

ISSN 1672-2043

CN 12-1347/S

# 农业环境科学学报

JOURNAL OF AGRO-ENVIRONMENT SCIENCE

中文核心期刊  
CODEN NHKXA7

## “农业面源和重金属污染农田综合防治与 修复技术研发”重点专项专刊

特邀主编：刘宝存 任天志 刘荣乐 王衍亮



2019年8月

第38卷 第8期 Vol.38 No.8



关注微信公众平台请扫二维码

万方数据

农业农村部环境保护科研监测所 主办  
中国农业生态环境保护协会



“农业面源和重金属污染农田综合防治与修复技术研发”重点专项专刊

特邀主编：刘宝存 任天志 刘荣乐 王衍亮

专论与综述

- 大米汞污染与摄食大米甲基汞暴露研究进展 ..... 程和发 高旭 罗晴(1665)
基于CNKI文献分析的镉污染土壤钝化技术概况及效果评估研究 ..... 李昂 侯红 苏本营 黄占斌 冯艳 吴志豪 孙在金(1677)

研究报告

- 不同表面分子膜材料抑制稻田氨挥发的效果及其作用途径 ..... 王梦凡 俞映惊 杨根 谢斐 侯朋福 杨林章 薛利红 孙庆业(1685)
聚天门冬氨酸/盐对水稻田面水氮素变化及养分利用的影响 ..... 徐嘉翼 牛世伟 隋世江 张鑫 叶鑫 蔡广兴 王娜(1696)
设施农业土壤中聚磷菌的筛选及其生物学特性分析 ..... 吴晓青 吕玉平 周方圆 赵晓燕 张广志 任何 周红姿 王加宁 张新建(1704)
我国果菜茶中畜禽粪便有机肥替代化肥潜力 ..... 安思羽 李艳霞 张雪莲 刘笑冰 陈兴财 童心 胡柏杨 刘克锋(1712)
不同农艺管理措施下双季稻田氮磷径流流失特征及其主控因子研究 ..... 杨坤宇 王美慧 王毅 尹黎明 李勇 吴金水(1723)
洱海流域典型农区不同施肥处理下稻田氨挥发变化特征 ..... 吴凡 张克强 谢坤 王风 王瑞琦 尹高飞 沈仕洲(1735)
沼液与有机肥配施条件下氮损失风险的研究 ..... 周炜 孙国峰 王鑫 童红玉 盛婧(1743)
硝化抑制剂阻控养殖肥液灌溉土壤氮素淋失 ..... 杨涵博 赖睿特 张克强 沈丰莉 李佳佳 高文莹 罗艳丽 王风(1751)
不同土壤改良剂对盐碱土壤化学性质和有机碳库的影响 ..... 冀拯宇 周吉祥 张贺 郭康莉 刘晓 姜慧敏 杨俊诚 李桂花 张建峰(1759)
基于近红外漫反射光谱的规模化奶牛场粪水氮磷定量分析及模型构建 ..... 赵润 牟美睿 王鹏 孙迪 刘海学 张克强 杨仁杰(1768)
三种添加剂对猪粪厌氧干发酵的影响 ..... 李丹妮 张克强 梁军锋 高文莹 孔德望 杜连柱(1777)
响应面法优化餐厨垃圾和牛粪混合两相厌氧发酵酸化条件 ..... 刘金力 洪秀杰 白岩 毕少杰 杨宏志 王彦杰(1786)

