

5th International Workshop on Environment and Geoscience

IOP Conference Series: Earth and Environmental Science
Volume 1087

Online
16 – 18 July 2022

Editor:

Youmin Chen

ISBN: 978-1-7138-6434-9
ISSN: 1755-1307

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. (2023)

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

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

Preface <i>Youmin Chen</i>	
Peer Review Statement	
Evaluation of Ecological Environment Carrying Capacity of Mineral Resources Exploitation - Take Shenzhen as an Example 1 <i>Jianqiao Qin, Hao Liu, Huarong Zhao, Fuxing Gu, Donghang Jiang, Zhixi Zhu, Jinxiang Hou</i>	1
Magnetic Activated Carbon Optimization Using Response Surface Approach for Cr(VI) 10 <i>Wenxuan Yao, Dezhi Tai, Honghu Zeng, Hua Zhang, Haiyi Huang</i>	10
Bioaccumulation of Silver Nanoparticles in Marine Copepod Tigriopus Japonicus Under Waterborne and Dietary Exposure..... 17 <i>Chenge Liu, Wenxia Liu</i>	17
Reaction of Japanese Media to Discharging Fukushima Nuclear Waste Water into Ocean and the Analysis----Taking Relevant Reports of Japanese Media as Examples..... 24 <i>Guangzhen Li, Zilong Li</i>	24
Comparison and Study of Several Methods for Solving the Hydraulic Jump Values in Pumping Well 34 <i>Xuezhen Zhang, Aidi Huo, Jucui Wang</i>	34
Application of a Modified Graphite Paste Electrode to the Detection of Fluorene in Fuscous Latices..... 43 <i>Yu Liu, Qi Luo, Qiping Tian, Wen Xu, Huili Hu, Li Shi</i>	43
Sorption Studies of Pb(II) onto Montmorillonite Clay..... 49 <i>Yuting Chuang, Jiajun Chen, Jianzun Lu, Lingcheng Su, Sabrina Yanan Jiang, Yijia Zhao, Chiu Hong Lee, Zhihui Wu, Huada Daniel Ruan</i>	49
Electrochemical Determination of Formamide for EVA Splicing Mats Using Activated CPE 64 <i>Wenhan Zhong, Lei Lin, Zhiyuan Yin, Yan Li, Xiubing Du, Yi Yang</i>	64
Apoptosis of NG108-15 Cells Induced by Fluorine Combined with Aluminum Exposure and the Effect of Curcumin Intervention..... 70 <i>Xuemei Yang, Xingang Wang, Dandan Zhang, Yue Zhang, Dan Tao, Chun Xie</i>	70
Management and Suggestion of Ecological Flow Guarantee of Key Rivers and Lakes in the Yangtze River Basin 81 <i>Zhimin Deng, Dandan Shen, Keke Zhang</i>	81
Effects of Organic Matter on the Distribution Pattern of Bacterial Community in Zaohe River..... 88 <i>Zhihan Wang, Yuanjie Wang, Ke Han, Yuan Liu, Mingbo Zuo, Guangwen Li, Hao Zhang, Youyi Zhao, Xisheng Tai, Tianpeng Gao</i>	88
Effects of Feeding Methods on Ecological Soil Wastewater Infiltration Systems for Sewage Treatment..... 96 <i>Zefang Jiang, Yuqing Xia, Ziqi Li, Yuxi Zhang, Lin Li, linlin Fan, Shiyao Wang, Jing Pan</i>	96
Analysis Uneven Selective Catalytic Reduction Flow Field of Coal-Fired Units Under the Situation of Double Carbon 103 <i>Fanliang Meng, Xueli Wang, Huahai Qiu, Qianwei Feng</i>	103

