



只有一个地球，  
请关心和维护这个小小的行星  
Only one earth, please care for  
and maintain the small planet

中 国 中 文 核 心 期 刊  
中 国 科 技 核 心 期 刊  
中国科学引文数据库核心库期刊

ISSN 1674-5906  
CN 44-1661/X

# 生态环境学报

ECOLOGY AND ENVIRONMENTAL SCIENCES

2019年10月 第28卷 第10期 Vol.28 No.10

生态环境学报  
第28卷第10期

2019年10月



生态环境学报编辑部



广东省土壤学会 主办  
广东省生态环境技术研究所

<http://www.jeesci.com>

E-mail: [editor@jeesci.com](mailto:editor@jeesci.com)



# 生 态 环 境 学 报

第 28 卷 第 10 期 2019 年 10 月 18 日

## 目 次

### 研究论文

小麦-玉米周年耕作方式与增施有机肥对夏玉米土壤有机碳库及温室气体排放的影响

..... 张黛静, 宗洁静, 马建辉, 杨雪倩, 胡晓, 许双 (1927)

浑善达克沙地榆树疏林植被和土壤的空间分异特征..... 张志永, 朱媛君, 时忠杰, 杨晓晖 (1936)

植被恢复对寒旱区典型草原群落枯落物分解的影响研究..... 王常顺, 王慧清 (1945)

银叶树群落优势树种分布与土壤环境、群落竞争的关系研究..... 郭乐东, 黄芳芳, 张卫强, 甘先华 (1951)

喀纳斯泰加林火成演替群落数量分类与排序..... 刘博, 潘存德, 李贵华, 余戈壁, 张帆, 郭珂, 邹卓颖 (1961)

康禾自然保护区森林苔藓植物丰富度对地形因子的响应..... 杨学成, 吴卓翎, 周庆, 徐明锋, 苏志尧 (1974)

西双版纳热带森林不同恢复阶段土壤微生物生物量碳的变化..... 曹润, 王邵军, 陈闽昆, 左倩倩, 王平, 曹乾斌 (1982)

米槠天然林和桔园土壤微生物群落结构的季节性变化..... 郑裕雄, 曹际玲, 杨智杰, 林成芳, 黄梦青, 杨玉盛 (1991)

滨海滩涂湿地不同植被土壤磷的生物有效性及其影响因子分析..... 黄翊兰, 崔丽娟, 李春义, 李伟, 雷茵茹 (1999)

珠三角北部背景站臭氧浓度变化特征..... 沈劲, 何灵, 程鹏, 谢敏, 江明, 陈多宏, 周国强 (2006)

基于卫星观测的南京臭氧时空分布及变化特征..... 李菁, 戴竹君, 李正金, 沈澄, 姜有山 (2012)

陕西省西咸新区空港新城夏季臭氧与气象因子关系分析..... 梁俊宁, 马启翔, 汪平, 刘杰 (2020)

天津市空气质量健康指数 (AQHI) 的建立及应用..... 张敏, 崔振雷, 高润祥, 李文 (2027)

土地利用变化对青海湖流域生境质量的影响..... 韩艳莉, 陈克龙, 于德永 (2035)

董铺水库及入库河流表层沉积物污染状况评价..... 于坤, 张坤, 孙庆业, 吴静林, 李杨, 孙乐乐 (2045)

纳米铁去除水体中镉的反应动力学、吸附平衡和影响因素..... 黄国英, 王倩, 汤奇峰, 刘久臣, 陈翠柏, 刘斯文 (2053)

黑炭/零价铁复合材料耦合金属还原菌对溶液中 Cr(VI) 的去除..... 王维大, 李硕, 林薇, 李玉梅, 张连科, 韩剑宏 (2062)

连续施用有机肥后重金属在土壤-作物系统中的积累与迁移特征

..... 茹淑华, 徐万强, 侯利敏, 孙世友, 张国印, 王凌, 苏德纯 (2070)

铅锌矿区不同程度尾矿砂重金属污染土壤的纵向微生物群落结构分析

..... 蒋永荣, 梁英, 张学洪, 秦永丽, 伍婵翠, 李学军 (2079)

