

3rd International Conference on Sustainable Development (ICSD 2017)

Advances in Engineering Research Volume 111

Tianjin, China
14 – 16 July 2017

Editors:

**Lam Wei Haur
Yiu Fai Tsang
Maciej Dzikuc**

**Hamidi Abdul Aziz
Constantinos S. Psomopoulos**

ISBN: 978-1-5108-4805-4

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© (2017) by Atlantis Press
All rights reserved.
<http://www.atlantis-press.com/php/pub.php?publication=icsd-17>

Printed by Curran Associates, Inc. (2017)

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

CHAPTER 1

DETECTING OCEAN EDDIES AUTOMATICALLY FROM MODIS L1B DATA	1
<i>Jian Ding, Shuang-Shang Zhang</i>	
MULTIPLE TIME SCALE ANALYSIS OF PRECIPITATION IN THE HENGYANG BASIN	6
<i>Qin Jiang, Yi-Min Huang, Wei-Yue Li, Jia-Hong Wen</i>	
INFLUENCE OF PREPARATION CONDITIONS OF MIL-88A ON CATALYTIC DEGRADATION OF ORANGE G AND DIBUTYL PHTHALATE	13
<i>Jiu-Mei Wang, Jin-Quan Wan, Yong-Wen Ma, Yan Wang, Ze-Yu Guan</i>	
INFLUENCE OF STRONG ELECTRONEGATIVITY GROUPS -CL AS THE ADSORPTION CENTER OF PTA@MIL-101-NH₂-CL FOR THE SELECTIVE HYDROLYSIS OF CELLULOSE INTO GLUCOSE	21
<i>Jin-Ye Han, Gui-Hua Zhang, Yan Wang, Jin-Quan Wan, Ze-Yu Guan, Yong-Wen Ma, Zi-Min Liu</i>	
RISK ANALYSIS METHOD FOR FLOOD CONTROL OPERATION OF CASCADE RESERVOIRS CONSIDERING PREDICTION ERROR	30
<i>Yan-Ke Zhang, Jin-Jun You, Chang-Ming Ji, Ya-Wei Zhao</i>	
THE FACTORS OF THRESHOLD PRESSURE GRADIENT FOR CO₂MISCIBLE FLOODING IN LOW PERMEABILITY RESERVOIR	38
<i>Xing Zhang, Hong-Ling Du, Chao Ding, Hong-Xian Liu, Zong-Jie Mu</i>	
PREPARATION OF SUSTAINED-RELEASE AND SALT CONTAINING ANTICOAGULATION	45
<i>Su Zhao, Guang-Yi Ma, Xiao-Ying Yang, Ying Ji, Jie Ren, Miao Yu, Zi-Ou Liu</i>	

CHAPTER 2

PRELIMINARY ANALYSIS ON POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) OF SURFACE SEDIMENT WITHIN EASTERN ROUTE OF CHINA'S SOUTH-TO-NORTH WATER DIVERSION PROJECT_ CASE OF NANSI LAKE	53
<i>Ji-Qing Li, Yu-Shan Zhang, Kai-Jie Xie</i>	
THE CHARACTERISTIC OF MACROMOLECULE HEAVY METAL FLOCCULANT AND TRAPPING CSAX OF Hg²⁺ FROM AQUEOUS SOLUTIONS	59
<i>Xiao-Hong Li, Xue-Kui Hao, Qing Chang</i>	
EFFECT OF CRANKCASE BLOW-BY ON PARTICLE EMISSION OF INTERNAL COMBUSTION ENGINE	65
<i>Xiao-Jun Xu, Jun Li, Lu-Yan Fan</i>	
RESEARCH INTO SURFACE SOIL RESOURCE UTILIZATION EFFECT IN THE EXPRESSWAY CONSTRUCTION	75
<i>Zi-Long Cao, Shu-Xue Chen</i>	
RESEARCH ON CONSISTENCY OF POWER LI-ION BATTERIES STORAGE	84
<i>Hong-Wei Wang, Zi-Qiang Tao, Jun Liu, Yan-Ling Fu, Nian-Peng Si, Hai-Qing Xiao</i>	
RESOURCE-BASED METHOD FOR REALIZING ZERO EMISSION OF SULFUR DIOXIDE FROM FLUE GAS	88
<i>Xiang-Lian Han, Xue-Xi Chen</i>	
BALANCE CALCULATION AND OPTIMIZATION OF DENITRIFICATION PROCESS SIMULATION OF OXY-FUEL COMBUSTION FLUE GAS	95
<i>Qiang Huang</i>	
SHORTWAVE EMISSION FROM TRIBOPLASMA DISCHARGE AND ITS POTENTIAL APPLICATION FOR LIGHT TRAPPING AGRICULTURAL PEST BY WIND-DRIVEN FRICTION	101
<i>Xiang-Yang Wang, Jian-Chao Wang, Qiang Zhou</i>	
EFFECT OF WETLAND RECLAMATION ON SOIL AGGREGATES CONTENT AND SOIL ORGANIC CARBON DISTRIBUTION OF AGGREGATES IN PEAT MIRE SOIL AROUND XINGKAI LAKE IN NORTHEAST CHINA	106
<i>Li-Li Huo, Han-Yu Huang, Yi An</i>	
SUMMARIZATION OF AIRPORT RUNWAY LIGHTS CLEANING METHODS	114
<i>Wei-Wei Hu, Xiao-Hong Ge, Wei-Rong Ye</i>	