Big Data Analytics for Adaption to Climate Change.....	110
<i>Haijing Wang, Yaping Wang</i>	
A Study of the Urban Heat Island Effect in Guangzhou.....	115
<i>Chi Fong Tang</i>	
Nitrogen and Phosphorus Load Estimation of Inflow Rivers to Yuqiao Reservoir Based on GWLF Model	126
<i>Zeli Li, Kai Gao, Xiaochao Gu, Pengyu Mei, Zhen Zhang, Yuqiu Wang</i>	
The Evaluation of Carbon Peak and Carbon Neutrality Industry Based on AHP-Entropy Weight Method	134
<i>Meng Peng, Lu Yang, Kun Zhang, Weidong Zhao, Jiayu Xu</i>	
Simulation Study on Pollutant Emission Characteristics of 1000MW Coal-Fired Boiler Blended with Sludge.....	147
<i>Linfeng Chen, Fangqin Li, Kejun Li, Xin Liu, Jianming Cai</i>	
Nitrogen and Phosphorus Concentration Zoning Control Method of Surface Water in the Haihe River Basin	154
<i>Maoqing Duan, Shilu Zhang, Qi Liu, Wei Gao, Mingxia Xu, Jun Zhang</i>	
Study of Unio Shells in the Quaternary Deposits, Southern Iraq	161
<i>Mohanad Hamid Al-Jaberi, Harith A. Al-Saad, Ghazi A. Hussain, Hiba Khalid Lafta</i>	
Calculation and Scenario Prediction of Methane Emissions from Agricultural Activities in China Under the Background of “carbon Peak”	168
<i>Zhongming Li, Wei Fu, Mingcan Luo, Jiancheng Chen, Long Li</i>	
Management of Inorganic Nitrogen Compounds in a Closed Aquaculture System During Imitation for Nursery of Litopenaeus Vannamei Under Brackish Condition	179
<i>Haihong Huang, Chaoyun Li, Yanju Lei, Pinhong Yang</i>	
On the Legal Mechanism of Nuclear Safety in China Under the Background of Environmental Protection	183
<i>Jiu Liu, Le Shen</i>	
An Investigation of Past and Present Stormwater Management Practices Within the City of Johannesburg	190
<i>B. Qumba, G.K. Nkhonjera, R. Alowo</i>	
A Comparative Study of Evaluating the Ability on Eichhornia Crassipes and Enydra Fluctuans to Remove Heavy Metals in Water in Vietnam.....	203
<i>Huynh The An, Chen Yi-Ching, Tran Thi Ngoc Bich</i>	
Analysis of Electric Energy Substitution Potential and Research on Calculation Method of Carbon Reduction Under “carbon Neutrality” Background.....	209
<i>Wei Tang, Zhilin Liu, Qingkun Tan, Yu Zhang</i>	
Research on the Measurement of Contribution Value of Scientific and Technological Talents in China’s Mining industry—Innovative Application Based on “Cobb Douglas Production Function Method”.....	216
<i>Tianheng Xie, Xueyi Zhu</i>	
Industrial Applications of the Composite Process “biodegradation+ Activated Carbon Adsorption” in Neutralizing the Waste Gas Emissions	224
<i>Guolin Jing, Xin Cheng, Zhongqing Wang</i>	

