

# 《农业资源与环境学报》2019年第36卷

## 总目次

### 第一期

土壤pH对汞迁移转化的影响研究进展	窦韦强 安毅 秦莉 林大松 曾庆楠 夏晴(1)
超微细活化磷肥对小白菜生长及磷利用的影响	王桂伟 陈宝成 王国鹏 李晗灏 梁海 周华敏 陈剑秋(9)
基于“3414”的三七氮磷钾施肥量研究	宋希梅 朱永全 卢迎春 陈军文 张广辉 龙光强 杨生超(16)
钱塘江附近农田土壤磷的积累及其流失的潜在风险	应金耀 阮弋飞 邬奇峰 谢国雄 章明奎(26)
不同养分管理措施下常年菜地磷、钾养分径流流失特征	李盟军 艾绍英 宁建凤 王荣辉 姚建武 余丹妮(33)
氮肥对油菜在不同土壤中吸收积累Cd的影响	张琦 杨洋 涂鹏飞 谭可夫 罗艳丽 曾清如(43)
安徽省某市农田土壤与农产品重金属污染评价	岳蛟 叶明亮 杨梦丽 崔俊义 马友华(53)
异质Cd胁迫对蚕豆和富集植物续断菊根系生长的影响	李博 袁兴超 湛方栋 尹晓青 蒋明 秦丽 祖艳群 李元(62)
土壤中水分和镉浓度对油菜生长发育的影响	史新杰 李卓 庄文化 刘超(71)
几种有机肥对紫色土Pb有效性和形态的调控效应	李顺奇 刘洁 陈杰 王璐瑶 柏宏成 魏世强(79)
赣南某原地浸析稀土尾矿复垦前后土壤质量变化	周彩云 张嶽 赵小敏 万广越 程晓迪 郭熙(89)
黄土高原东部潇河流域农田土壤有机质时空变异及影响因素	解文艳 周怀平 杨振兴 冯悦晨 白雪 杜艳玲(96)
粤东海域经济贝类重金属含量与暴露风险评价	郑清梅 刘兴隆 郭江山 钟艳梅 韩春艳(105)
餐厨垃圾生物质炭制备及其吸附水中亚甲基蓝性能	张新旺 李保鹏 沈建国 臧志林 马小涵 辛言君(115)
藻菌共培养体系优势菌株筛选及沼液处理	王书亚 李志 高仪璠 孙利芹 李丹 孙中亮 姜政如(121)

### 第二期

#### 战略与管理

农林生物质直燃电厂灰渣资源化技术分析与展望	石炎 薛聪 邱宇平(127)
-----------------------	----------------

#### 农业资源

乡村振兴背景下灾毁耕地复垦潜力研究——以重庆市北碚区为例	何青泽 谢德体 王三(140)
------------------------------	-----------------

西部绿洲城市土地利用转型的生态环境效应——以乌鲁木齐市为例

- ..... 阿依吐尔逊·沙木西 刘新平 祖丽菲娅·买买提 陈前利 冯 彤(149)  
玉米秸秆颗粒还田对土壤有机碳含量和作物产量的影响 ..... 张 莉 李玉义 逢焕成 王 靖 丛 萍 张珺穜 郭建军(160)  
杂卤石对花生生长及养分吸收的影响 ..... 李晗灏 李文庆 王 媛 赵丽娅(169)  
宛氏拟青霉提取物对樱桃萝卜产量及品质的影响 ..... 贾春花 刘之广 张 民 贾继文 郑 磊 王庆彬 王洪凤(176)

## 农业生态与环境

- 成都平原不同种植模式下重金属镉污染风险和经济效益评价 ..... 刘海涛 陈一兵 田 静 林超文(184)  
钝化剂种类和粒径对复合污染土壤镉铅有效态的影响 ..... 袁启慧 包 立 张乃明(192)  
解磷真菌驱动磷灰石固定重金属铅的地球化学模拟研究 ..... 郑君仪 蒋 柳 胡云潇 郭辰萌 唐凌逸 李 真(198)  
两种典型温度下农村化粪池出水氮素在原地土壤中的迁移转化过程 ..... 孟凡凡 阮建飞 王文林 王飞鹏 刘 波 桑陆宇(206)  
黄莺尾对牛场养殖废水肥用过程中的耐受性研究 ..... 丁飞飞 张克强 渠清博 赵 芙 杨 鹏 沈 晨(214)  
密闭蛋鸡舍内 NH<sub>3</sub>浓度变化规律及其影响因子分析 ..... 沈丰菊 刘雪兰 张克强(221)  
不同残膜含量对淡灰钙土水分入渗过程的影响 ..... 白一茹 张 兴 王幼奇 赵云鹏 王 宇(227)

