFORMANCE FRCC.....</b>	<b>295</b>
<i>Zhang Pan, Xiaohui Zeng, Zhongwei Hu</i>	
<b>CONSTRUCTION METHOD AND CHARACTERISTICS ANALYSIS OF INTERNAL VOIDS IN DRAINAGE ASPHALT MIXTURE BASED ON DISCRETE ELEMENT METHOD.....</b>	<b>301</b>
<i>Hong Ying, Xinyue Hou, Shunxin Chen</i>	
<b>INFLUENCE OF DIFFERENT NON-COLOR BACKGROUND ON TOURMALINE GREEN .....</b>	<b>307</b>
<i>Haoyuan Jia, Ying Guo, Yinuo Li, Bin Yuan</i>	
<b>RESEARCH ON APPLICATION OF NEW TYPES OF FIBER REINFORCED COMPOSITES IN SAFETY TECHNOLOGY.....</b>	<b>318</b>
<i>Huazhen Wei, Danyong Wang, Juncong Liu, Haiyun Zhang, Shuhu Li, Yadong Liu</i>	
<b>STUDY ON SUBSTATION SEISMIC RESILIENCE EVALUATION INDEX AND RESILIENCE MATRIX .....</b>	<b>322</b>
<i>Rushan Liu, Zhenxiu Hu, Rongxing Shu</i>	
<b>A WIDE RANGE OF PH-SENSITIVE FLUORESCENT PROBE BASED ON RESPONSIVE DOUBLE HYDROPHILIC BLOCK COPOLYMER FOR REAL-TIME INTRACELLULAR PH SENSING IN WATER SAMPLES.....</b>	<b>333</b>
<i>Zijuan Zhou</i>	
<b>RESEARCH ON ANCHORAGE PERFORMANCE OF NEW CFRP PLATE ANCHORAGE BASED ON DISPLACEMENT CONTROL .....</b>	<b>341</b>
<i>Peiheng Long, Wenhao Shi, Suwei Hou, Chiyu Jiao, Haomai Xu</i>	
<b>STUDY ON DISTRIBUTION CHARACTERISTICS OF KEY TARGET PERSONNEL DENSITY AND EARTHQUAKE RESCUE STRATEGY .....</b>	<b>350</b>
<i>Rushan Liu, Lupeng Yan, Dongqi Yan</i>	
<b>SIMULATION ANALYSIS OF FLOW FIELD IN ENGINE COMPARTMENT OF A REAR-MOUNTED EXHAUST .....</b>	<b>358</b>
<i>Y Y Xie, L Q Zhang, Y L Yan, S W Qiu, C Z Tan</i>	
<b>EFFECT OF RELAXATION HEAT SETTING AT VARIOUS TEMPERATURES ON MOLECULAR ORIENTATION IN POLYPROPYLENE FIBER .....</b>	<b>363</b>
<i>Wei Ai, Xin Liu, Song You, Fangyi Liu, Ze Yu, Lei Tao, Hongtao Liu</i>	
<b>DISPERSION OF INORGANIC PIGMENTS BY AMPHIPHILIC HYPERBRANCHED POLYETHERS DISPERSANT .....</b>	<b>367</b>
<i>Qing Xu, Yungui Liu, Anlu Long, Yuanjing Zhou</i>	

<b>COMPUTATIONAL ANALYSIS ON MATERIAL MOVEMENT OF LS SCREW CONVEYOR</b> .....	372
<i>Peng Zeng, Ziqiang Fang</i>	
<b>EFFECT OF NANO-MONTMORILLONITE ON PROPERTIES OF SPRAY-DRIED CINNAMON OIL MICROCAPSULES</b> .....	377
<i>Hui Wang, Bo Yang, Yan Bai</i>	
<b>SYNTHESIS AND CHARACTERIZATION OF FLUORESCENT MESOPOROUS SILICA(ZNQ-CMS)WITH A ZINC COMPLEX OF 8-HYDROXYQUINOLINE</b> .....	383
<i>Jian Liu, Youyun wang, Shen'e Guo, Mingxing Liu</i>	
<b>EXPERIMENTAL STUDY OF MAGNETIC VISCOUS PROPERTIES OF MAGNETIC FLUIDS AFFECT ON ITS SENSING PERFORMANCE</b> .....	388
<i>Hairong Cui</i>	
<b>EFFECTS OF THREE-STEP AGING ON MICROSTRUCTURE AND STRESS CORROSION CRACKING OF 7N01 ALUMINUM ALLOYS</b> .....	393
<i>Shuai Wang, Binghui Luo, Yaya Zheng, Sizhi Tan, Gen Jiang, Guochao Cai</i>	