Ecological Study on Native Plant Diversity in Kuwait Desert Ecosystem.....	231
<i>Modi Ahmed, Abeer Al Saleh, Noor Al Dousari</i>	
Rare Earth Elements Behaviour in Different Types of Mineral Waters Within Baikal Lake.....	237
<i>G. A. Chelnokov, V.Y. Lavrushin, A. S. Aidarkozhina, I. V. Bragin, N.A. Kharitonova, A.V. Ermakov</i>	
Arboreal Forests Growth Carbon Sink and Assessment of Carbon Storage in China's Henan Province.....	243
<i>Bingtao Liu, Yu Shi, Naxin Mei</i>	
Study on Purification Performance of Nitrogen and Phosphorus in Landscape Water by Enhanced Combined Ecological Floating Bed.....	250
<i>Minjuan Zhao, Yu Duan, Huan Zhang, Shanshan Liu, Yuji Li, Lin Xiao, Youyi Zhao, Hao Zhang, Tianpeng Gao</i>	
Towards Mesoscale Ensemble Prediction for the Guangdong-Hong Kong-Macao Greater Bay Area.....	259
<i>Kai-kwong Hon</i>	
Research of Chlorophyll-A Concentration Inversion at Different Depths in Hong Kong Offshore Waters Based on Gaussian Process Regression.....	265
<i>Jie Zhang, Hongchang He, Donglin Fan, Bolin Fu, Shiwen Wang, Shundan Dong</i>	
Changes in Land Use Land Cover Within the Jukskei River Basin and Its Implications on the Water Availability	274
<i>P. Moeketsi, G.K. Nkhonjera, R. Alowo</i>	
Analysis of Spatial-Temporal Atmospheric Emissions from Heavy-Duty Diesel Trucks in Central and Southern Liaoning Urban Agglomeration.....	283
<i>Yanhao Cao, Xiaohan Wu, Zhiwei Song, Baiyizhuo Chen, Shuai Liu, Chengkang Gao</i>	
Developing Comprehensive Resilient Water Systems and Their Driving Factors for the 21st Century Society in China.....	293
<i>Jingwei Yang, Fei Xue, Xiang Sun, Yao Luo, Jian Wang</i>	
Geoinformation Representation of Maritime Knowledge Flows: New Frontiers of Coastalization.....	300
<i>A. Mikhaylova, D. Maksimenko, D. Hvalej, M. Maksimenko, A. Mikhaylov</i>	
Earthworm Invasion in Chayu River Valley of Tibet Under Climate Change	309
<i>Mingyue Jin, Lei Hou, Yihua Ren, Yaozhi Zhou</i>	
Investigating the Correlation of Nitrates and Phosphates to the Effective Removal of Fats, Oils, and Grease in Two Mangaung Municipal Wastewater Treatment Plants	321
<i>Mpho Gladness Sello, Saheed A Oke</i>	
Fostering Low-Carbon Industrial Parks in Vietnam: Establishment and Application of an Index System for Trang Bang Industrial Park	328
<i>Vuong Thi Mai Thi, Tran Hau Vuong, Nguyen Tri Quang Hung, Ho Thanh Ba, Nguyen Kim Hue, Nguyen Minh Ky</i>	
Research on Ice Characteristics in Bohai Bay, China Based on Multi-Source Remote Sensing Images	338
<i>Huaiyuan Li, Longkun Qin, Zhiyuan Han</i>	
Analysis of Land Subsidence Change in Wuhan Based on sentinel-1A.....	345
<i>Yizhan Zhao, Lv Zhou, Jie Qin, Cheng Wang, Haiquan Sheng</i>	