## 农产品安全

- 河北省蔬菜大棚土壤及蔬菜中重金属累积分析 ..... 孙 硕 李菊梅 马义兵 赵会薇(236)  
东北稻蟹中18种微量元素含量及健康风险评价 ..... 覃东立 姜海峰 黄晓丽 高 磊 王 鹏 刘 欢 韩 刚(245)

## 第三期

## 战略与管理

- 重金属污染农田原位钝化修复材料研究进展 ..... 吴霄霄 曹榕彬 米长虹 林大松 王天恕(253)  
城乡有机废弃物资源化利用现状及展望 ..... 李龙涛 李万明 孙继民 褚 飞 饶中秀 黄凤球(264)  
基于限制因素分析的耕地质量提升分区——以长春市九台区为例 ..... 黄梦佳 李淑杰 杜婉婷 曹竞文 齐 鲁(272)

## 农业资源

- 流域尺度下地形属性对土壤质地类型变异的影响——以重庆市彭水县一小流域为例 ..... 马 冉 刘洪斌 武 伟(279)  
重庆农田土壤硫分布特征及其影响因素 ..... 罗曼琳 窦添元 向秋洁 胡翔宇 木志坚(287)  
遵义市土壤锌空间分布特征研究 ..... 赵 建 师华定 吴 哮 韩小斌 彭玉龙 马 瑾 刘 京(298)  
秸秆碳对不同施肥水平低肥力土壤碳组分的影响 ..... 何振超 苏 瑶 喻 曼 陈喜靖 万美霞 沈阿林(304)  
控释氮肥和控释钾肥对棉花产量、品质及土壤肥力的影响 ..... 于小晶 田晓飞 张 民 李成亮 孙玲丽 刘之广 陈剑秋(313)  
木醋液对土壤 pH、EC 与茄子叶片光合特性及根系发育的影响 ..... 常 青 王永亮 杨治平 黄高鉴 郭彩霞(322)  
山西省种养废弃物构成及资源化利用潜力研究 ..... 杜艳玲 周怀平 程 曼 解文艳 杨振兴 郭 晋 吕倩倩 王志伟(329)  
生物改性玉米秸秆处理含铜废水的研究 ..... 宋晓晓 任滨侨 赵路阳 金 玉 欧阳凤菊(337)

## 农业生态与环境

黄土露天矿区重构土壤典型物理性质差异及对植被生长状况的影响

- ..... 王舒菲 曹银贵 罗古拜 况欣宇 宋 蕾 白中科(344)  
 不同植物种植对矿区复垦土壤微生物多样性的影响 ..... 张变华 靳东升 张 强 鄂春花 李建华 籍晟煜(355)  
 生态与常规种植对土壤养分、微生物及重金属的影响 ..... 王玉梅 张雪华 盛 虎 陈能场(361)  
 入侵植物黄顶菊不同器官和不同发育阶段DNA表观遗传多样性变化特征  
 ..... 张思宇 全志星 田佳源 杨殿林 刘红梅 王 慧(368)  
 围垦对条子泥互花米草种群年季扩张特征的影响 ..... 刘 潞 余夏杨 唐洪根 辛 沛(376)  
 曼陀罗对镉的吸收及其亚细胞分布研究 ..... 周 振 杨素勤 柳海涛 陈先锋 陈 鑫 张 彪(385)  
 29种水生植物对农村生活污水净化能力研究 ..... 张倩妮 陈永华 杨皓然 陈明利 柳 俊(392)

## 第四期

## 战略与管理

- 活化水灌溉在农业生产中的应用研究进展 ..... 穆 艳 赵国庆 赵巧巧 刘 皓 王全九(403)  
 基于资源环境承载力的国土空间管制分区研究 ..... 梁宇哲 谢晓瑜 郭泰圣 吴茗华 王 璐(412)  
 华南地区县域耕地质量和产能评价研究——以广东吴川为例  
 ..... 戴文举 王东杰 卢 瑛 缪武龙 文泰斌 王 璐 陈飞香(419)  
 广西土地整治增长极及其驱动类型分析——基于改进灰色关联模型 ..... 张中秋 胡宝清 李 英 韦金洪(431)

## 农业资源

- 露天矿区排土场复垦地土壤容重差异、GPR特征识别与反演 ..... 罗古拜 曹银贵 白中科 黄雨晗 王舒菲(441)  
 基于不同重构土壤材料配比的草木樨生物量差异分析 ..... 况欣宇 曹银贵 罗古拜 李树志 白中科(453)  
 喀斯特山区土壤有机无机磷分级方法的比较研究 ..... 陈梦军 舒英格 肖盛杨(462)  
 间作促进作物磷吸收的氮素调控效应 ..... 钱韩玲 朱启林 周 龙 龙光强 汤 利(471)  
 山西省畜禽粪污产生量估算及环境效应 ..... 李丹阳 孙少泽 马若男 李国学 李恕艳(480)  
 规模化养殖场肥水水质特征研究 ..... 付 莉 张克强 高文萱 社会英(487)  
 蘑菇渣腐熟微生物组方研究 ..... 陈智坤 路强强 任英英 张 昭 赵 宁 黄 标(494)