<b>NON-ISOTHERMAL AGEING OF AN AL-MG-SI ALLOY FOR ENHANCED ANTICORROSION PERFORMANCE</b> .....	400
<i>Yaya Zheng, Binghui Luo, Shuai Wang, Chuan He</i>	
<b>ABRASION RESISTANCE OF MANUFACTURED SAND (MS) CONCRETE AND ITS INFLUENCE FACTORS</b> .....	407
<i>Guang Luo, Jicheng Xie, Zheng Chen, Yun Zhang</i>	
<b>EXPERIMENTAL STUDY ON SPLITTING STRENGTH OF AC-25 EMULSIFIED ASPHALT COLD RECYCLED MIXTURE</b> .....	416
<i>Zhaohui Sun, Zhiqi Song, Hanyag Cheng, Weidong Sun</i>	
 <b><u>ELECTRONIC, OPTIC AND MAGNETIC MATERIALS</u></b>	
<b>RESEARCH ON LIGAND PROPERTIES OF CDSE QUANTUM DOTS</b> .....	422
<i>Zilei Liu, Chun Chang, Wenjing Zhang, Min Yang, Qin Zhang</i>	
<b>STUDY ON CHINESE SIGN LANGUAGE COMPREHENSION OF DRUG-INDUCED NEUROTIC DEAF CHILDREN AFTER LEARNING LANGUAGE</b> .....	427
<i>Huang Guo, Qiang Li</i>	
<b>THREE-DIMENSIONAL POSE PARAMETERS MEASUREMENT OF AIR TARGET</b> .....	433
<i>Xinghong Li, Taize Ji, Ren Ji</i>	
<b>INFLUENCE OF HYDROXYL SILICONE OIL ON MECHANICAL AND ELECTRICAL PROPERTIES OF SILICONE RUBBER-BASED CERAMIZABLE COMPOSITES</b> .....	438
<i>Guowen Kuang, Kumpeng Yang, Hongchuan Tang, Yonglan Li, Qian Li, Penghu Li, Pengfei Zhu, Haiyun Jin, Naikui Gao</i>	
<b>EVALUATION OF THE EFFECT OF PAINTS REPRODUCING OCEAN COLOR IN VISIBLE LIGHT RANGE</b> .....	444
<i>Yumei Li, Shufang He, Ningfang Liao, Yasheng Li, Xueqiong Bai, Chenyang Deng</i>	
<b>TRANSFER BEHAVIORS OF PFPE LUBRICANT FROM DISK SURFACE TO SLIDER</b> .....	451
<i>C B Zhang, H R Ao, Q Y Zeng, H Y Jiang</i>	
<b>PLASMON EXCITATIONS IN SPIN-POLARIZED IRON ATOMIC CHAINS: A TIME-DEPENDENT DENSITY FUNCTIONAL THEORY STUDY</b> .....	458
<i>Jiazhou Lin, Sanhuang Ke</i>	
<b>GROWTH MECHANISM OF CONTINUOUS MONOLAYER MOS<sub>2</sub> PREPARED BY CHEMICAL VAPOR DEPOSITION</b> .....	463
<i>Wenzhao Wang, Xiangbin Zeng, Zhenyu Guo, Jia Ding, Xiaoxiao Chen</i>	
<b>IMPROVED MAGNETISM IN MN-DOPED ZNO THIN FILMS BY INSERTING ZNO LAYER</b> .....	468
<i>Huifang Yang, Zhenhua Li, Lingzhi Tang, Guihua Li, Qiang Sun, Shuxia Ren</i>	
<b>EVALUATING THE RADIATION EFFECTS ON THE CHARACTERISTICS OF THE SILICON AVALANCHE PHOTODIODE WITH PROTONS</b> .....	473
<i>Meng Yang, Shengkai Liao, Yang Li, Chengzhi Peng</i>	
<b>MODELING AND SIMULATION OF MODULAR INDEPENDENT OIL AND GAS SUSPENSION MECHANICS</b> .....	478
<i>Yijie Chen, Yafeng Zhang, Mengyan Xu, Le Wang, Xiaoling Han</i>	
<b>PREPARATION AND FERROELECTRIC PROPERTIES OF PZT MULTILAYER FILM</b> .....	484
<i>Chengbin Li, Sijing Chen, Yongjiang Di, Qiang Li, Zengqi Wang, Pengjun Cao</i>	