A Comparative Study of Different Deep Learning Models for Land Use and Land Cover Mapping of Flood Detention Basin.....	353
<i>Nan Li, Jianwei Ma, Shifeng Huang, He Zhu, Yayong Sun, Mengcheng Hu</i>	
Spatiotemporal Characteristics Analysis of Ground Subsidence in Wuhan Based on SBAS-InSAR.....	361
<i>Weiping Zhang, Lv Zhou, Lilong Liu, Mingming Zheng</i>	
Kalman Filtering for SAR Satellite Yaw Steering.....	370
<i>Tao Chen, Yu Li, Zheng Fang, Qiming Qiu, Xiaochen Yin, Ting Yang, Hengyang Zhang</i>	
3D Model Construction and Accuracy Analysis Based on UAV Tilt Photogrammetry.....	377
<i>Xuanyu Chen, Shaowei Pan, Guanyu Chen</i>	
Global Spatial Distribution of Vegetation and 20-Years Dynamic Changes.....	385
<i>Sihui Huo, Qing Sun, Yanmin Shuai, Congying Shao, Jiapeng Huang</i>	
Spatial-Temporal Distribution of Cloud Covers Over China During 2001-2020.....	396
<i>Yanmin Shuai, Yingxin Cao, Congying Shao, Mengjin Wu, Yu Ma</i>	
Soil Heavy Metal Pb Concentration Quantitative Inversion Method Based on Hyperspectral Remote Sensing.....	402
<i>Maoyu Chen, Dan Ke, Wenkai Wang, Wanming Zhang, Xianglan Li</i>	
Permaculture Inclusion in the Planning of “Sansheng Space” - Taking Pu Ran Farm as an Example.....	409
<i>Weinan Hong, Dan Ke, Chuan Zhong, Xianglan Li, Guoqing Li</i>	
Analysis of Statistical Post-Processing Methods for Multi-Model Ensemble Runoff Forecasts in Flood Seasons.....	415
<i>Bo Qu, Yuanhao Fang, Lingqi Li</i>	
Mesozoic Hydrocarbon Accumulation Model in the Northern South China Sea.....	427
<i>Guangjian Zhong, Pibo Su, Changmao Feng, Shenghong Chen, Ming Sun, Hai Yi, Yanlin Wang, Junhui Yu, Jing Zhao, Zhongquan Zhao</i>	
Case Study on the Effectiveness of Agrometeorological Proverbs.....	434
<i>Shuo Chen, Yize Liu, Yanmin Shuai, Congying Shao, Yanjun Tian</i>	
Research on Goaf Treatment and Geothermal Comprehensive Utilization Technology in Coal Mining Subsidence Area.....	443
<i>Yu Yang, Bo Li</i>	
Stability Analysis of Surrounding Rock in a Lead-Zinc Mine Stope Based on Fine Numerical Modeling Technology.....	456
<i>Huiqiong Wang, Qibing Duan, Wencheng Xing</i>	
Effects of CaCl ₂ on Concentration and Speciation of Soil Cd Around a Pb-Zn Mine.....	466
<i>Lina Zhang, Zhicheng Dong, Yu Zhang, Lin Wang, Chenhao Xu</i>	
Shallow Geological Structures Building by Joint Waveform Inversion Based on Curvelet Decomposition.....	474
<i>Chao Zhang, Qingxiang Meng</i>	
Effects of Lime Nitrogen on the Fungi Community of Tobacco Soil and Its Correlation Analysis.....	481
<i>Susu Zhang, Yulan Chen, Yangyang Tuo, Hongli Li, Yan Wang</i>	
Interannual Variation Trend of Hail Days in Hail Prone Areas in Xinjiang.....	496
<i>Hongyun Fan, Xi Wang, Liping Zhou</i>	