基于空间聚类与随机森林的稻米富集镉影响因素筛选研究 .....	郭新蕾 赵玉杰
刘潇威 周其文 王夏晖 李志涛 朱智伟 张铁亮 王祖光 张 璠 孙 扬(1794)	
叶面喷施二巯基丁二酸对晚稻籽粒镉及矿质元素含量的影响 .....	杨晓荣 黄永春 刘仲齐 王常荣 张长波(1802)
叶面喷施锌离子对水稻各器官镉积累特性的影响 .....	韩潇潇 任兴华 王培培 黄永春 张长波 刘仲齐(1809)
镉污染农田不同水稻品种镉积累差异研究 .....	薛 涛 廖晓勇 王凌青 张扬珠(1818)
海藻糖对镉胁迫下水稻幼苗生长的影响 .....	李昉峻 周其文 漆新华 宋正国(1827)
不同改良剂和水管理对水稻吸收积累砷的影响 .....	王丙烁 黄亦玟 李 娟 龙 健 黄益宗 韩 廿(1835)
三种有机物料组成性质及其对土壤Cd形态与水稻Cd含量的影响 .....	刘高云 柏宏成 叶碧莹 魏世强(1844)
<i>Delftia</i> sp. B9对镉胁迫下水稻种子萌发及幼苗镉积累的影响	
.....	刘玉玲 彭 鸥 铁柏清 刘亦婷 罗海艳 李丹阳 刘寿涛(1855)
镉在黄瓜幼苗中的化学形态及亚细胞分布 .....	闫 雷 朱园辰 陈 辰 张思佳 丁官尧 喇乐鹏 曲娟娟(1864)
喷施不同形态锰肥对叶用油菜镉累积及亚细胞分布的影响	
.....	闫秀秀 徐应明 王 林 陶雪莹 孙约兵 梁学峰(1872)
锰污染土壤石灰改良对油茶生长及抗氧化酶系统的影响	
.....	于方明 漆培艺 刘可慧 周振明 陈朝述 唐舒婷 李 艺(1882)
螯合剂对油菜修复镉砷复合污染土壤的影响	
.....	韩 廿 黄益宗 魏祥东 铁柏清 张盛楠 王丙烁 保琼莉 黄永春(1891)
表面活性剂改性纳米羟基磷灰石对Cd <sup>2+</sup> 吸附研究	
.....	尹英杰 楚龙港 朱司航 李 阳 晏朝睿 商建英(1901)
镉砷污染土壤钝化剂配方优化及效果研究 .....	熊 静 郭丽莉 李书鹏 林启美 陈有鑑(1909)
镉铜复合污染土壤中南方红豆杉的重金属提取效果及根际细菌群落特征	
.....	魏 帅 Wolde Tefera Beri 王润泽 林 之 谢若瀚 乔亚蓓 卢玲丽 田生科(1919)
不同黄麻品种对重金属污染农田镉的富集和转移效率研究 .....	郭 媛 邱财生 龙松华 王玉富(1929)
外源Pb在三种典型土壤中老化过程差异性研究 .....	孙 硕 李菊梅 马义兵 赵会薇(1936)
添加方式对不同固化剂稳定土壤重金属的影响 .....	米深深 肖 然 王 姣 李荣华 张增强(1946)
4种植物水浸提液对铅镉污染土壤的淋洗效果 .....	徐小逊 腾 艺 杨 燕 王贵胤 张世熔(1954)
天然有机质不同分子量组分对紫色土镉吸附-解吸的影响.....	叶碧莹 柏宏成 刘高云 魏世强(1963)
三聚磷酸钠与柠檬酸复合强化蜈蚣草修复砷污染土壤 .....	向冬芳 廖水姣 涂书新 张丽梅 谢 天(1973)
猕猴桃木生物质炭对溶液中Cd <sup>2+</sup> 、Pb <sup>2+</sup> 的吸附及应用研究	
.....	任春燕 郭 堤 刘翔宇 李荣华 杜 娟 张增强(1982)
氧化铁改性秸秆炭吸附铬(VI)性能研究 .....	李际会 王 鹏 庄克章 卞建波 唐洪杰 郭艳萍 宋吉青(1991)
水稻和蔬菜的膳食结构变化对农村居民镉摄入健康风险的影响——以珠海市斗门区为例	
.....	仝桂杰 陈东湘 吴绍华 颜道浩 袁毓婕 李富富 王院民(2002)

版权所有 未经许可 不得以任何形式进行摘编或转载

***A special issue of Research and Development of Comprehensive Prevention and Remediation Technology for Farmland Contaminated by Agricultural Non-point Source Pollutants and Heavy Metals***

(Guest editor: LIU Bao-cun, REN Tian-zhi, LIU Rong-le, WANG Yan-liang)