<b>THE STUDY OF THE POLARIZATION ERRORS OF ALL FIBER OPTICAL CURRENT TRANSFORMERS</b> .....	491
<i>Xingjian Zhang</i>	

<b>SYNTHESIS AND CHARACTERIZATION OF CHIRAL AZO LCPS</b> .....	499
<i>Xuesong Zhang, Yuejiao Huang, Xiaozhi He</i>	
<b>PREPARATION AND CHARACTERIZATION OF <math>\alpha</math>-<math>\text{Fe}_2\text{O}_3</math> FROM IRON MUD BY HYDROTHERMAL SYNTHESIS</b> .....	504
<i>Shaojun Luo, Suqin Li, Peng Zhang</i>	
<b>THE EXISTENCE AND UPPER BOUND OF PERIODIC SOLUTIONS FOR TWO-COUPLED-OSCILLATOR MODEL IN OPTICS CHIRAL MOLECULAR MEDIUM</b> .....	509
<i>Xiaoyue Shi, Jing Li, Bin He, Shaotao Zhu</i>	
<b>EFFECT OF SOLVENTS OF QUANTUM DOTS ON QLED PERFORMANCE</b> .....	515
<i>Min Yang, Chun Chang, Wenjing Zhang, Zilei Liu, Qin Zhang</i>	

## **ENERGY AND ENVIRONMENT MATERIALS**

<b>STUDY ON TEMPERATURE EFFECT OF HYDRATION BEHAVIOR OF CEMENT PASTES</b> .....	519
<i>Quanhong Lv, Zheng Ren, Lianzhen Xiao</i>	

## **PART 2**

<b>EFFECTS OF TEMPERATURE AND MOISTURE ON SOIL ORGANIC CARBON MINERALIZATION</b> .....	525
<i>Jianwei Yun, Xugen Chen, Shujing Liu, Weihua Zhang</i>	
<b>SUPERCRITICAL XE AS PROPELLANT IN SATELLITE ELECTRIC PROPULSION SYSTEM: EXPERIMENTAL STUDY ON THERMAL PHYSICAL PROPERTIES</b> .....	531
<i>Yueshuai Zhao, Lichen Sun, Xinfu Yu, Wei Sun</i>	
<b>FLOW FIELD CHARACTERISTICS IN THE COMBUSTION SPACE OF A FLOAT GLASS FURNACE WITH CO-COMBUSTION OF HEAVY OIL AND PETROLEUM COKE</b> .....	537
<i>Shuxia Mei, Feng He, Junlin Xie, Mingfang Jin, Liyang Zhong, Zhimin Wang</i>	
<b>PRACTICE OF TRAJECTORY CONTROL TECHNOLOGY FOR DIRECTIONAL WELLS WITH SMALL DEVIATION IN YAN'AN</b> .....	543
<i>Chao Ma, Baokui Gao, Lisong Wang, Tianxiang Hu, Jieli Wang</i>	
<b>ANALYSIS OF NUMERICAL SIMULATION ON COMBUSTION OF DIFFERENT FUELS IN FLOAT GLASS FURNACE</b> .....	551
<i>Mingfang Jin, Feng He, Junlin Xie, Shuxia Mei, Liyang Zhong, Yuhua Zhao</i>	
<b>A FACILE SYNTHESIS OF <math>\text{TiO}_2</math> WITH ENHANCED PHOTOCATALYTIC PERFORMANCE FOR REMOVAL OF METHYLENE BLUE</b> .....	559
<i>Hu Xie, Xinran Wang, Jianjun Chen</i>	
<b>PREPARATION AND GAS SENSITIVITY OF TWO-DIMENSIONAL TUNGSTEN OXIDE SUPPORTED HIGH DENSITY GOLD NANOPARTICLES</b> .....	564
<i>Fei Hui, Yanhui Chen, Quan Zhou, Chunhui Wang, Meng Qi, Wei Li, Luyan Yang, Ang Li</i>	
<b>STUDY OF THE PERMEABILITY COEFFICIENT OF PERVIOUS CONCRETE WITH VARIOUS AGGREGATE GRADES</b> .....	572
<i>Xingjiao Jiang, Lianzhen Xiao</i>	
<b>A CASE STUDY BASED ON POWER DATA FOR SOLAR AND WIND ENERGY ASSESSMENT</b> .....	578
<i>Qiang Jiang, Haiyin Qing, Min Li</i>	
<b>SYNTHESIS OF THE SIO POWDERS BY A NEW METHOD</b> .....	584