热带地区成土母质对水稻土不同粒级组分及其铅吸附形态的影响

..... 洪思诚, 李建宏, 张婧旻, 赵庆杰, 李伯凌, 吴治澎, 邱勇 (2089)

不同作物对土壤中 Ni 的富集特征及低累积品种筛选..... 白玉杰, 陈小华, 沈根祥, 郭春霞, 钱晓雍, 付侃, 王振旗 (2098)

低镉铅菜心品种田间试验研究..... 李俊, 刘兴, 彭建兵, 林泉, 马强, 卫泽斌, 吴启堂 (2105)

### 综 述:

城市低影响开发面源污染治理措施研究进展与展望..... 李定强, 刘嘉华, 袁再健, 梁晨, 聂小东, 马东方 (2110)

近 20 年国内外生态系统服务研究回顾与解析..... 邓楚雄, 刘俊宇, 李忠武, 肖海兵, 聂小东, 张宇婷, 周咪 (2119)

陆地生态系统植物和土壤微生物群落多样性对全球变化的响应与适应研究进展

..... 沈芳芳, 刘影, 罗昌泰, 刘文飞, 段洪浪, 廖迎春, 吴春生, 樊后保 (2129)



期刊基本参数: CN 44-1661/X \* 1992 \* m \* A4 \* 214 \* zh \* P \* ¥40.00 \* 1 000 \* 25 \* 2019-10

# ECOLOGY AND ENVIRONMENTAL SCIENCES

Vol.28 No.10

October 18, 2019

## Contents

### Research Articles

- Effects of Wheat-Maize Rotation System Tillage Method and Enhanced Organic Fertilizer on Soil Organic Carbon Pool and Greenhouse Gas Emission in Maize Soil ..... ZHANG Daijing, ZONG Jiejing, MA Jianhui, YANG Xueqian, HU Xiao, XU Shuang ( 1927 )
- Spatial Distribution of Vegetation and Soil in *Ulmus pumila*-dominated Savanna in the Otindag Sandy Land ..... ZHANG Zhiyong, ZHU Yuanjun, SHI Zhongjie, YANG Xiaohui ( 1936 )
- Effects of Vegetation Restoration on the Decomposition of Litter in Typical Steppe of Cold and Arid Grassland Zone ..... WANG Changshun, WANG Huiqing ( 1945 )
- The Relationship between Dominant Species Distribution and Soil Condition and Competition in A *Heritiera littoralis* Community ..... GUO Yuedong, HUANG Fangfang, ZHANG Weiqiang, GAN Xianhua ( 1951 )
- Quantitative Classification and Sequencing of Communities in Pyrogenic Succession of Kanas Taiga ..... LIU Bo, PAN Cunde, LI Guihua, YU Gebi, ZHANG Fan, GUO Ke, ZOU Zhuoying ( 1961 )
- Responses of Forest Bryophyte Richness to Topographic Factors in Kanghe Nature Reserve, Guangdong Province ..... YANG Xuecheng, WU Zhuoling, ZHOU Qing, XU Mingfeng, SU Zhiyao ( 1974 )
- Changes of Soil Microbial Biomass Carbon along with Tropical Forest Restoration in Xishuangbanna ..... CAO Run, WANG Shaojun, CHEN Minkun, ZUO Qianqian, WANG Ping, CAO Qianbin ( 1982 )
- Seasonal Variation of Soil Microbial Community Structure in *Castanopsis Carlesii* Natural Forest and Orange Orchard ..... ZHENG Yuxiong, CAO Jiling, YANG Zhijie, LIN Chengfang, HUANG Mengqing, YANG Yusheng ( 1991 )
- Biologically-Based Availability and Influencing Factors of Soil Phosphorus under Different Vegetation in Coastal Beach Wetlands ..... HUANG Yilan, CUI Lijuan, LI Chunyi, LI Wei, LEI Yinru ( 1999 )

