

# 生 态 环 境 学 报

(原《生态环境》)

第 19 卷 第 11 期 2010 年 11 月 18 日

## 目 次

### 研究论文

- 50 年长江源区域植被净初级生产力及其影响因素变化特征 ..... 姚玉璧, 杨金虎, 王润元, 陆登荣 (2521)
- 江苏省植被 NPP 时空特征及气候因素的影响 ..... 王琳, 景元书, 李琨 (2529)
- 1996—2006 年武汉市土地利用/覆被变化研究 ..... 张杨, 刘艳芳, 丁庆, 江平 (2534)
- 冬季淹水稻田  $\text{CH}_4$  产生、氧化和排放规律及其影响因素研究 ..... 张晓艳, 张广斌, 纪洋, 马静, 徐华, 蔡祖聪 (2540)
- 大气  $\text{CO}_2$  浓度升高对稻田土壤 Ca、Mg 含量的影响 ..... 尹微琴, 王小治, 盛海君, 许健, 封克, 朱建国 (2546)
- 贵州喀斯特地区不同土地利用方式土壤  $\text{CO}_2$  体积分数变化及影响因素  
..... 程建中, 李心清, 唐源, 周志红, 王兵, 程红光, 邢英 (2551)
- 密云水库上游流域不同林分土壤有机碳分布特征 ..... 王淑芳, 王效科, 张千千, 肖钦, 罗云建, 杨乐, 欧阳志云 (2558)
- 海南热带橡胶园土壤易氧化有机碳空间变异特征研究 ..... 张俊华, 丁维新, 孟磊 (2563)
- 西北干旱区植被恢复的土壤养分效应 ..... 丁文广, 魏银丽, 牛贺文 (2568)
- 不同类型植物篱对长江上游坡耕地土壤养分含量及坡面分布的影响 ..... 黎建强, 张洪江, 程金花, 王幸, 吕文星 (2574)
- 不同干扰强度对沙质海岸带植物物种  $\beta$  多样性的影响 ..... 高伟, 叶功富, 游水生, 韩孟孟, 杜林梅, 辛秀 (2581)
- 土壤干旱胁迫对 *Larrea tridentata* 叶片膜脂过氧化和保护酶活性的影响  
..... 张香凝, 崔令军, 王保平, 孙向阳, 孟伟, 杨超伟, 夏莘, 乔杰 (2587)
- 基于复合节间组分关系的结缕草克隆植株形态可塑性特征分析  
..... 赵鲁青, 李德志, 李立科, 潘宇, 吕媛媛, 赵美霞, 高锦瑾, 何莹莹, 程立丽, 王浩 (2592)
- 西藏生态整体性水平测度 ..... 智颖飙, 陶文辉, 王再岚, 马中, 张荷亮, 郭喜, Emmy Komada, 刘秀珍, 旺扎拉 (2600)
- 基于自然灾害的北京幅综合生态风险评价 ..... 徐丽芬, 许学工, 卢亚灵, 颜磊, 马禄义 (2607)
- 北京城区屋面径流中 PAHs 的污染特征与来源解析 ..... 胡丹, 欧浪波, 黄晔, 崔司宇, 郭天蛟, 张巍, 王学军 (2613)
- 厦门市隧道中挥发性有机物污染研究 ..... 徐亚, 赵金平, 陈进生, 张福旺, 张晗 (2619)
- 市政工程施工地周边颗粒污染物扩散特征 ..... 赵勇, 于莉, 张春会, 王谦, 经济, 陈楨 (2625)
- 远距离输送作用对南京大气污染的影响 ..... 刘世玺, 安俊琳, 朱彬, 王东东 (2629)
- 沈阳地区霾的环境特征研究 ..... 张云海, 马雁军, 刘宁微, 周德平, 王扬锋, 洪也 (2636)
- 珠江三角洲水位演变分析 ..... 孔兰, 陈晓宏, 陈栋为, 杜建 (2642)
- 一株溶藻细菌对铜绿微囊藻的溶藻机理初探 ..... 罗国源, 刘静, 王金霞, 叶姜瑜 (2647)
- 一株非降解菌的分离鉴定及其降解条件研究 ..... 刘其友, 卢磊, 赵东风, 赵朝成 (2652)
- 溶藻放线菌对铜绿微囊藻和小球藻竞争生长的影响 ..... 孔赞, 缪礼鸿, 朱亮, 徐向阳 (2657)
- 不同氮、磷质量浓度下四尾栅藻的生长研究 ..... 郑晓宇, 顾詠洁, 金妍, 任翔宇, 朱永青, 杨漪帆 (2663)
- 苦草光合作用日变化对水体环境因子及磷质量浓度的影响 ..... 王立志, 王国祥, 俞振飞, 周贝贝, 陈秋敏 (2669)
- 程海冬季水华暴发期间氮、磷营养元素的形态与分布 ..... 董云仙, 洪雪花, 胡锦乾, 关兆国, 和熊祥, 芮希远 (2675)
- 不同特性底质对沉水植物恢复生长的影响 ..... 李垒, 廖日红, 牛影, 赵立新, 吴晓辉 (2680)
- 深圳湾浮游动物的群落结构及季节变化 ..... 张才学, 周凯, 孙省利, 陈春亮, 张际标, 张瑜斌 (2686)
- 黄河上游沉积物对磷酸盐的吸附动力学研究 ..... 李北罡, 刘培怡, 马钦 (2693)
- 硼泥陶粒处理钢铁高浊度废水的探究 ..... 李辉, 李柏全, 邵红 (2698)
- 塑料地膜对小麦种子萌发及幼苗抗氧化酶系统的影响 ..... 徐荣乐, 海热提 (2702)