<i>Xuefeng Xiao, Xuefeng Zhang, Haicheng Wei, Huan Zhang</i>	
<b>MODELING THE ELECTRICAL CONDUCTIVITY OF ANODE FOR SOLID OXIDE FUEL CELL USING SUPPORT VECTOR REGRESSION MACHINE</b> .....	590
<i>Jiangling Tang, Ping Huang</i>	
<b>NUMERICAL SIMULATION OF PROPELLANT DIFFUSION CONSIDERING CHEMICAL REACTION</b> .....	596
<i>Cunyan Cui, Xiang Zhan, Xiaodeng Zhou, Tengda Xin, Xiangyang Han</i>	
<b>SYNTHESIS OF BISMUTH VANADATE BY A NOVEL PROCESS AND ITS ENHANCED PHOTOELECTROCHEMICAL PERFORMANCE</b> .....	602
<i>Fengkai Yu, Yan Zhang, Xiangzhong Ren, Meijun Yang, Jianqiang Yu</i>	
<b>PROPERTIES AND PERFORMANCE OF GENERAL PIEZOELECTRIC MATERIALS ON A NOVEL CANTILEVERED ENERGY HARVESTER</b> .....	609
<i>Shan Gao, Hongrui Ao, Hongyuan Jiang</i>	
<b>COMPREHENSIVE TREATMENT TECHNOLOGY OF "TWO LOW AND ONE CLOSE" WELL</b> .....	616
<i>Kai Li</i>	

<b>OPTIMIZATION OF BIOLEACHING PROCESS OF HIGH-FLUORIDE-BEARING URANIUM BY RESPONSE SURFACE METHODOLOGY .....</b>	<b>621</b>
<i>Xiang Li, Xiaolan Mo, Jiankang Wen, Hongying Yang</i>	
<b>FACILE PREPARATION OF CARBON AEROGELS WITH DIFFERENT DRYING METHODS .....</b>	<b>627</b>
<i>Yuelong Xu, Zhenfa Liu, Bin Ren, Shasha Wang, Lihui Zhang</i>	
<b>STUDY ON THE PHYSICAL PROPERTIES OF LiCl SOLUTION.....</b>	<b>632</b>
<i>Ruiqi Song, Tonghua Zou, Jianbo Chen, Xiaobing Hou, Xiaowang Han</i>	
<b>DETERMINATION OF FORMALDEHYDE IN CARBON-COATED AIR PURIFYING MATERIAL BY ULTRAVIOLET SPECTROPHOTOMETRY .....</b>	<b>642</b>
<i>Ruiyan Zhang, Haijiao Zhang</i>	
<b>INTERNATIONAL COMPARISON OF PROFESSIONAL DEGREE EDUCATION CERTIFICATION IN ENVIRONMENTAL ENGINEERING.....</b>	<b>647</b>
<i>Yuhua Zhang, Yidong Huang</i>	
<b>SYNTHESIS OF GRAPHENE HYDROGEL AND GRAPHENE OXIDE/POLYANILINE COMPOSITES FOR ASYMMETRIC SUPERCAPACITOR.....</b>	<b>653</b>
<i>Yangyang Shang, Liao Xu, Linlin Cai, Xiaoqing Jiang</i>	
<b>STUDY ON POPULATION DEVELOPMENT AND CARRYING CAPACITY OF WATER RESOURCES AND LAND RESOURCES IN CHINA—TAKING THE NEXT 10 YEARS AS AN EXAMPLE .....</b>	<b>660</b>
<i>Shuolong Peng, Jie Wang, Guangyu Ye</i>	
<b>IMMOBILIZATION OF DOMINANT BACTERIA BY POLYVINYL ALCOHOL AND ITS EFFECT ON COD REMOVAL FROM COKING WASTEWATER .....</b>	<b>666</b>
<i>Fa Zhong, Suqin Li, Ke Yuan</i>	
<b>DEVELOPMENT TRENDS OF ENERGY SAVING TECHNOLOGIES IN CHINESE STEEL INDUSTRY .....</b>	<b>672</b>
<i>Haifeng Wang</i>	
<b>PREPARATION OF SODIUM PYROPHOSPHATE MODIFIED MUNICIPAL SLUDGE BIOCHAR FOR THE CU ADSORPTION IN AQUEOUS SOLUTION.....</b>	<b>677</b>
<i>Liangqian Fan, Qin Liu, Xianda Wang, Jie Cai, Jiabin Miao, Yan Wan</i>	
