

International Conference on Materials Applications and Engineering (ICMAE 2017)

MATEC Web of Conferences Volume 142 (2018)

Qingdao, China
25 - 27 August 2017

Editor:

Huining Xiao

ISBN: 978-1-5108-5579-3

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 license:
<http://creativecommons.org/licenses/by/2.0/>

You are free to:

Share – copy and redistribute the material in any medium or format.

Adapt – remix, transform, and build upon the material for any purpose, even commercial.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. The copyright is retained by the corresponding authors.

Printed by Curran Associates, Inc. (2018)

For additional information, please contact EDP Sciences – Web of Conferences
at the address below.

EDP Sciences – Web of Conferences
17, Avenue du Hoggar
Parc d'Activité de Courtabœuf
BP 112
F-91944 Les Ulis Cedex A
France

Phone: +33 (0) 1 69 18 75 75

Fax: +33 (0) 1 69 28 84 91

contact-edps@webofconferences.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
Web: www.proceedings.com

TABLE OF CONTENTS

CONTROL MATERIALS OF HYDROGEN CONCENTRATION IN MICRO ENVIRONMENT AND THEIR SUMMARY OF APPLICATION	1
<i>Zhu Min, Lu Cuihua, Zhou Hongqing</i>	
DETERMINATION OF NICKEL IN END-FITTING OF SPOOLABLE REINFORCED PLASTIC LINE PIPE	10
<i>Shao Xiaodong</i>	
CYANIDE CONTAINING WASTEWATER TREATMENT BY OZONE ENHANCED CATALYTIC OXIDATION OVER DIATOMITE CATALYSTS	16
<i>Lin Mingguo, Gu Qiyuan, Cui Xinglan, Liu Xingyu</i>	
TWO WATER STABLE COPPER METAL-ORGANIC FRAMEWORKS WITH PERFORMANCE IN THE ELECTROCATALYTIC ACTIVITY FOR WATER OXIDATION	23
<i>Liu Xiuping, Wang Yijun, Liu Wenwen, Zhao Lianming, Guo Wenyue</i>	
PREPARATION OF ACTIVATED CARBONS FROM WASTE EXTERNAL THERMAL-INSULATING PHENOLIC FOAM BOARDS	30
<i>Gao Lijuan, Zheng Xiaojun, Zhu Yaming, Zhao Xuefei, Cheng Junxia</i>	
EXPLOITING A SIMPLE METHOD FOR THE DETERMINATION OF MANGANESE IN POLYETHYLENE LINED TUBING FOR PETROLEUM AND NATURAL GAS INDUSTRIES	41
<i>Shao Xiaodong, Shi Xin</i>	
FAILURE ANALYSIS OF CATHODE MATERIALS FOR ENERGY STORAGE BATTERIES IN OVERCHARGE TEST	47
<i>Wang Hongwei, Tao Ziqiang, Si Nianpeng, Fu Yanling, Li Tao, Xiao Haiqing</i>	
EFFECT OF AG DOPING ON THE ELECTRONIC STRUCTURE AND OPTICAL PROPERTIES OF ZNO(0001) SURFACE	52
<i>Xiang Qian, Zhao Shutao, Wu Yanning, Liu Guangdong</i>	
PREPARATION AND PERFORMANCE OF GALLIUM NITRIDE POWDERS WITH PREFERRED ORIENTATION	58
<i>Kang Liping, Wang Lingli, Wang Haiyan, Zhang Xiaodong, Wang Yongqiang</i>	
SYNTHESIS AND LUMINESCENCE PROPERTIES OF THE BINARY/TERNARY COMPLEX OF SAMARIUM ION WITH PHENACYLMETHYL P-TOLYL SULFOXIDE AND BENZOIC ACID	64
<i>Yang Kui-Suo, Li Wen-Xian, Bao Jin-Rong</i>	
EFFECT OF CO-MONOMER STYRENE ON REACTIVE COMPATIBILIZATION OF PE/WOOD-FLOUR COMPOSITES	73
<i>Li Yuewen, Chen Xinhua</i>	
ANALYSIS ON INTERFACIAL PERFORMANCE OF CFRP CONCRETE WITH DIFFERENT THICKNESS OF ADHESIVE LAYER AND CFRP PLATE	79
<i>Guo Qingyong, Zhao Huijian, Chen Lei, Mao Jize, Zhang Wensong</i>	
DESIGN METHOD FOR PROPORTION OF CEMENT-FOAMED ASPHALT COLD RECYCLED MIXTURE	85
<i>Li Junxiao, Fu Wei, Zang Hechao</i>	
COMBINED EFFECT OF INITIAL CURING TEMPERATURE AND CRACK WIDTH ON CHLORIDE PENETRATION IN REINFORCED CONCRETE BEAMS	91
<i>Elkedrouci Lotfi, Diao Bo, Pang Sen, Li Yi</i>	
THE EFFECT OF MIXING AND CURING SEA WATER ON CONCRETE STRENGTH AT DIFFERENT AGES	98
<i>Guo Qingyong, Chen Lei, Zhao Huijian, Admilson Jorge, Zhang Wensong</i>	
PERFORMANCE ON WATER STABILITY OF CEMENT-FOAMED ASPHALT COLD RECYCLED MIXTURE	104
<i>Li Junxiao, Fu Wei, Zang Hechao</i>	
PREPARATION OF AUTOCLAVED FOAMED CONCRETE BLOCK FROM FLY ASH AND CARBIDE SLAG	109
<i>Tan Xing, Han Fuqiang, Zhao Fengqing</i>	
PREPARATION OF MAGNESIUM PHOSPHATE CEMENT AND APPLICATION IN CONCRETE REPAIR	115
<i>Xing Sainan, Wu Chengyou</i>	
COMPOSITE DESIGN OF LOW THERMAL CONDUCTIVITY MULLITE BRICK FOR APPLICATION TO CEMENT KILN	121
<i>Chen Songlin, Wang Juntao, Yuan Lin, Li Quanyou</i>	