THE ZIF-8 BASED ON POLY MICROSPHERES AS A NOVEL ADSORBENT FOR REMOVING ORGANIC CONTAMINANTS FROM WASTEWATER	118
<i>Juan Dai, Yan-Xue Liu, Shang-Zhen Xiao, Jing Liu, Jing He, Jian-Du Lei, Lu-Ying Wang</i>	
FLOCCULATION EFFICIENCY OF SLUDGE BIOFLOCCULANT FOR TREATING TWO KINDS OF SIMULATED WASTEWATER	125
<i>Xiu-Hong Zhang, Lian Zhang, Jun-Kang Zou, Jing Wang</i>	
APPLICATION STATUS OF DRY DESULFURIZATION IN INDUSTRIAL WASTE GAS TREATMENT	130
<i>Hong-Mei Liu, Huan-Huan Li, Yao Yao, Jian-Jun Wang, Le Mi</i>	
ANALYSIS OF EMISSION REDUCTION EFFECT FOR RAPE STRAW-POPLAR BIOMASS PELLET FUEL	134
<i>Le-Ying Zhang, Yan Liu, Yue Zhang, Dian-Xiang Zhu</i>	

CHAPTER 3

COMBUSTION CHARACTERISTIC NUMERICAL SIMULATION AND ANALYSIS ON NEW TYPE PULVERIZED COAL-FIRED HOT WATER BOILER	140
<i>Guo-Li Qi, Wei-Feng Chen, Zhong-Wei Wang, Song-Song Zhang, Yong-Qiang Chang, Xue-Min Liu, Jian Guan</i>	
NUMERICAL SIMULATION OF TURBOEXPANDER FOR GEOTHERMAL ENERGY ORC POWER SYSTEM	148
<i>Bing-Cheng Liu, Xi-Bao Dong, Lu-Hang Wu, Kui Cao, Quan-Min Wang</i>	
OPPOSED-PISTON TWO-STROKE DIESEL ENGINE SCAVENGING SYSTEM STRUCTURAL OPTIMIZATION BASED ON GA-SVM	154
<i>Yu-Hang Liu, Fu-Jun Zhang, Zhen-Feng Zhao, Shuan-Lu Zhang</i>	
EFFECTS OF W⁶⁺ DOPING ON STRUCTURE AND ELECTRICAL PROPERTY OF VO₂ (A) THIN FILM	164
<i>Kang-Kang Zhang, Guang-You Pan, Yuan-Yuan Dang, Wei-Yan Qi, Qiang Liu, Yuan-Bao Li, Jun-Cheng Liu</i>	
PERFORMANCE ANALYSIS OF TWO PV PLANTS IN DIFFERENT GEOGRAPHICAL ENVIRONMENT	170
<i>Xin-Jing Zou, Fei-Fei Jiang, Hai-Tao Liu</i>	
PERFORMANCE TEST OF A ROOFTOP PV SYSTEM IN CHINA	178
<i>Fei-Fei Jiang, Xin-Jing Zou</i>	
DESIGN OF SUPERCRITICAL CO₂ JOINTING SOLAR THERMAL REFRIGERATION SYSTEM WITH UTILIZATION OF SHIP WASTE HEAT	183
<i>Qun Li</i>	
STUDY ON COAL MOISTURE CONTROL TECHNOLOGY USING SUPERHEATED STEAM	189
<i>Zhong-Hua Wu, Bing Liu, Jian-Shu Yin, Ning Kang, Li-Juan Zhao</i>	
STUDY ON KEY FACTORS OF DYNAMIC REACTIVE POWER SUPPORT OF MEGA KILOWATT WIND POWER BASE CONSIST OF DOUBLY-FED INDUCTION GENERATOR	194
<i>Hai-Tao Zhang, Ming Dai, Zheng-Guang Fu, Shi-Liang Zhang</i>	
THE DESIGN AND IMPLEMENTATION OF SOLAR SYSTEM'S NETWORK	202
<i>Qiang Tong, Zhao-Wei Shao, Bin Wang, Li Ma, Yong-Qing Wang</i>	
THREE-PHASE ALTERNATING PARALLEL PERTURBATION VARIABLE STEP LENGTH APPLY TO MPPT SOLAR CONTROLLER	207
<i>Qiang Tong, Bin Wang, Zhao-Wei Shao, Xiang Li, Yong-Qing Wang</i>	
TOPOLOGY OPTIMAL DESIGN OF WIND TURBINE BLADES CONSIDERING AERODYNAMIC LOAD	211
<i>Quan Wang, Xing Hong, Zheng-Zheng Qin, Jun Wang, Jin-Feng Sun, Jun Ren</i>	