铜胁迫对两种地衣植物生理生化特征的影响.....帕孜来提·拜合提, 祁要鹏, 阿孜古丽·玉苏甫, 艾尼瓦尔·吐米尔 (2708)

生物炭对玉米苗期生长、养分吸收及土壤化学性状的影响  
.....张晗芝, 黄云, 刘钢, 许燕萍, 刘金山, 卓其诚, 蔺兴武, 朱建国, 谢祖彬 (2713)

脱硫渣废弃物对盐碱地油葵根际微生物数量及土壤酶活性的影响.....赵辉, 杨涓, 腾迎风, 丁晓娟 (2718)

施用城市污泥对杨树土壤化学特性及金属含量的影响.....辛涛, 白莉萍, 宋金洪, 卢振兰, 伏亚萍 (2722)

4种改良剂对土壤-黑麦草系统中镉行为的影响.....杜志敏, 周静, 郝建设, 崔红标, 祝红红, 李辉信 (2728)

藻红外测试多元有机毒物急性毒性的初步分析.....郭蔚华, 马金龙, 吴玉龙 (2733)

城市化地区植被生态环境效应研究.....曾辉, 陈雪 (2737)

综 述

浮游植物程序性细胞死亡研究进展.....李杰, 丁奕, 项荣, 宋立荣 (2743)

铈的环境地球化学研究进展.....王春霖, 陈永亨, 张永波, 刘乙敏, 王津, 李祥平, 齐剑英 (2749)

稻田土壤种子库研究进展.....王卫, 谢小立, 谢永宏 (2758)

观 点

生态环境脆弱地区城市化发展特征及城市发展路径选择流程研究.....张理茜, 蔡建明 (2764)

更正 (2701)

期刊基本参数: CN 44-1661/X \* 1992 \* m \* A4 \* 252 \* zh \* P \* ¥30.00 \* 1 500 \* 43 \* 2010-11