<b>STUDY ON THE COUPLING AND COORDINATION RELATIONSHIP BETWEEN URBANIZATION AND ECOLOGICAL ENVIRONMENT IN THE YANGTZE RIVER ECONOMIC BELT OF CHINA .....</b>	<b>683</b>
<i>Shuolong Peng, Yuying Jin</i>	
<b>RESEARCH PROGRESS OF SPATIAL DISTRIBUTION ABOUT GEOMORPHOLOGY-VEGETATION- WATER EROSION BASED ON REMOTE SENSING IN SOIL COVERED PISHA STONE AREA .....</b>	<b>689</b>
<i>Zhenzhou Shen, Wenyi Yao, Peiqing Xiao, Mian Li, Pan Zhang, Jishan Yang, Jing Chengran, Hui Liu</i>	
<b>ANALYSIS ON THE CAUSES OF A HAIL WEATHER IN THE EASTERN TARIM BASIN, XINJIANG, JULY 2018 .....</b>	<b>698</b>
<i>Rong Qin, Xuefei Song, Yanli Chen, Aihong Jiang, Haili Chen, Xian Yang</i>	
<b>AGRICULTURAL SUSTAINABLE DEVELOPMENT AND ECONOMIC STABILITY IN NORTHEAST CHINA UNDER CLIMATE CHANGE.....</b>	<b>708</b>
<i>Yilin Chen, Nan Wu</i>	
<b>RESEARCH ON DEFORMATION CHARACTERISTICS OF NEW BREAKWATER STRUCTURE .....</b>	<b>721</b>
<i>Bin Li, Xinyao Tong</i>	
<b>STUDY ON THE CORRELATION BETWEEN HYDRATION HEAT AND ELECTRICAL RESISTIVITY OF THE CEMENT PASTES WITH POLYCARBOXYLATE SUPERPLASTICIZER.....</b>	<b>727</b>
<i>Yunhao Zheng, Lianzhen Xiao</i>	
<b>A COMPARATIVE STUDY OF DIFFERENT HYDROLOGICAL MODEL AND THEIR APPLICATION IN BASS RIVER CATCHMENT .....</b>	<b>733</b>
<i>Mingjin Song, Yanping Shi, Huanqi Yao, Weihua Zhang</i>	
 <b><u>MATERIALS PROCESSING AND GENOMIC ENGINEERING</u></b>	
<b>EFFECT OF AUSTENITIZING TEMPERATURE ON DIVORCED EUTECTOID TRANSFORMATION OF GCR15 STEEL.....</b>	<b>738</b>
<i>Dongxu Han, Linxiu Du, Bin Zhang, Ying Dong</i>	
<b>EFFECT OF CAO ON PHASE SEPARATION AND PROPERTIES IN Na<sub>2</sub>O-CAO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> OPAQUE GLASS .....</b>	<b>745</b>
<i>Lida Luo, Zihao Li, Qingwei Wang, Kaidong Lan, Weizhong Jiang</i>	



<b>ISOLATION OF PROTOPLAST FROM LEAVES OF CASTOR (RICINUS COMMUNIS L.)</b> .....	751
<i>Jianian Tang, Bingzhen Liu, Miao Chen, Yingbin Xue, Ying Liu, Zhengwei Wu</i>	
<b>RESEARCH AND DEVELOPMENT OF MICROWAVE IRRADIATION TECHNOLOGY IN POLYMER SYNTHESIS</b> .....	756
<i>Xuelian Bai, Zhongguo Mu</i>	
<b>EFFECT OF COILING PROCEDURE ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF C-SI-MN HOT-ROLLED TRIP STEEL</b> .....	762
<i>Bin Zhang, Linxiu Du, Ying Dong</i>	
<b>A NEW PREPARATION DEVICE FOR SiO<sub>x</sub> (X = 1 OR 2) POWDERS</b> .....	769
<i>Xuefeng Xiao, Xuefeng Zhang, Haicheng Wei, Huan Zhang</i>	
<b>QUALITY CHANGES OF DIFFERENT VARIETIES OF FRESH-TYPE POTATOES DURING STORAGE</b> .....	773
<i>Sijia Liu, Xiangning Chen, Jing Zhou, Xiangzheng Kong, Peixin Han</i>	
<b>STUDY ON FRACTURE OF ALUMINUM ALLOY JOINTS WELDED BY FRICTION STIR WELDING</b> .....	782