STUDY ON HOT DEFORMATION BEHAVIOR OF HIGH STRENGTH CONSTRUCTION STEEL 34CRNiMO6	127
<i>Kang Feng, Yang Echuan, Lin Jun, Hu Chuankai</i>	
A CALCULATION THEORY OF EARTH PRESSURE CONSIDERING MICROSTRUCTURE OF POROUS MATERIALS	133
<i>Li Jun-hu, Zhang Chao, Xue Wei, Zhang Wen-chao, Xu Ri-qing</i>	
MINERALOGICAL CHARACTERISTICS OF A MICRO-FINE AND LOW GRADE REFRACTORY GOLD ORE	141
<i>Chen Yong, Song Yongsheng, Li Wenjuan, Cai Liulu</i>	
A MEASURING METHOD OF GRAVEL'S COEFFICIENT OF RESTITUTION AND DISCUSSION	147
<i>Chen Yanhui, Zhang Xinjie, Wang Bin</i>	
FAILURE ANALYSIS AND SAFETY PROTECTION OF A CERTAIN TYPE OF WIRE ROPES UNDER HIGH-SPEED IMPACT LOADS	155
<i>Ren Zhiqian, Lu Zhiqiang, Yu Qiong, Jiang Yun</i>	
TECHNICS RESEARCH ON POLYCRYSTALLINE CUBIC BORON NITRIDE CUTTING TOOLS DRY TURNING Ti-6Al-4V ALLOY BASED ON ORTHOGONAL EXPERIMENTAL DESIGN	163
<i>Jia Yunhai, Zhu Lixin</i>	
PROPERTIES AND PREPARATION OF HIGH ENTROPY ALLOYS	169
<i>Yin Xiang, Xu Shuqiong</i>	
EFFECTS OF AR AND HE ON MICROSTRUCTURES AND PROPERTIES OF LASER WELDED 800MPa TRIP STEEL	174
<i>Wang Wen-Quan, Dong Shu-Cheng, Jiang Fan, Cao Ming</i>	
EVALUATION OF CYCLIC DURABILITY IN SURFACEMODIFIED LAYERS WITH TINIZR THERMOELASTIC PHASE TRANSFORMATIONS	180
<i>Rusinov Peter, Blednova Zhesfina</i>	
MICROSTRUCTURE AND PHASE COMPOSITION OF TITANIUM COATINGS PLASMA SPRAYED WITH A SHROUD	186
<i>Zhou Hong, Liu Zhi, Luo Liancong</i>	
ANTI-CARBURIZING COATING FOR RESIN SAND CASTING OF LOW CARBON STEEL BASED ON COMPOSITE SILICATE POWDER CONTAINING ZIRCONIUM	193
<i>Zhan Chunyi, Feng Shengshan, Xie Shuzhong, Liu Chunjing, Gao Yunhua, Liang Jiahao</i>	
PREPARATION AND CHARACTERIZATION OF FC FILMS COATED ON PET SUBSTRATES BY RF MAGNETRON SPUTTERING	202
<i>Huang Mei-lin, Lu Sheng-guo, Du Wen-qin</i>	
PREPARATION, AND LUMINESCENCE PROPERTIES OF SiO₂@SM(MABA-SI)PHEN CORE-SHELL STRUCTURE NANOMETER COMPOSITE	208
<i>Feng Li-Na, Li Wen-Xian, Bao Jin-Rong</i>	
SYNTHESIS, AND CHARACTERISTIC LUMINESCENCE OF CORE-SHELL SiO₂@EU(MABA-SI) (PHEN) MICROSPHERES	215
<i>Ma Yang-Yang, Li Wen-Xian, Zheng Yu-Shan</i>	
LUMINESCENCE PROPERTIES OF SiO₂@EU(PHEN-SI) (SULPHOXIDE) CORE-SHELL NANOMETER COMPOSITE	221
<i>Li Yi-Lian, Li Wen-Xian, Zheng Yu-Shan</i>	
COMPARATIVE STUDY ON WETTABILITY OF TYPICAL PLANT LEAVES AND BIOMIMETIC PREPARATION OF SUPERHYDROPHOBIC SURFACE OF ALUMINUM ALLOY	228
<i>Sun Yanhong, Gao Xinxin, Li Jinnong, Chen Ying</i>	
Author Index	