

## 目次

## “微塑料污染特征及毒性效应”特色研究专栏

- 微塑料对土壤微生物群落结构影响及共生网络分析 ..... 尚耘旭, 古雄杰, 余红, 郑涵云, 李文金, 全占军, 王菲菲 (719)
- 微塑料对土壤生态系统的影响及其修复技术 ..... 李信茹, 董翠敏, 石峰, 周民, 米屹东, 苏海磊, 刘雪松, 王凡凡, 魏源 (732)
- 武都水库微塑料的赋存特征研究 ..... 李全威, 余红, 杨轲, 古雄杰, 王菲菲, 全占军 (742)
- 微塑料对冰生消及密度的影响研究 ..... 王志超, 康延秋, 李卫平, 窦雅娇, 李嘉辰, 杨文煊 (750)
- 瓶装饮用水中微塑料的含量研究 ..... 郑涵云, 武志鑫, 李全威, 杨颖, 王慢想, 安立会, 王菲菲 (758)
- 吸入暴露途径下纳米塑料在SD大鼠体内的富集特征研究 ..... 董小艳, 杨波, 谢颖, 李明姣, 陈嘉禾, 李浩然, 阮鸿洁, 王琼 (764)
- 进口再生塑料颗粒中特征污染物的筛选及污染特征研究 ..... 白月娇, 林晔, 岳波, 孟棒棒, 张颖, 王超 (769)

## 降碳减污

- 内蒙古沿黄河流域七盟市碳排放影响因素与情景分析 ..... 于晓燕, 沈碧霞, 吴雨彤, 高雅娴, 魏光普 (778)
- 基于情景分析法的安徽省能源消耗及碳排放分析 ..... 陆彪, 郝永康, 陈德敏, 王索军, 张雨 (788)
- 提标升级对乡镇污水处理厂碳排放特征的影响 ..... 刘思玉, 张建强, 白华清, 汪锐, 陈杨武, 何杨 (798)

## 大气/废气污染控制与管理

- 树干高度耦合壁面热效应对城市街谷内污染扩散的影响研究 ..... 姬蓉, 姚成, 崔鹏义, 黄远东, 罗杨, 杨瑞涛 (808)
- 灌木篱墙对高架桥街道峡谷内CO<sub>2</sub>扩散的影响 ..... 王薇, 陈昌萍, 郑翥鹏, 张祥敏 (818)
- 移动监测技术在大气环境研究中的应用 ..... 朱明玉, 初红涛, 高元官, 李刚, 全权浩, 蔡熾基, 赵刚, 张浩, 杨小阳 (826)
- 催化剂的非均匀分布对船舶SCR系统特性的影响 ..... 梁海明, 许红祥, 雷小霞, 陈正科, 潘光明 (836)

## 流域/区域保护与修复

- 基于PSR模型的太湖流域生态健康评价及主要影响因素 ..... 董稳静, 陶艳茹, 庞燕, 许秋瑾, 余小梅 (846)
- 肇兰新河流域生态系统健康评价及改善对策 ..... 赵晓珊, 董彭旭, 冯可心, 姜兵, 杜慧玲, 于晓英, 孙健, 李秀媛, 张乐天, 李广来 (856)
- 螳螂川—普渡河流域浮游植物群落特征及环境影响因子 ..... 秦海娇, 史秋月, 支国强, 王永强, 韩镇阳, 毕斌, 杨莉园, 霍笑康, 陈金明, 卢少勇, 刘宪斌 (867)
- 乌梁素海黄苔分布及其关键影响因素研究 ..... 张晓蝶, 崔江龙, 熊瑛, 张列宇 (879)
- 云南省九湖流域低污染水总量、类型及利用现状分析 ..... 邹凯波, 杨智, 彭菲, 戎国标, 肖复晋, 李锐 (889)
- 冬春季生态沟渠对农田径流污染物的净化效果分析 ..... 张迎颖, 闻学政, 宋雪飞, 王岩, 姜智绘, 刘海琴, 张志勇 (897)
- 基于文献计量学的河流中抗生素与内分泌干扰物研究热点分析 ..... 刘琛, 顾晓云, 陈杰 (907)

