



ISSN 1001-6929
CN 11-1827 / X
CODEN HKYAEZ

第35卷 第4期 (Vol.35 No.4)

2022 / 04

环境科学研究

Research of Environmental Sciences

特别约稿

中韩合作助力
东北亚蓝天

特色专题

千岛湖水质风险
挑战与控制



9 771001 692228

中华人民共和国生态环境部 主管

中国环境科学研究院 主办

万方数据

☆ 中文核心期刊

☆ 中国科技核心期刊 (CSTPCD)

☆ 《国家哲学社会科学学术期刊数据库》(NSSD) 收录

★ 国际检索: Scopus、CSA: NS、AJ、CABI、ZR、JST、IC、EBSCOhost 等

☆ 中国科学引文数据库 (CSCD) 收录

☆ RCCSE 中国核心学术期刊

目次

第 35 卷 第 4 期 2022 年 4 月

特别约稿

中韩合作助力东北亚蓝天……李海生, 安达, 裴莹莹, 柴发合, 胡京南 (845)

千岛湖水质风险挑战与控制专题

千岛湖水体营养盐时空变化及水环境挑战

……朱广伟, 程新良, 吴志旭, 史鹏程, 朱梦圆, 许海, 国超旋, 赵星辰 (852)

城镇分布对新安江水系及千岛湖营养盐浓度的影响

……赵星辰, 许海, 俞洁, 刘明亮, 单亮, 程新良, 朱广伟, 李慧贊, 朱梦圆, 康丽娟 (864)

千岛湖大气氮磷干湿沉降特征及周年入库负荷

……朱梦圆, 程新良, 朱可嘉, 赵星辰, 王铁森, 邹伟, 许海, 史鹏程, 施坤, 朱广伟 (877)

暴雨径流对新安江入库总磷负荷量的影响……李慧贊, 王裕成, 单亮, 罗激葱, 朱广伟, 许海, 史鹏程 (887)

夏季强降雨期间千岛湖有机碳的时空分布特征及影响因素

……郑清, 黎云祥, 朱广伟, 俞洁, 朱梦圆, 许海, 王裕成, 刘明亮 (896)

基于高频监测的千岛湖湖心藻类时空变化研究

……史鹏程, 朱广伟, 李未, 韩轶才, 王裕成, 朱梦圆, 许海, 李慧贊 (908)

基于 NARX 神经网络的千岛湖藻类短期预测模型构建……李未, 朱梦圆, 王裕成, 朱广伟 (918)

生态浮床对千岛湖水体氮磷净化效果研究

……唐伟, 许海, 詹旭, 朱广伟, 王裕成, 韩轶才, 王子聪, 朱梦圆 (926)

大气环境

减污降碳协同多元共治体系需求及构建探析……王涵, 马军, 陈民, 张真, 丁杉杉, 王淑兰, 阳平坚 (936)

2001—2020 年天津市大气污染特征的演变与防治历程

……王雪涵, 张文慧, 毕晓辉, 戴启立, 吴建会, 肖致美, 张裕芬, 冯银厂 (945)

PM_{2.5} 中 Cr(VI) 的采集与分析方法优化研究……王橹玺, 郭敬华, 李慧, 张文杰, 王涵 (956)

- 汽车涂料废物挥发性有机物气相释放特征 杨延梅, 颜渝森, 刘泽伟, 黄泽春, 黄启飞 (964)
移动式空气质量传感器的研究与应用进展 汤明珍, 任建宁, 伍丽青, 高健 (971)

水环境

- 天目湖流域沟塘湿地脱氮速率的时空差异 王子聪, 许海, 詹旭, 朱广伟, 朱梦圆, 康丽娟, 赵峰, 唐伟, 赵星辰 (979)
北京城市副中心新建景观水体的水生态环境变化规律 张蕾, 郭硕, 晁春国, 杨子超, 楼春华, 王培京 (989)
泥膜混合MBBR系统自养脱氮工艺的启动研究 姚丽婷, 陈启智, 赖勇州, 梁瑜海 (999)
 MnO_2/TiO_2 改性沸石去除矿井水中 Fe^{2+} 和 Mn^{2+} 的试验研究 张春晖, 王文倩, 师学璐, 全炳旭, 杨博, 霍倩倩, 王新玲 (1007)
氢氧化镧掺杂氧化铝去除水体磷酸盐性能研究 刘涛, 居小秋, 郑寿荣 (1016)