# ECOLOGY AND ENVIRONMENTAL SCIENCES

Vol.19 No.11 November 18, 2010

## Contents

### Research Articles

- Change feature of net primary productivity of natural vegetation and its impact factors over the source region of the Yangtze River in recent 50 years..... YAO Yubi, YANG Jinhu, WANG Runyuan, LU Dengrong ( 2521 )
- Spatio-temporal characteristics of vegetation net primary productivity and climate change effects in Jiangsu province  
..... WANG Lin, JING Yuanshu, LI Kun ( 2529 )
- Study on land use/cover change from 1996 to 2005 in Wuhan city  
..... ZhANG Yang, LIU Yanfang, DING Qing, JIANG Ping ( 2534 )
- Study on the rules of CH<sub>4</sub> production, oxidation, and emission and their influencing factors in continuously flooded rice field  
..... ZHANG Xiaoyan, ZHANG Guangbin, JI Yang, MA Jing, XU Hua, CAI Zucong ( 2540 )
- Effect of CO<sub>2</sub> enrichment on Ca and Mg concentration in soil solution in the rice season  
..... YIN Weiqin, WANG Xiaozhi, SHENG Haijun, XU Jian, FENG Ke, ZHU Jianguo ( 2546 )
- Variations and affecting factors of volume fractions of CO<sub>2</sub> in soils between different land use in Guizhou Karst region of China  
.....CHENG Jianzhong, LI Xinqing, TANG Yuan, ZHOU Zhihong, WANG Bing, CHENG Hongguang, XING Ying ( 2551 )
- Distribution characteristics of soil organic carbon of different forest types in the upstream watershed of Miyun Reservoir in north China ..... WANG Shufang, WANG Xiaoke, ZHANG Qianqian, XIAO Qin, LUO Yunjian, YANG Le, OUYANG Zhiyun ( 2558 )
- Spatial variability of soil labile organic carbon in the tropical rubber plantations of Hainan province, China  
..... ZHANG Junhua, DING Weixin, MENG Lei ( 2563 )
- Impact of vegetation regeneration on soil nutrient variation in central arid region of Gansu province  
..... DING Wenguang, WEI Yinli, NIU Hewen ( 2568 )
- Effects of hedgerow intercropping with different species on soil nutrients and its distribution on steep land in upper reaches of Yangtze River. .... LI Jianqiang, ZHANG Hongjiang, CHENG Jinhua, WANG Xing, LU Wenxing ( 2574 )
- Effects of disturbance on different scales upon  $\beta$  diversity of plants on sandy coast  
.....GAO Wei, YE Gongfu, YOU ShuiSheng, HAN Mengmeng, DU Linmei, XIN Xiu ( 2581 )
- Effect of soil drought stress on the lipid peroxidation and the activity of protective enzyme in *Larrea tridentata*  
..... ZHANG Xiangning, CUI Lingjun, WANG Baoping, SUN Xiangyang, QIAO Jie, MENG Wei, YANG Chaowei, XA Xin ( 2587 )
- Analysis on the characteristics of morphological plasticity of a clonal plant *Zoysia japonica* based on the relationship among the components of multiple-nodes  
.....ZHAO Luqing, LI Dezhi, LI Like, PAN Yu, LU Yuanyuan, ZHAO Meixia, GAO Jinjin, HE Yingying, CHENG Lili, WANG Hao ( 2592 )
- Parallel analysis of ecological integrity and regional eco-modernization: A case study for Tibet  
..... ZHI Yingbiao, TAO Wenhui, WANG Zailan, MA Zhong, ZHANG Heliang, Emmy KOMADA, LIU Xiuzhen, WANG Zhala ( 2600 )
- Integrated ecological risk assessment of J-50 based on natural disasters risk source  
.....XU Lifen, XU Xuegong, LU Yaling, YAN Lei, MA Luyi ( 2607 )
- Concentration characteristics and source identification of PAHs in urban roof runoff in Beijing  
.....HU Dan, OU Langbo, HUANG Ye, CUI Siyu, GUO Tianjiao, ZhANG Wei, WANG Xuejun ( 2613 )
- Study on pollution of volatile organic compounds in tunnels in Xiamen  
..... XU Ya, ZHAO Jinping, CHEN Jinsheng, ZHANG Fuwang, ZHANG Han ( 2619 )
- Spatial dispersion laws of particulate matter from construction work site of municipal engineering  
.....ZHAO Yong, YU Li, ZHANG Chunhui, WANG Qian, JING Tao, CHEN Zhen ( 2625 )
- Influence of the long-distance air masses on atmospheric pollutants in Nanjing city  
..... LIU Shixi, AN Junlin, ZHU Bin, WANG Dongdong ( 2629 )
- Study on environmental characteristics of haze in Shenyang  
.....ZHANG Yunhai, MA Yanjun, LIU Ningwei, ZHOU Deping, WANG Yangfeng, HONG Ye ( 2636 )
- Analysis on evolution of water level in Pearl River Delta, China  
..... KONG Lan, CHEN Xiaohong, CHEN Dongwei, DU Jian ( 2642 )
- Primary research on algicidal mechanism of an algae-lysing bacterium to *Microcystis aeruginosa*  
..... LUO Guyuan, LIU Jing, WANG Jinxia, YE Jiangyu ( 2647 )
- Isolation, identification and degradation conditions of a phenanthrene-degrading bacterium