- Research progress in mercury pollution in rice and methylmercury exposure through rice consumption  
 ..... CHENG He-fa, GAO Xu, LUO Qing(1665)
- Assessment of heavy metal passivation technology and evaluation of cadmium-contaminated soil based on CNKI literature analysis  
 ..... LI Ang, HOU Hong, SU Ben-ying, HUANG Zhan-bin, FENG Yan, WU Zhi-hao, SUN Zai-jin(1677)
- Effect of different surface molecular membrane materials on inhibition of ammonia volatilization and the action pathways in paddy fields  
 ... WANG Meng-fan, YU Ying-liang, YANG-Bei, XIE Fei, HOU Peng-fu, YANG Lin-zhang, XUE Li-hong, SUN Qing-ye(1685)
- Effects of polyaspartic-acid/salt on nitrogen loss from paddy surface water and nutrients utilization  
 ..... XU Jia-yi, NIU Shi-wei, SUI Shi-jiang, ZHANG Xin, YE Xin, CAI Guang-xing, WANG Na(1696)
- Isolation and biological characterization of phosphorus accumulating organisms(PAOs) from greenhouse facility soil  
 ..... WU Xiao-qing, LÜ Yu-ping,  
 ZHOU Fang-yuan, ZHAO Xiao-yan, ZHANG Guang-zhi, REN He, ZHOU Hong-zi, WANG Jia-ning, ZHANG Xin-jian(1704)
- Potential of animal manure in replacing chemical fertilizers for fruit, vegetable, and tea production in China  
 ..... AN Si-yu, LI Yan-xia, ZHANG Xue-lian, LIU Xiao-bing, CHEN Xing-cai, TONG Xin, HU Bai-yang, LIU Ke-feng(1712)
- Characteristics and determinants of nitrogen and phosphorus runoff losses under different agronomic measures in double cropping paddy fields  
 ..... YANG Kun-yu, WANG Mei-hui, WANG Yi, YIN Li-ming, LI Yong, WU Jin-shui(1723)
- Characteristics of ammonia volatilization from rice paddy fields under different fertilization treatments in typical agricultural areas of Erhai basin  
 ..... WU Fan, ZHANG Ke-qiang, XIE Kun, WANG Feng, WANG Rui-qi, YIN Gao-fei, SHEN Shi-zhou(1735)
- Risk of nitrogen loss under the combined application of biogas slurry and organic fertilizer  
 ..... ZHOU Wei, SUN Guo-feng, WANG Xin, TONG Hong-yu, SHENG Jing(1743)
- Nitrification inhibitors prevent nitrogen leaching in soil irrigated by biogas slurry  
 ... YANG Han-bo, LAI Rui-te, ZHANG Ke-qiang, SHEN Feng-ju, LI Jia-jia, GAO Wen-xuan, LUO Yan-li, WANG Feng(1751)
- Effect of soil conditioners on the soil chemical properties and organic carbon pool of saline-sodic soil  
 ..... JI Zheng-yu,  
 ZHOU Ji-xiang, ZHANG He, GUO Kang-li, LIU Xiao, JIANG Hui-min, YANG Jun-cheng, LI Gui-hua, ZHANG Jian-feng(1759)
- Quantified analysis and model structure of nitrogen and phosphorus in the slurry of large-scale dairy farms based on near-infrared transmission-diffuse reflectance spectroscopy  
 ..... ZHAO Run, MOU Mei-rui, WANG Peng, SUN Di, LIU Hai-xue, ZHANG Ke-qiang, YANG Ren-jie(1768)
- Solid-state anaerobic digestion of pig manure with three kinds of additives  
 ..... LI Dan-ni, ZHANG Ke-qiang, LIANG Jun-feng, GAO Wen-xuan, KONG De-wang, DU Lian-zhu(1777)
- Optimization of the acidification condition in anaerobic fermentation of food waste and cow manure based on response surface methodology  
 ..... LIU Jin-li, HONG Xiu-jie, BAI Yan, BI Shao-jie, YANG Hong-zhi, WANG Yan-jie(1786)
- Screening for factors affecting rice uptake of cadmium based on spatial clustering and random forests  
 ..... GUO Xin-lei, ZHAO Yu-jie, LIU Xiao-wei,  
 ZHOU Qi-wen, WANG Xia-hui, LI Zhi-tao, ZHU Zhi-wei, ZHANG Tie-liang, WANG Zu-guang, ZHANG Fan, SUN Yang(1794)
- Foliar application of DMSA: Effects on Cd and other mineral elements in rice grains  
 ..... YANG Xiao-rong, HUANG Yong-chun, LIU Zhong-qi, WANG Chang-rong, ZHANG Chang-bo(1802)