Investigation and Characterization of Karst Landform with GPR: A Case Study in Shandong, China.....	503
<i>Qingyi Yang, Renjie Li, Hao Liu, Wenbo Zhang</i>	
Research on Intelligent Building Greenhouse Plant Factory and “3-Positions and 1-Entity” Development Mode	509
<i>Xinfa Wang, Vladislav Zubko, Viktor Onychko, Zhenwei Wu, Mingfu Zhao</i>	
Spatial Accessibility of Medical Facilities Based on Green Travel Mode - Take the Central Urban Area of Wuhan as an Example	520
<i>Wei Wei, Jianhua Zhang</i>	
Field Characteristics of Sedimentary Rocks in the Dohol Formation, Johor, Peninsular Malaysia.....	536
<i>Alidu Rashid, Numair Ahmed Siddiqui, Nisar Ahmed, Muhammed Jamil, Daniel Asante Otchere, Sani Ado Kasim</i>	
Hydrogeological Studies in the São Torcato Zone -Tabuaço with Aim of Optimizing the Location of a Special Groundwater Abstraction to Plan a New Medical Spa in Portugal	544
<i>L M Ferreira-Gomes, A M Machado Fonseca, L J Andrade Pais, P E M Carvalho</i>	
Estimation of Forest Carbon Storage and Carbon Sink Potential in Yunnan Province Under the Goal of “carbon Peaking and Carbon Neutrality”	555
<i>Long Li, Wei Fu, Mingcan Luo, Jiancheng Chen, Zhongming Li</i>	
Analysis of the Current Situation and Suggestion of Countermeasures for International Standardization for Power Grid Industry of China.....	571
<i>Cai Zhang, Yuanping Huang, Xiaoming Zhao, Lan Cao, Liming Zhao, Chaoyan Lou, Pengyue Zhang</i>	
Recognition and Application of Single Sand-Body in Fluvial Facies	579
<i>Yuhang He</i>	
Geochemical Analysis of Formation Water as a Tool for Better Understanding of Water Flooding	586
<i>M.S. Shipaeva, V.I. Garifullina, R.R. Fayzetdinova, V.A. Sudakov, A.A. Shakirov, I.A. Nuriev, R.R. Khuzin, D.A. Salikhov</i>	
Climatic Changes Inferred from the Chroma and Magnetic Susceptibility of Aeolian Deposits in the Central Shandong Mountains Over the Penultimate Interglacial Period	597
<i>Qiuyue Zhao, Xinqi Zhang, Yanping Sun, Xiuying Liu, Tianyan Ge, Ning Liu, Anrui Tang, Rui Zhou</i>	
Imaging of Karst Cave Using Ground Penetrating Radar and Electrical Resistivity Tomography: A Case Study in Shandong, China	606
<i>Xu Sun, Xiangxing Lu, Kaitian Li</i>	
Fractal Analysis on the Effective Heat Conductivity of Unsaturated Soil.....	614
<i>Shunyu Su, Wenlantang Li</i>	
Characteristics of Sedimentary System Evolution and Sequence Stratigraphy Boundary of Denglouku Group in Xujiaweizi Fault Depression, Songliao Basin	621
<i>Kunning Cui</i>	
Research on International Project of China’s Electric Power Industry Standards - Taking Smart Grid as an Example	630
<i>Xiaoming Zhao, Lan Cao, Cai Zhang, Yuanping Huang, Chaoyan Lou, Liming Zhao, Pengyue Zhang</i>	

Delineating Surface Sediments Physical Properties in Ghudai Area, Kuwait	637
<i>Abeer Al-Saleh, Modi Ahmed, Noor Al-Dousari, Teena William</i>	
Urgent Need to Strengthen Unified Management of Scientific Data of Natural Resources	643
<i>Chengcheng Zhang, Dezhu Gui</i>	
Enhancing Soil Fertility and Lowbush Blueberry (<i>Vaccinium Angustifolium</i>) Growth Using Bio-Organic Fertilizer.....	650
<i>Ngo Phuong Ngoc, Le Van Dang, Le Ngoc Quynh, Ngo Ngoc Hung</i>	
Removal of Mn(II) from Acidic Wastewater on the Red Mud– Loess Mixture: Fixed–Bed Column Tests.....	658
<i>Yisi Lu, Xiaofeng Liu, Mingxing Xie, Xiaoqiang Dong</i>	
3D Gravity Inversion Based on Deep Learning.....	665
<i>Shuang Zhang, Changchun Yin, Jing Cai, Yunhe Liu, Xiuyan Ren, Bo Zhang, Yang Su</i>	
Assessment of Geothermal Resources in the West Area of Taikang Town in Dumeng Geothermal Field, NE China.....	671
<i>Yongfa Ma, Fengtian Yang, Xuejun Zhou, Tao Zhan, Ling Liu, Nan Li, Xu Wang, Junling Dong, Yu Liu, Yan Liu, Zhenzhen Shi, Chang Li</i>	
Relationship Between the Size Composition Observed from the Photosedimentation Technique and Chromaticity of the Fine-Grained Surface Sediments from the Modern Lakes, Songnen Plain	680
<i>Yangxin Su, Xinrong Zhang, Shun Zhang, Shi Fang, Xiuli Fu, Hongjun Shao</i>	
Amplification Phenomenon and Mechanism Analysis of Ground Fissure Activity Rate in Jiaocheng Fault.....	691
<i>Xiaofei Han, Xuejing Hao, Bin Dong, Shuangshuang Shi, Xiaodong Xue</i>	

Author Index