生态环境

- 基于遥感的SDG 15.1.2生物多样性指标计算与分析:以长三角生态绿色一体化发展示范区为例 伽光, 林文鹏, 徐润浇, 李鲁冰 (1025)
凋落物对落叶松林雪盖下土壤真菌多样性的影响 杨立宾, 江云兵, 周甜, 崔福星, 朱道光, 徐飞 (1037)

土壤与固废

- 鸡粪模拟堆肥中多重耐药菌、耐药基因和整合酶基因的消减动力学解析 姜欣然, 李涛, 孙兴滨, 唐伟欣, 王旭明, 高浩泽, 仇天雷 (1045)
陶粒窑协同处置电镀污泥试验中Zn、Cr的迁移特性 刘美佳, 李岩, 肖海平, 王铭玮, 闫大海, 刘忠, 张衡, 王世锋 (1056)

环境污染与健康

- 某污染场地地下水石油烃的健康风险评估及其微生物群落分析 张皓辉, 史俊祥, 姜永海, 贾永锋, 李秀金 (1063)

环境经济与管理

- 成渝地区工业大气污染物排放的时空演化格局及关键驱动因素 陈敏, 李振亮, 段林丰, 蒲茜, 吕平江, 何敏, 陈军辉 (1072)
“煤改气”投资对宏观经济的拉动效应:基于北京市可计算一般均衡模型分析 鲁传一, 鲁玉成, 魏永杰 (1082)

信息

《环境科学研究》第六届编委会名单(封二)

“减污降碳协同增效”专刊征稿启事(封三)



Contents



Vol.35 No.4 April 2022

Special Invited

- Close Cooperation between China and South Korea for the Blue Sky of Northeast Asia LI Haisheng, AN Da, PEI Yingying, CHAI Fahe, HU Jingnan (845)

Water Quality Challenges and Countermeasures of Qiandaohu Reservoir

- Spatio-Temporal Variation of Nutrient Concentrations and Environmental Challenges of Qiandaohu Reservoir, China ZHU Guangwei, CHENG Xinliang, WU Zhixu, SHI Pengcheng, ZHU Mengyuan, XU Hai, GUO Chaoxuan, ZHAO Xingchen (852)
Impacts of Urban Distribution on Nutrient Concentrations in Xin'an River and Qiandaohu Reservoir ZHAO Xingchen, XU Hai, YU Jie, LIU Mingliang, SHAN Liang, CHENG Xinliang, ZHU Guangwei, LI Huiyun, ZHU Mengyuan, KANG Lijuan (864)
Atmospheric Deposition Characteristics and Flux of Nitrogen and Phosphorus in Qiandaohu Reservoir, China ZHU Mengyuan, CHENG Xinliang, ZHU Kejia, ZHAO Xingchen, WANG Tiesen, ZOU Wei, XU Hai, SHI Pengcheng, SHI Kun, ZHU Guangwei (877)
Effect of Rainstorm Runoff on Total Phosphorus Load in Xin'anjiang LI Huiyun, WANG Yucheng, SHAN Liang, LUO Liancong, ZHU Guangwei, XU Hai, SHI Pengcheng (887)
Spatio-Temporal Distribution and Driving Factors of Organic Carbon in Qiandaohu Reservoir during Summer Storm ZHENG Qing, LI Yunxiang, ZHU Guangwei, YU Jie, ZHU Mengyuan, XU Hai, WANG Yucheng, LIU Mingliang (896)
Spatial-Temporal Variation of Algal Community in Central of Qiandaohu Reservoir Based on High Frequency Monitoring Buoy Data SHI Pengcheng, ZHU Guangwei, LI Wei, HAN Yicai, WANG Yucheng, ZHU Mengyuan, XU Hai, LI Huiyun (908)
Short-Term Forecasting Model for Algae Based on NARX Neural Network in Qiandaohu Reservoir LI Wei, ZHU Mengyuan, WANG Yucheng, ZHU Guangwei (918)
Nitrogen and Phosphorus Purification Effects of Ecological Floating Bed in Qiandao Lake TANG Wei, XU Hai, ZHAN Xu, ZHU Guangwei, WANG Yucheng, HAN Yicai, WANG Zicong, ZHU Mengyuan (926)