- Effects of foliar application with zinc on the characteristics of cadmium accumulation in organs of rice plants  
 ..... HAN Xiao-xiao, REN Xing-hua, WANG Pei-pei, HUANG Yong-chun, ZHANG Chang-bo, LIU Zhong-qi (1809)
- Cadmium accumulation in different rice cultivars from cadmium-polluted paddy fields  
 ..... XUE Tao, LIAO Xiao-yong, WANG Ling-qing, ZHANG Yang-zhu (1818)
- Effects of trehalose on the growth of rice seedlings under cadmium stress  
 ..... LI Fang-jun, ZHOU Qi-wen, QI Xin-hua, SONG Zheng-guo (1827)
- Effect of different amendments and water management on arsenic uptake and accumulation by rice in arsenic contaminated soil  
 ..... WANG Bing-shuo, HUANG Yi-wen, LI Juan, LONG Jian, HUANG Yi-zong, HAN Nian (1835)
- Composition and properties of three organic materials and their effects on soil Cd speciation and Cd content in rice  
 ..... LIU Gao-yun, BAI Hong-cheng, YE Bi-ying, WEI Shi-qiang (1844)
- Effects of *Delfinia* sp. B9 on rice seed germination and cadmium accumulation in rice seedlings under Cd stress  
 ..... LIU Yu-ling, PENG Ou, TIE Bai-qing, LIU Yi-ting, LUO Hai-yan, LI Dan-yang, LIU Shou-tao (1855)
- Subcellular distribution and chemical forms of cadmium in cucumber seedlings  
 ..... YAN Lei, ZHU Yuan-chen, CHEN Chen, ZHANG Si-jia, DING Gong-yao, LA Yue-peng, QU Juan-juan (1864)
- Effect of foliar application of different manganese fertilizers on cadmium accumulation and subcellular distribution in pak choi  
 ..... YAN Xiu-xiu, XU Ying-ming, WANG Lin, TAO Xue-ying, SUN Yue-bing, LIANG Xue-feng (1872)
- Effects of lime on the growth and antioxidant enzyme system of *Camellia oleifera* in manganese-contaminated soil  
 ..... YU Fang-ming, QI Pei-yi, LIU Ke-hui, ZHOU Zhen-ming, CHEN Chao-shu, TANG Shu-ting, LI Yi (1882)
- Effect of chelating agents on remediation of cadmium and arsenic complex contaminated soil using oil sunflower  
 ..... HAN Nian, HUANG Yi-zong,  
 WEI Xiang-dong, TIE Bai-qing, ZHANG Sheng-nan, WANG Bing-shuo, BAO Qiong-li, HUANG Yong-chun (1891)
- Adsorption capacity of surfactant-modified nano-hydroxyapatite for Cd<sup>2+</sup>  
 ..... YIN Ying-jie, CHU Long-gang, ZHU Si-hang, LI Yang, YAN Chao-rui, SHANG Jian-ying (1901)
- Optimizing the formulation and stabilization effects of an amendment for cadmium and arsenic contaminated soil  
 ..... XIONG Jing, GUO Li-li, LI Shu-peng, LIN Qi-mei, CHEN You-jian (1909)
- Phytoextraction of heavy metals and characteristics of the rhizosphere bacterial community of *Taxus wallichiana* var. *mairei* on multi-metal (cadmium and copper)-contaminated soil  
 ..... WEI Shuai, Wolde Tefera Beri, WANG Run-ze, LIN Zhi, XIE Ruo-han, QIAO Ya-bei, LU Ling-li, TIAN Sheng-ke (1919)
- Cadmium accumulation and translocation in different jute (*Corchorus capsularis* L.) cultivars growing in heavy metal contaminated paddy soil ..... GUO Yuan, QIU Cai-sheng, LONG Song-hua, WANG Yu-fu (1929)
- Differences in the aging of added lead in three typical soils ..... SUN Shuo, LI Ju-mei, MA Yi-bing, ZHAO Hui-wei (1936)
- Effects of different applications of soil remediation agents on heavy-metal stabilization in contaminated soil  
 ..... MI Shen-shen, XIAO Ran, WANG Jiao, LI Rong-hua, ZHANG Zeng-qiang (1946)
- Washing removal of Pb and Cd from soil using four plant water extracts  
 ..... XU Xiao-xun, TENG Yi, YANG Yan, WANG Gui-yin, ZHANG Shi-rong (1954)
- Effects of different molecular weight fractions of natural organic matter on the adsorption and desorption of cadmium in purple soil  
 ..... YE Bi-ying, BAI Hong-cheng, LIU Gao-yun, WEI Shi-qiang (1963)
- Effect of a sodium tripolyphosphate and citric acid composite on arsenic bioaccumulation caused by arsenic-contaminated soil in *Pteris vittata* L. .... XIANG Dong-fang, LIAO Shui-jiao, TU Shu-xin, ZHANG Li-mei, XIE Tian (1973)
- Application of biochar derived from kiwi pruning branches for Cd<sup>2+</sup> and Pb<sup>2+</sup> adsorption in aqueous solutions  
 ..... REN Chun-yan, GUO Di, LIU Xiang-yu, LI Rong-hua, DU Juan, ZHANG Zeng-qiang (1982)
- Optimization, characterization, and Cr(VI) adsorption properties of iron oxide-coated wheat straw biochar  
 ..... LI Ji-hui, WANG Peng, ZHUANG Ke-zhang, BIAN Jian-bo, TANG Hong-jie, GUO Yan-ping, SONG Ji-qing (1991)
- Effects of changes in rice- and vegetable-based dietary structure on health risk from cadmium intake for rural residents :  
 A case study of Doumen District, Zhuhai City, China  
 ..... TONG Gui-jie, CHEN Dong-xiang, WU Shao-hua, YAN Dao-hao, YUAN Yu-jie, LI Fu-fu, WANG Yuan-min (2002)