<i>Chuanhong Luo, Jianqiang Zhang, Jungang Wen</i>	
<b>EFFECT OF VISCOUS FLOW ACTIVATION ENERGY ON THE GAS-ASSISTED EXTRUSION FORMING OF PLASTIC MICRO-TUBE</b> .....	787
<i>Zhong Ren, Xingyuan Huang</i>	
<b>IN SITU OBSERVATION OF AUSTENITE GRAIN GROWTH AND PHASE TRANSFORMATION OF A517GRQ RACK STEEL FOR JACK-UP OFFSHORE PLATFORM</b> .....	793
<i>Qinghai Wang, Qibin Ye, Wenbo Wang, Xiangtao Deng, Zhaodong Wang</i>	

## **BIOMATERIALS AND HEALTHCARE**

<b>CLINICAL APPLICATION OF INTELLIGENT SYSTEM OF WEANING FROM MECHANICAL VENTILATION</b> .....	799
<i>Na Wang, Wei Han, Zaitang Wang, Qun Li</i>	
<b>RESEARCH ON MECHANISM OF FGFR1 INHIBITOR BAY1163877 AGAINST PROLIFERATION OF BREAST CANCER CELLS</b> .....	803
<i>Yingnan Cui, Li Zhang, Jin Xing, Zhaoying Yang</i>	
<b>ESTABLISHMENT OF COLLOIDAL GOLD IMMUNOCHROMATOGRAPHIC ASSAY FOR RHDV ANTIBODY</b> .....	813
<i>Lijun Zhou, Yilin Luo, Xiang Wang, Yong Song, Xulong Wu, Pengfei Zhang, Changyu Liao, Ruijiao Jiang, Xueping Yao, Yan Luo, Yin Wang, Yi Geng, Zexiao Yang</i>	
<b>PREPARATION AND CHEMICAL ANALYSIS OF VOLATILE OIL IN SEVEN-LOBED LEAF TYPE OF FICUS HIRTA VAHL</b> .....	819
<i>Lishi Chen, Jianping Chen, Hujie Luo, Chuqin Yu, Shanbin Deng, Mengjiao Du</i>	
<b>MECHANICAL BEHAVIOR OF HINGE LOZENGE GRID STRUCTURE</b> .....	825
<i>Zhong Li, Shuai Wang, Kaijia Zhou, Qianwen Tan, Huolei Feng</i>	
<b>HPLC METHOD FOR SIMULTANEOUS DETERMINATION OF SIX ISOFLAVONES IN SOYBEAN YOGHURT</b> .....	832
<i>Zican Huang, Ming Xia</i>	
<b>STUDY ON CLINICAL APPLICATION OF INTELLIGENT CONTROL TECHNOLOGY</b> .....	838
<i>Na Wang, Gaoqi Yu, Zilong Zhong, Qun Li</i>	

## **MECHANICAL ENGINEERING**

<b>RESEARCH ON RESIDUAL STRESS OF CR12 SURFACE LAYER AFTER ROLLING PROCESSING</b> .....	842
<i>Kaihua Qi, Peiquan Guo, Haiquan Zhang, Yang Qiao</i>	
<b>APPLICATION OF ALGINATE OLIGOSACCHARIDES AND SODIUM ALGINATE IN BREAST ABSCESS INCISION AND DRAINAGE</b> .....	848
<i>Yayun Miao, Tong Sun, Guang Sun</i>	
<b>INTELLIGENT SIMULATED HUMAN MODEL IN MODERN MEDICAL EDUCATION</b> .....	852
<i>Na Wang, Mengyang Li, Huiqing Jia, Jinguo Wang</i>	
<b>THE ORTHOGONAL EXPERIMENTS FOR RADIAL JET CYCLONE</b> .....	856
<i>Yuchen Mo, Genfan Liu, Xianjie Liu, Jieliang Zhou</i>	

<b>STUDY ON THE TRANSIENT CREEP STAGE BY SMALL BEAM SPECIMEN WITH FIXED CONSTRAINTS .....</b>	<b>864</b>
<i>Junqi Wang, Guoyan Zhou, Shantung Tu</i>	
<b>SIMULATION ANALYSIS OF FORGING PROCESS OF AUTOMOBILE ALUMINUM ALLOY SWING ARM.....</b>	<b>870</b>
<i>Peicheng Shi, Xiayang Xia, Jun Zhou, Ping Xiao</i>	