## 水污染控制

- 芯片行业再生水灌溉矮牵牛的植物毒理效应及环境风险评价 ..... 陈鸿芳, 余波平, 卢星星, 陈何曦, 谢林伸, 黄毅, 陈璞 (921)
- 水处理用絮凝剂对发光细菌的联合毒性研究 ..... 范雪滢, 许玉洁, 吴欣颖, 徐志锐, 梁嘉慧, 林健辉, 梅承芳 (933)
- 旱季污水处理厂污水中溶解性有机质特征及其与氮素关系 ..... 刘交, 潘国强, 杨帆, 李晓曼, 谢彦杰, 韦敏祥, 任美洁 (941)
- 五格式净粪池与三格式化粪池处理农村生活污水效果及成本对比 ..... 蒋进元, 陈朱迪, 罗勇, 谭伟, 宋浩洋, 石冬妮 (953)
- 固相碳源的特性对生物反硝化脱氮技术的影响研究进展 ..... 柴文云, 郭亚南, 杨铮, 朱焯, 侯俊, 苗令占 (963)
- 城镇分流制排水系统初期雨水污染特征与控制对策 ..... 高雅弘, 林炳权, 刘宇轩, 王振北, 胡潜, 齐飞, 孙德智 (973)
- 雨污合流制地区溢流污染影响因素及管控建议 ..... 安子倩, 乔肖翠, 刘琰, 卢延娜, 李雪, 王海燕 (986)

## 土壤与固废污染控制与管理

- 天津市农田土壤重金属来源及健康风险评价 ..... 朱玲, 刘琨, 李兰兰, 苑红丹, 赵美姿, 李炜 (995)
- 手持式XRF在土壤调查修复项目中应用的可靠性分析 ..... 孙中瑾, 张莹莹, 叶小塘, 李新元, 满伟慧, 刘超, 史瑞, 刘敬兵, 王子鸣 (1005)
- 复合改良剂对石墨尾矿物物理性状的影响 ..... 易富, 杨磊, 杜常博, 程传旺 (1015)
- 尾矿库环境事故因素分析及建议 ..... 袁华山, 张明慧, 陶霞, 王宏洋, 赵鑫, 张国宁, 江梅 (1026)
- 基于危害性评价的危险废物分级方法研究——以电子行业为例 ..... 吴丹, 刘彦君, 孟令易, 傅海辉, 王雪娇, 杨子良 (1034)
- 危险废物鉴别采样技术要点解析 ..... 郝雅琼, 黄泽春, 杨玉飞, 傅海辉 (1043)
- 基于灰色系统的城市生活垃圾产生量预测研究 ..... 杨延梅, 舒辉秀, 周奇, 赵彤, 包为磊 (1048)
- 污酸石膏渣的环境稳定性与金属释放特性研究 ..... 王云燕, 何紫彤, 柯勇, 罗永健, 唐中尧, 孙竹梅, 闵小波 (1056)

## 生态修复与风险评估

- 基于景观生态风险和生态系统服务价值的海岸带地区生态修复分区研究——以防城港市为例 ..... 沈杨, 汪晗, 聂鑫 (1066)
- 以旗舰物种为视角的生物多样性价值评估初探 ..... 李晓蔚, 邓陈宁, 黄小媛, 谢明辉 (1077)

## 环境风险评估与管理

- 基于文献计量学的环境领域有机磷农药研究热点和趋势分析 ..... 周摇, 张新伟, 谢晓琳, 钱锋, 宋永会 (1087)
- 环境监测中异常数据识别与修复 ..... 景永志, 艾自东, 田相臣 (1098)