|                                                                                                                                         |                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| .....                                                                                                                                   | LIU Qiyou, LU Lei, ZHAO Dongfeng, ZHAO Chaocheng ( 2652 )                                                             |
| Effects of algae-lysing <i>Streptomyces</i> on the competition between <i>Microcystis aeruginosa</i> and <i>Chlorella pyrenoidosa</i>   | .....                                                                                                                 |
| .....                                                                                                                                   | KONG Yun, MIAO Lihong, ZHU Liang, XU Xiangyang ( 2657 )                                                               |
| Study on the growth of <i>Scenedesmus quadricauda</i> under different nutrients                                                         | .....                                                                                                                 |
| .....                                                                                                                                   | ZHENG Xiaoyu, GU Yongjie, JIN Yan, REN Xiangyu, ZHU Yongqing, YANG Yifan ( 2663 )                                     |
| Effects of diurnal change of <i>V. natans</i> photosynthesis on environmental factors and phosphorus concentration in water             | .....                                                                                                                 |
| .....                                                                                                                                   | WANG Lizhi, WANG Guoxiang, YU Zhenfei, ZHOU Beibei, CHEN Qiumin ( 2669 )                                              |
| The N and P chemical speciation and temporal-spatial pattern during a winter bloom event in Lake Chenghai, China                        | .....                                                                                                                 |
| .....                                                                                                                                   | DONG Yunxian HONG Xuehua, HU Jinqian, GUAN Zhaoguo, HE Xiongxiang, RUI Xiyuan ( 2675 )                                |
| Effects of sediments with different characteristics on restoration of submerged macrophytes                                             | .....                                                                                                                 |
| .....                                                                                                                                   | LI Lei, LIAO Rihong, NIU Ying, ZHAO Lixin, WU Xiaohui ( 2680 )                                                        |
| Community structure and seasonal variation of the zooplankton in Shenzhen Bay                                                           | .....                                                                                                                 |
| .....                                                                                                                                   | ZHANG Caixue, ZHOU Kai, SUN Xingli, CHEN Chunliang, ZHANG Jibiao, ZHANG Yubin ( 2686 )                                |
| Adsorption kinetics of phosphate onto sediments from the upper reaches of the Yellow River                                              | .....                                                                                                                 |
| .....                                                                                                                                   | LI Beigang, LIU Peiyi, MA Qin ( 2693 )                                                                                |
| Research of treatment on steel waste water with high turbidity by boron mud haydite                                                     | .....                                                                                                                 |
| .....                                                                                                                                   | LI Hui, LI Baiquan, SHAO Hong ( 2698 )                                                                                |
| Effects of plastic film on seed germination and the activities of antioxidant enzyme of wheat ( <i>Triticum aestivum</i> L. ) seedlings | .....                                                                                                                 |
| .....                                                                                                                                   | XU Rongle, HAI Reti ( 2702 )                                                                                          |
| Influence of copper stress on physiological and biochemical characteristics of two different lichens species                            | .....                                                                                                                 |
| .....                                                                                                                                   | Pazilat BAHTI, QI Yaopeng, Arzigul YUSUP, Anwar TUMUR ( 2708 )                                                        |
| Effects of biochar on corn growth, nutrient uptake and soil chemical properties in seeding stage                                        | .....                                                                                                                 |
| .....                                                                                                                                   | ZHANG Hanzhi, HUANG Yuan, LIU Gang, XU Yanping, LIU Jinshan, BEI Qicheng, LIN Xingwu, ZHU Jianguo, XIE Zubin ( 2713 ) |
| Effects of gypsum application rate on the quantity of microorganisms and activity of enzymes in <i>Helianthus annuus</i> rhizospheric   | .....                                                                                                                 |
| .....                                                                                                                                   | ZHAO Hui, YANG Juan, Teng Yingfeng, Di Xiaojuan ( 2718 )                                                              |
| Effects of municipal sewage sludge applications on chemical properties and metal contents in poplar soil                                | .....                                                                                                                 |
| .....                                                                                                                                   | XIN Tao, BAI Liping, SONG Jinhong, LU Zhenlan, FU Yaping ( 2722 )                                                     |
| Effects of four amendments on behaviors of cadmium in soil-ryegrass system                                                              | .....                                                                                                                 |
| .....                                                                                                                                   | DU Zhimin, ZHOU Jing, HAO Jianshe, CUI Hongbiao, ZHU Honghong, LI Huixin ( 2728 )                                     |
| Preliminary analysis on the acute toxicity of multiple poisonous organic matters in measuring algae infrared radiation                  | .....                                                                                                                 |
| .....                                                                                                                                   | GUO Weihua, MA Jinlong, WU Yulong ( 2733 )                                                                            |

# Reviews

|                                                                                   |       |                                                                                                    |
|-----------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------|
| An analysis on eco-environmental effect of vegetation in urbanized areas          | ..... | ZENG Hui, CHEN Xue ( 2737 )                                                                        |
| Programmed cell death in phytoplankton                                            | ..... | LI Jie, DING Yi, XIANG Rong, SONG Lirong ( 2743 )                                                  |
| Overview of research about environmental geochemistry characteristics of thallium | ..... | WANG Chunlin, CHEN Yongheng, ZHANG Yongbo, LIU Yimin, WANG Jin, LI Xiangping, QI Jianying ( 2749 ) |
| Progress in the researches of seed bank in rice paddy fields                      | ..... | WANG Wei, XIE Xiaoli, XIE Yonghong ( 2758 )                                                        |

# Perspectives

|                                                                                                           |       |                                     |
|-----------------------------------------------------------------------------------------------------------|-------|-------------------------------------|
| Urbanization development characteristics and its path selection process in fragile ecological environment | ..... | ZHANG Liqian, CAI Jianming ( 2764 ) |
|-----------------------------------------------------------------------------------------------------------|-------|-------------------------------------|