<b>COUPLED RESPONSES IN A PARTIALLY LIQUID-FILLED CONTAINER WITH THE MULTI-ELASTIC BAFFLES SUBJECTED TO PITCHING EXCITATION .....</b>	<b>876</b>
<i>Jiadong Wang, Zhanxue Cao</i>	
<b>THE DESIGN OF AN INNOVATIVE MULTI-WINDING MAGNETORHEOLOGY DAMPER FEATURING EMBEDDED FLOW PASSAGE .....</b>	<b>884</b>
<i>Lifeng Feng, Shaogang Liu, Jianbin Zhao, Xiaoman Wang, Dan Zhao</i>	
<b>INVESTIGATION OF MACHINED SURFACE PROPERTIES AND TOOL WEAR FOR DRILLING OF NICKEL-BASED SUPERALLOY FGH97 .....</b>	<b>890</b>
<i>Yang Qiao, Peiquan Guo, Hongtang Chen, Shouren Wang, Hui Wang</i>	
<b>RESEARCH ON LIGHTWEIGHT DESIGN OF INERTIA VIBRATOR .....</b>	<b>897</b>
<i>Jiangang Yi, Ruixue Qian, Xinyuan Chen</i>	
<b>APPLICATION OF HISTOACRYL TISSUE GLUE IN BREAST SURGERY .....</b>	<b>902</b>
<i>Tong Sun, Shengnan Liu, Guang Sun</i>	
<b>ANALYSIS OF ULTRASONIC VIBRATION BELT GRINDING PROCESSING METHOD.....</b>	<b>906</b>
<i>Qingling Wu, Cui Wang, Mingming Cui, Qiang Liu</i>	
<b>A PREPARATION SYSTEM FOR GRINDING BRITTLE MATERIALS TO SUBMICRON AND NANO PARTICLES VIA MECHANICAL COMMINATION .....</b>	<b>912</b>
<i>Guoming Hu, Bin Jian, Hui Wan, Ziqiang Fang</i>	
<b>STUDY AND APPLICATION OF SELF-ADAPTIVE FUZZY PID CONTROL IN DISSOLVED OXYGEN CONTROL OF WASTEWATER TREATMENT .....</b>	<b>917</b>
<i>Dasen Zhang, Jian Chu, Yacong He, Hui Jin, Wei Han</i>	
<b>EXPERIMENTAL STUDY OF RECRYSTALLIZATION FOR C-MN EXTRUDED WORKPIECE.....</b>	<b>924</b>
<i>Baojian Yang, Li Jiang, Huijun Li, Yonghua Zhong, Jianhua Tang</i>	
<b>SIMULATION RESEARCH ON VARIABLE FREQUENCY CONTROL SYSTEM OF HOIST IN INLAND RIVER LOCKS BASED ON FUZZY PID.....</b>	<b>929</b>
<i>Xiaogang An, Weiwei Zhu, Na An</i>	
<b>NUMERICAL SIMULATION AND LIFE PREDICTION OF STEEL BALL UNFOLDING WHEEL WEAR.....</b>	<b>935</b>
<i>Chengyi Pan, Hepeng Wang, Xia Li, Yanling Zhao, Jingzhong Xiang</i>	
<b>STUDY ON EQUIVALENT BENDING STIFFNESS OF 1250MM<sup>2</sup> LARGE SECTION CONDUCTOR .....</b>	<b>940</b>
<i>Chen Liu, Jian Qin, Jiancheng Wan, Wenchuan Jing, Chenghu Fan</i>	
<b>RESEARCH ON SCHEDULING OF FURNACE LOADING QUALITY MAXIMIZATION IN FORGING HEAT TREATMENT PROCESS .....</b>	<b>946</b>
<i>Fei He, Zeyu Wang, Kang Shen, Rongjing Jia</i>	
<b>THE APPLICATION OF INTELLIGENT SIMULATED HUMAN TEACHING EQUIPMENT IN CLINICAL PRACTICE .....</b>	<b>952</b>
<i>Na Wang, Wei Han, Rui Wang, Jinguo Wang</i>	
<b>ROUGHNESS PREDICTION MODEL OF FACE MILLING SURFACE FOR NICKEL-BASED SUPERALLOY FGH97 .....</b>	<b>956</b>
<i>Yang Qiao, Peiquan Guo, Hongtang Chen, Shouren Wang, Tonghui Liu</i>	
<b>A NOVEL GEAR HONING MACHINE PARAMETER DESIGN AND FINITE ELEMENT ANALYSIS BASED ON THE PRINCIPLE OF DISLOCATION AXIS LINE CONTACT .....</b>	<b>962</b>