Atmospheric Environment

- Analysis of Needs and Construction of Coordinated Multi-Governance System for Pollution Reduction and Carbon Reduction WANG Han, MA Jun, CHEN Min, ZHANG Zhen, DING Shanshan, WANG Shulan, YANG Pingjian (936)
Characteristics Evolution and Prevention Development of Ambient Pollution in Tianjin, China WANG Xuehan, ZHANG Wenhui, BI Xiaohui, DAI Qili, WU Jianhui, XIAO Zhimei, ZHANG Yufen, FENG Yinchang (945)
Verification and Optimization of Sampling and Analytical Method to Measure Cr(VI) in Ambient PM_{2.5} WANG Luxi, GUO Jinghua, LI Hui, ZHANG Wenjie, WANG Han (956)
Gas Phase Emission Characteristics of Volatile Organic Compounds (VOCs) from Automotive Paint Waste YANG Yanmei, YAN Yusen, LIU Zeiwei, HUANG Zechun, HUANG Qifei (964)

Advances in Research and Application of Mobile Air Quality Sensors

..... TANG Mingzhen, REN Jianning, WU Liqing, GAO Jian (971)

Water Environment

Temporal and Spatial Characteristics of Nitrogen Removal in Ditches and Ponds in Tianmu Lake Basin

..... WANG Zicong,

XU Hai, ZHAN Xu, ZHU Guangwei, ZHU Mengyuan, KANG Lijuan, ZHAO Feng, TANG Wei, ZHAO Xingchen (979)

Variation of Ecological Environment of New Water Landscape in Beijing Municipal Administrative Center

..... ZHANG Lei, GUO Shuo, CHAO Chunguo, YANG Zichao, LOU Chunhua, WANG Peijing (989)

Start-Up of Autotrophic Nitrogen Removal Process in A Sludge-Biofilm Hybrid MBBR System

..... YAO Liting, CHEN Qizhi, LAI Yongzhou, LIANG Yuhai (999)

Removal of Fe²⁺ and Mn²⁺ from Mine Water by MnO₂/TiO₂ Modified Zeolites

..... ZHANG Chunhui, WANG Wenqian, SHI Xuelu, QUAN Bingxu, YANG Bo, HUO Qianqian, WANG Xinling (1007)

Phosphate Adsorption by Aluminum Oxide Doped with Lanthanum Hydroxide

..... LIU Tao, JU Xiaoqiu, ZHENG Shourong (1016)

Ecological Environment

Calculation and Analysis of SDG 15.1.2 Biodiversity Index Based on Remote Sensing: A Case Study of Demonstration

Zone of Green and Integrated Ecological Development of the Yangtze River Delta

..... QIE Guang, LIN Wenpeng, XU Runjiao, LI Lubing (1025)

Effects of Litter Fall on Soil Fungal Diversity under Snow Cover in the Greater Xing'an Mountains

..... YANG Libin, JIANG Yunbing, ZHOU Tian, CUI Fuxing, ZHU Daoguang, XU Fei (1037)

Soil and Solid Waste

Dissipation Kinetics of Multidrug-Resistant Bacteria, Antibiotic Resistance Genes and Integrase Genes during Simulated Composting of Chicken Manure

..... JIANG Xinran, LI Tao, SUN Xingbin, TANG Weixin, WANG Xuming, GAO Haoze, QIU Tianlei (1045)

Migration of Zinc and Chromium during the Co-Processing of Electroplating Sludge in A Ceramsite Kiln

..... LIU Meijia, LI Yan, XIAO Haiping, WANG Mingwei, YAN Dahai, LIU Zhong, ZHANG Heng, WANG Shifeng (1056)

Environmental Pollution and Health

Health Risk Assessment and Microbial Community Analysis of Petroleum Hydrocarbons in Groundwater of A

Contaminated Site ZHANG Haohui, SHI Junxiang, JIANG Yonghai, JIA Yongfeng, LI Xiujin (1063)

Environmental Economy and Management

Spatiotemporal Patterns and Key Driving Forces of Industrial Air Pollutant Discharge in Chengdu-Chongqing Region

..... CHEN Min, LI Zhenliang, DUAN Linfeng, PU Xi, LÜ Pingjiang, HE Min, CHEN Junhui (1072)

Pulling Effect of 'Coal to Gas' Investment on Regional Economy: Based on Beijing General Equilibrium Analysis

..... LU Chuanyi, LU Yucheng, WEI Yongjie (1082)