- Characteristics of Ozone Concentration Variation in the Northern Background Site of the Pearl River Delta ..... SHEN Jin, HE Ling, CHENG Peng, XIE Min, JIANG Min, CHEN Duohong, ZHOU Guoqiang ( 2006 )
- Ozone Spatial-temporal Distribution and Trend over Nanjing: Insight from Satellite ..... LI Jing, DAI Zhujun, LI Zhengjin, SHEN Cheng, JIANG Youshan ( 2012 )
- Analysis of the Relationship between Ozone and Meteorological Factors in Summer at Airport New City of Xixian New Area, China ..... LIANG Junning, MA Qixiang, WANG Ping, LIU Jie ( 2020 )
- The Establishment and Application of Air Quality Health Index (AQHI) in Tianjin ..... ZHANG Min, CUI Zhenlei, GAO Runxiang, LI Wen ( 2027 )
- Evaluation on the Impact of Land Use Change on Habitat Quality in Qinghai Lake Basin ..... HAN Yanli, CHEN Kelong, YU Deyong ( 2035 )
- Assessment of Surface Sediment Pollution in Dongpu Reservoir and Its Inflow Rivers ..... YU Kun, ZHANG Kun, SUN Qingye, WU Jinglin, LI Yang, SUN Lele ( 2045 )
- Removal of Cadmium Ion from Aqueous Solution by Nano Zero-valent Iron: Kinetics, Equilibrium and Impact Factors ..... HUANG Yuanying, WANG Qian, TANG Qifeng, LIU Jiuchen, CHEN Cuibai, LIU Siwen ( 2053 )
- Removal of Cr(VI) from Solution by Carbon black/Zero Valence Iron Composites Coupled with Metal Reducing Bacteria ..... WANG Weida, LI Shuo, LIN Wei, LI Yumei, ZHANG Lianke, HAN Jianhong ( 2062 )
- Effects of Continuous Application of Organic Fertilizer on the Accumulation and Migration of Heavy Metals in Soil-crop Systems ..... RU Shuhua, XU Wanqing, HOU Limin, SUN Shiyong, ZHANG Guoyin, WANG Ling, SU Dechun ( 2070 )
- Vertical Microbial Community Structure of Heavy Metal Contaminated Soils from Mine Tailings of Different Degrees in Lead-zinc Mining Areas ..... JIANG Yongrong, LIANG Ying, ZHANG Xuehong, QIN Yongli, WU Changcui, LI Xuejun ( 2079 )
- Influences of Parent Material Types on the Components and the Adsorbed Forms of Lead on Different Size-particles of Paddy Soil in Tropical Areas ..... HONG Sicheng, LI Jianhong, ZHANG Jingmin, ZHAO Qingjie, LI Boling, WU Zhipeng, QIU Yong ( 2089 )
- Accumulation Characteristics of Ni in Different Crops and Screening of Low-Ni Accumulation Crops ..... BAI Yujie, CHEN Xiaohua, SHEN Genxiang, GUO Chunxia, QIAN Xiaoyong, FU Kan, WANG Zhenqi ( 2098 )
- Field Verification of Low Cadmium and Lead Varieties of *Brassica parachinensis* ..... LI Jun, LIU Xing, PENG Jianbing, LIN Quan, MA Qiang, WEI Zebin, WU Qitang ( 2105 )

### Reviews

- Research Advance and Prospects on Low Impact Development Control Measures for Urban Non-Point Source Pollution ..... LI Dingqiang, LIU Jiahua, YUAN Zaijian, LIANG Chen, NIE Xiaodong, MA Dongfang ( 2110 )
- Review and Analysis of Ecosystem Services Research between Domestic and Foreign in Recent 20 Years ..... DENG Chuxiong, LIU Junyu, LI Zhongwu, XIAO Haibing, NIE Xiaodong, ZHANG Yuting, ZHOU Mi ( 2119 )
- Research Progress on Response and Adaptation of Plant and Soil Microbial Community Diversity to Global Change in Terrestrial Ecosystem ..... SHEN Fangfang, LIU Ying, LUO Changtai, LIU Wenfei, DUAN Honglang, LIAO Yingchun, WU Chunsheng, FAN Houbao ( 2129 )