<i>Lijuan Yu, Xinxu Guo, Xuecheng Zhang, Xin Wang, Xiaoming Ji, Hongguo Wang</i>	
<b>EXPERIMENTAL INVESTIGATION ON HEAT TRANSFER OF N-HEPTANE AT SUBCRITICAL AND SUPERCRITICAL PRESSURES .....</b>	<b>968</b>
<i>Ning Wang, Yu Pan</i>	
<b>CEMENT PAVEMENT CRACK IDENTIFICATION METHOD BASED ON DFT TRANSFORMATION AND CRACK SEGMENT SPLICING METHOD.....</b>	<b>974</b>
<i>Hong Ying, Shunxin Chen, Yukai Zhang</i>	
<b>GROOVE DEPTH DETECTION METHOD BASE ON THE LINE LASER VISION MEASUREMENT ON CEMENT CONCRETE PAVEMENT .....</b>	<b>979</b>
<i>Hong Ying, Shunxing Chen, Yana Jiang, Xinyue Hou</i>	
<b>LABORATORY TEST AND NUMERICAL SIMULATION FOR GEOTEXTILE BAG WITH SAND COFFERDAM OF IMMERSERD TUNNEL .....</b>	<b>985</b>
<i>Zegan He, Lixin Wei, Chunshan Yang, Junsheng Chen</i>	

<b>VACUUM SWITCH CONTACT POSITION DETECTION BASED ON LABVIEW .....</b>	<b>994</b>
<i>Liting Ma, Zhengqi Wang, Chong Su</i>	
<b>RESEARCH AND APPLICATION OF UNDERWATER WET WELDING TECHNOLOGY .....</b>	<b>1000</b>
<i>Chao Shen, Zhizun Li, Yunhe Ma, Liming Sun</i>	
<b>APPLICATION OF NEW DRESSING TO POST-OPERATION SKIN FLAP NECROSIS IN BREAST CANCER PATIENTS DAMLMS SCOT AND VIBAS CROSS .....</b>	<b>1005</b>
<i>Liyang Qu, Jianping Zhou, Guang Sun</i>	
<b>FORCED CONVECTIVE HEAT TRANSFER OF RP-3 KEROSENE AT SUPERCRITICAL PRESSURE INSIDE A MINIATURE TUBE.....</b>	<b>1008</b>
<i>Ning Wang, Yu Pan</i>	
<b>COMPUTER DESIGN OF OVERLOAD PROTECTION DEVICE OF ADSORPTION AUTOMATIC LOCKING SCREW MACHINE.....</b>	<b>1013</b>
<i>Xiaoyan Zhu, Ziqiang Fang</i>	
<b>VIRTUAL REALITY SIMULATION OF EQUIPMENT TRAINING BASED ON UNITY3D .....</b>	<b>1017</b>
<i>Xiangyong Su, Zhujun Zhang, Zelong Zhou, Xin Yu</i>	
<b>NONLINEAR VIBRATION ANALYSIS OF GENERATOR ROTOR OF A MILITARY GENERAL MOBILE POWER PLANT .....</b>	<b>1023</b>
<i>Xiaoquan Li, Jiangjiang He, Yuwei Zhao, Yuemeng Cheng</i>	
<b>ANALYSIS OF PERIODIC SOLUTIONS FOR COMPOSITE LAMINATED CIRCULAR CYLINDRICAL SHELL WITH 1:2 INTERNAL RESONANCE .....</b>	<b>1030</b>
<i>Yuanyuan Tian, Jing Li, Bin He</i>	
<b>ANALYSIS ON THE CONDITION OF MOTORCYCLE USING HIGH SPEED CLIMBING .....</b>	<b>1037</b>
<i>Bin Zheng, Xin Wang, Xinggang Yu, Xiayong Liu, Lishan Li, Feng Xiao</i>	
<b>SIMULATION OF MICROSCALE FEATURES EFFECT ON MECHANICAL PROPERTIES OF PTFE-AL COMPOSITES.....</b>	<b>1043</b>
<i>Juan Liu, Le Tang, Yuanfeng Zheng, Haifu Wang</i>	
<b>THE HIGH TEMPERATURE PERFORMANCE PREDICTION MODEL OF AC-13 ASPHALT MIXTURE.....</b>	<b>1049</b>
<i>Zhaohui Sun, Huaizhi Wang, Gang Chen, Guangpeng Zhang</i>	
<b>Author Index</b>	