## Contents

<b>Effects of microplastics on soil microbial community structure and symbiotic network analysis</b> .....	SHANG Yunxu, GU Xiongjie, YU Hong, ZHENG Hanyun, LI Wenjin, QUAN Zhanjun, WANG Feifei	(719)
<b>Effects of microplastics on soil ecosystems and remediation technologies</b> .....	LI Xinru, DONG Cuimin, SHI Feng, ZHOU Min, MI Yidong, SU Hailei, LIU Xuesong, WANG Fanfan, WEI Yuan	(732)
<b>Study on the occurrence characteristics of microplastics in Wudu Reservoir</b> .....	LI Quanwei, YU Hong, YANG Ke, GU Xiongjie, WANG Feifei, QUAN Zhanjun	(742)
<b>Study on the effect of microplastics on ice formation, melting and density</b> .....	WANG Zhichao, KANG Yanqiu, LI Weiping, DOU Yajiao, LI Jiachen, YANG Wenhuan	(750)
<b>Study on the occurrence of microplastics in bottled drinking water</b> .....	ZHENG Hanyun, WU Zhixin, LI Quanwei, YANG Ying, WANG Manxiang, AN Lihui, WANG Feifei	(758)
<b>Study on the accumulation characteristics of nanoplastics in SD rats under inhalation exposure route</b> .....	DONG Xiaoyan, YANG Bo, XIE Ying, LI Mingjiao, CHEN Jiahe, LI Haoran, RUAN Hongjie, WANG Qiong	(764)
<b>Study on screening of characteristic pollutants and pollution characteristics in imported regenerated plastic particles</b> .....	BAI Yuejiao, LIN Ye, YUE Bo, MENG Bangbang, ZHANG Ying, WANG Chao	(769)
<b>Influencing factors and scenario analysis of carbon emissions in seven cities along the Yellow River basin in Inner Mongolia</b> .....	YU Xiaoyan, SHEN Bixia, WU Yutong, GAO Yaxian, WEI Guangpu	(778)
<b>Analysis of energy consumption and carbon emissions in Anhui Province based on scenario analysis</b> .....	LU Biao, HAO Yongkang, CHEN Demin, WANG Suojun, ZHANG Yu	(788)
<b>Impact of upgrading on carbon emission characteristics of township sewage treatment plants</b> .....	LIU Siyu, ZHANG Jianqiang, BAI Huaqing, WANG Rui, CHEN Yangwu, HE Yang	(798)
<b>Study on the influence of wall thermal effect coupled with tree trunk height on pollution diffusion in urban street canyons</b> .....	JI Rong, YAO Cheng, CUI Pengyi, HUANG Yuandong, LUO Yang, YANG Ruitao	(808)
<b>Influence of shrub hedge on CO diffusion in elevated bridge street canyons</b> .....	WANG Wei, CHEN Changping, ZHENG Zhupeng, ZHANG Xiangmin	(818)
<b>Application of mobile monitoring technology in atmospheric environment research</b> .....	ZHU Mingyu, CHU Hongtao, GAO Yuanguan, LI Gang, JEON Kwonho, CHAE Hyeogki, ZHAO Gang, ZHANG Hao, YANG Xiaoyang	(826)
<b>Influence of non-uniform distribution of catalysts on the characteristics of ship SCR system</b> .....	LIANG Haiming, XU Hongxiang, LEI Xiaoxia, CHEN Zhengke, PAN Guangming	(836)
<b>Ecological health assessment and main influencing factors of Lake Taihu Basin based on PSR model</b> .....	DONG Wenjing, TAO Yanru, PANG Yan, XU Qiujiu, YU Xiaomei	(846)
<b>Ecosystem health assessment and improvement strategies of Zhaolan Xin River</b> .....	ZHAO Xiaoshan, DONG Pengxu, FENG Kexin, JIANG Bing, DU Huiling, YU Xiaoying, SUN Jian, LI Xiuyuan, ZHANG Letian, LI Guanglai	(856)
<b>Phytoplankton community characteristics and environmental impact factors in Tanglang River-Pudu River basin</b> .....	QIN Haijiao, SHI Qiuyue, ZHI Guoqiang, WANG Yongqiang, HAN Zhenyang, BI Bin, YANG Liyuan, HUO Xiaokang, CHEN Jinming, LU Shaoyong, LIU Xianbin	(867)
<b>Study on the distribution and key influencing factors of Huangtai algae of Ulansuhai Lake</b> .....	ZHANG Xiaodie, CUI Jianglong, XIONG Ying, ZHANG Lieyu	(879)
<b>Analysis of total amount, types and utilization status of low-polluted water in the Nine Plateau Lake Basins of Yunnan Province</b> .....	ZOU Kaibo, YANG Zhi, PENG Fei, SHU Guobiao, XIAO Fujin, LI Rui	(889)
<b>Analysis of purification efficiency of pollutants in farmland runoff by the ecological ditch in winter and spring</b> .....	ZHANG Yingying, WEN Xuezheng, SONG Xuefei, WANG Yan, JIANG Zhihui, LIU Haiqin, ZHANG Zhiyong	(897)