CHAPTER 4

EMPIRICAL STUDY ON CONSUMER PURCHASE INTENTION FOR REMANUFACTURE PRODUCT	217
<i>Hua Han, Qiao-Lun Gu</i>	
AMINE REGENERATION TESTS ON MEA, DEA AND MMEA WITH RESPECT TO ENERGY EFFICIENCY STUDY	223
<i>Yun-Long Zhou, Lin-Na Zheng, Yi-Fan Cao, Lu Huang, Huan-Cong Shi, Li-Feng Cui</i>	
SUZHOU'S BUILDING OF A PARADIGM IN GLOBAL ENERGY TRANSTION-DRIVEN URBAN DEVELOPMENT: THE CONTENTS AND PATHWAYS	231
<i>Lin-Yu Wang, Qiang Sun, Rui-Xin Chen, Wei-Yang Li</i>	

SUZHOU'S BUILDING OF A PARADIGM IN GLOBAL ENERGY TRANSITION-DRIVEN URBAN DEVELOPMENT: THE IDEA AND ITS BACKGROUND	238
<i>Lin-Yu Wang, Qiang Sun, Rui-Xin Chen, Wei-Yang Li</i>	
INCOME, CONSUMPTION TENDENCY AND PER CAPITAL ELECTRICITY CONSUMPTION IN THE AGE OF CHINA' URBANIZATION	244
<i>Ya-Yu Wen, Chong-Huai Niu, Xi-Long Yao, Xiao Yan</i>	
PROSPECT ANALYSIS FOR THE COMPLEMENTARY DEVELOPMENT OF GAS-FUELED AND ELECTRIC VEHICLES IN CHINA	252
<i>Xue-Hang Bian, Jie Guo, Bin Ouyang, Yi Zhang, Zhen-Hua Feng</i>	
CONSTRUCTION OF ECOLOGICAL CIVILIZATION: THE STRATEGIC CHOICE OF SUSTAINABLE DEVELOPMENT IN WUMENG MOUNTAINOUS AREA	259
<i>Mei-Ying Sun, Xiu-Hong Li, Rong-Jin Yang, Qiang Liu, Jia-Lin Zhang, Sa Xiao</i>	
STUDY ON APPLICATION OF VENTILATION HEAT TRANSFER IN BUILDING ENERGY CONVERSATION	268
<i>Xiang Mao, Jun-Ling Yang, Zhen-Tao Zhang, Lu-Wei Yang</i>	
ENERGY CONVERSION OF CIRCULATING WATER--A NOVEL IDEA ON WATER LOOP HEAT PUMP SYSTEM	274
<i>Qi-Dong Yu</i>	
THE CLIMATE CHARACTERISTICS AND FORECAST OF FOG IN SHANXI PROVINCE	282
<i>Jun-Hui Lei, Jin-Hong Zhou, Xiao-Ting Tian</i>	
CONSTRUCTION SEQUENCE BASED INFLUENCE OF HIGH-RISE URBAN DEVELOPMENT ON PEDESTRIAN WIND COMFORT IN LUJIAZUI, SHANGHAI	289
<i>Jia-Wei Yao, Feng Yang, Zhi Zhuang, Feng Yuan</i>	
CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE SUSTAINABLE DEVELOPMENT-EVIDENCE FROM LISTED TOURISM AND COMMERCE COMPANIES	295
<i>Guo-Bao Xiong, Ming Zhou, Ye Le, Yu Zhao, Ru-Hui Ma</i>	
ECOSYSTEM SERVICE: LINKING THE ECOSYSTEM AND THE SOCIOECONOMIC SYSTEM	302
<i>Hua-Xia Sheng, Luo-Ping Zhang</i>	
ANALYSIS ON THE PRACTICE AND EXPERIENCE OF THE FIVE AND THREE SYSTEM CONSTRUCTION OF STATE GRID	307
<i>Fu-You Jiang, Jian Zhu</i>	
AN ALTERNATIVE FOREIGN INDEBTMENT MODEL FOR THE STATE ECONOMIC ENTERPRISES WHICH CONSTRUCT THE NUCLEAR POWER STATIONS	311
<i>Özcan Erdogan</i>	
MICRO-GRID STABILITY ANALYSIS UNDER THE GRID FAULT CONDITION	315
<i>Tian-Yi Ma, Ming-Ming Zhang, Jin-Yao Li</i>	
BELJING'S DECLINING INDUSTRIAL ENERGY INTENSITY TREND: A DECOMPOSITION ANALYSIS	322
<i>Yong-Ke Yuan, Qin Yang, Qiang Gao</i>	
SIMULATION RESEARCHES ON THERMAL CHARACTERISTICS OF VEHICULAR IN-WHEEL MOTORS	329
<i>Fu-Xing Yao, Zhe-Ke Zhang, You-Tong Zhang</i>	
TESTING TECHNIQUE AND MATERIALS COMPONENT OF GREEN HIGH PERFORMANCE CONCRETE	336
<i>Feng-De Zhang, Qing-Hui Lai, Zheng-Jun Wang</i>	
Author Index	