<b>Analysis of research hotspots on antibiotics and endocrine disruptors in rivers based on bibliometrics</b> .....	LIU Chen, GU Xiaoyun, CHEN Jie	(907)
<b>Phytotoxic effects and environmental risk assessment of petunia hybrida irrigated with reclaimed water from the chip industry</b> .....	CHEN Hongfang, YU Boping, LU Xingxing, CHEN Hexi, XIE Linshen, HUANG Yi, CHEN Ying	(921)
<b>Study on the joint toxicity of flocculants used in water treatment on luminescent bacteria</b> .....	FAN Xueying, XU Yujie, WU Xinying, XU Zhirui, LIANG Jiahui, LIN Jianhui, MEI Chengfang	(933)
<b>Characteristics of dissolved organic matters and their relationship with nitrogen in wastewater from sewage treatment plants in dry season</b> .....	LIU Jiao, PAN Guoqiang, YANG Fan, LI Xiaoman, XIE Yanjie, WEI Minxiang, REN Meijie	(941)
<b>Comparison of effect and cost of five-compartment purification tank reactor and three-compartment septic tank in domestic sewage treatment</b> .....	JIANG Jinyuan, CHEN Zhudi, LUO Yong, TAN Wei, SONG Haoyang, SHI Dongni	(953)
<b>Research progress on the influence of solid carbon source characteristics on biological denitrification technology</b> .....	CHAI Wenyun, GUO Yanan, YANG Zheng, ZHU Ye, HOU Jun, MIAO Lingzhan	(963)
<b>Characteristics and control measures of rainwater pollution in urban separate drainage system</b> .....	GAO Yahong, LIN Bingquan, LIU Yuxuan, WANG Zhenbei, HU Qian, QI Fei, SUN Dezhi	(973)
<b>Influencing factors and control suggestions for overflow pollution in areas with combined sewer system</b> .....	AN Ziqian, QIAO Xiaocui, LIU Yan, LU Yanna, LI Xue, WANG Haiyan	(986)
<b>Source and health risk assessment of heavy metals in farmland soil of Tianjin City</b> .....	ZHU Ling, LIU Kun, LI Lanlan, YUAN Hongdan, ZHAO Meizi, LI Wei	(995)
<b>Reliability analysis of handheld XRF application in soil investigation and remediation projects</b> .....	SUN Zhongjin, ZHANG Yingying, YE Xiaotang, LI Xinyuan, MAN Weihui, LIU Chao, SHI Rui, LIU Jingbing, WANG Ziming	(1005)
<b>Effect of composite modifier on the physical properties of graphite tailings</b> .....	YI Fu, YANG Lei, DU Changbo, CHENG Chuanwang	(1015)
<b>Factors analysis and suggestions on environmental accident of tailings ponds</b> .....	YUAN Huashan, ZHANG Minghui, TAO Xia, WANG Hongyang, ZHAO Xin, ZHANG Guoning, JIANG Mei	(1026)
<b>Research on hazardous waste classification method based on hazard assessment: taking the electronics industry as an example</b> .....	WU Dan, LIU Yanjun, MENG Lingyi, FU Haihui, WANG Xuejiao, YANG Ziliang	(1034)
<b>Analysis of key points of hazardous waste identification sampling technology</b> .....	HAO Yaqiong, HUANG Zechun, YANG Yufei, FU Haihui	(1043)
<b>Research on prediction of municipal solid waste generation based on grey system</b> .....	YANG Yanmei, SHU Huixiu, ZHOU Qi, ZHAO Tong, BAO Weilei	(1048)
<b>Research on environmental stability and heavy metals release characteristics of gypsum sludge from waste acid treatment</b> .....	WANG Yunyan, HE Zitong, KE Yong, LUO Yongjian, TANG Jinyao, SUN Zhumei, MIN Xiaobo	(1056)
<b>Research on ecological restoration zoning in coastal zone based on landscape ecological risk and ecosystem service value: a case study of Fangchenggang City</b> .....	SHEN Yang, WANG Han, NIE Xin	(1066)
<b>Exploring the application of flagship species in biodiversity valuation</b> .....	LI Xiaowei, DENG Chenning, HUANG Xiaoyu, XIE Minghui	(1077)
<b>Research hotspots and trend analysis of organophosphorus pesticides in the environmental field based on bibliometrics</b> .....	ZHOU Yao, ZHANG Xinwei, XIE Xiaolin, QIAN Feng, SONG Yonghui	(1087)
<b>Identification and recovery of abnormal data in environmental monitoring</b> .....	JING Yongzhi, AI Zidong, TIAN Xiangchen	(1098)