## 农业生态与环境

- 耕地生态风险评价研究热点与趋势——基于CiteSpace可视化分析 ..... 黎怡姗 吴大放 刘艳艳(502)  
 宁夏贺兰县土壤重金属分布特征及其生态风险评价 ..... 周勤利 王学东 李志涛 王夏晖 何 俊 季国华(513)  
 土壤镉污染对小麦生长及镉吸收的影响 ..... 张 婕 李仁英 徐向华 谢晓金 Chambe E A(522)  
 改性蒙脱石修复镉污染对水稻根际土壤酶活性的影响 ..... 陈泽雄 朱凤榕 周志军 赵秋香(528)  
 北京市郊农田土壤中多环芳烃污染特征及风险评价 ..... 周 洁 张敬锁 刘晓霞 冯 洋 王鸿婷 徐淑波 庞 博(534)  
 不同碳氮源对 *Paracoccus* sp.QD15-1降解邻苯二甲酸二甲酯的影响  
 ..... 王姊威 刘 虹 王春龙 吕志航 刘泽平 陈文晶 王志刚(541)  
 云南玉溪地区烟田根结线虫的SCAR鉴定、分布及其生物防治研究  
 ..... 宋 莉 周培培 李 阳 张立猛 赵进龙 张翠萍 罗秀莲 纳红艳 刘 芳 谷星慧 阮维斌(546)

## 第五期

**战略与管理**

- 我国农村厕所改造的区域特征及路径探析 ..... 王永生 刘彦随 龙花楼(553)  
 输变电工程对土壤环境的影响及其防控 ..... 黄志元 刘宝华 崔星怡 许杨贵 汤泽平 黎华寿(561)

**研究报告**

- 一种无动力·蒸发式农村生活污水处理新技术及其工程应用 ..... 陈畴圳 赵建军 郑向群(570)  
 CAST一体化设备处理农村生活污水工况研究 ..... 杨大川 黄治平 郑宏艳 米长虹 丁健(575)  
 巢湖流域厌氧-土壤净化床工艺处理农村生活污水生态补偿标准测算  
 ..... 丁健 吴晓斐 黄治平 郑宏艳 米长虹 郑宏杰(584)  
 稻麦两熟农田径流养分循环利用模式的能值分析与生态补偿标准测算 ..... 朱冰莹 陈留根 盛婧 郑建初(592)  
 洱海流域不同轮作与施肥方式对农田氮磷径流损失的影响  
 ..... 姚金玲 郭海刚 倪喜云 王风 郑宏艳 杨怀钦 杨苏树 任天志(600)  
 水稻施肥参数的相关性分析 ..... 侯显达 刘书田 王铄今 贾书刚 侯彦林 陆伶(614)  
 节水改造对沈乌灌域不同地貌浅层地下水埋深的影响 ..... 韩天凯 丁雪华 潘春洋 刘月(620)  
 基于熵权-集对模型的耕地面源污染生态风险评价与防控——以新疆昌吉州为例 ..... 原伟鹏 刘新平(630)  
 PBAT型全生物降解膜对南疆番茄产量及土壤理化性质的影响  
 ..... 王斌 万艳芳 王金鑫 孙九胜 槐国龙 崔磊 张彦红 魏彦宏 刘国宏(640)  
 基于降解地膜覆盖的新疆棉花生长发育及效益分析 ..... 窦巧巧 汤秋香 吴凤全 林涛 何文清 严昌荣 杨再磊(649)  
 生物质炭与草炭混配基质的养分状况及其对凤仙花生长的影响 ..... 王媛 李文庆 李晗灏(656)  
 添加生物质炭改良剂对土壤-烟草中重金属含量的影响  
 ..... 赵建 朱文彬 汪玉 祝乾湘 彭玉龙 刘京 韩小斌 夏志林 王慎强(664)  
 基于畜禽粪便的有机肥中雌激素污染特征 ..... 韩进 程鹏飞 周贤 王建 凌婉婷(673)  
 畜禽粪便堆肥过程中雌激素降解特征 ..... 韩进 程鹏飞 周贤 王建 凌婉婷(679)  
 秸秆饲料化全细胞纤维素酶的构建及应用 ..... 余泉 谢晓航 叶萌 李华南 刘晓鹏 宋慧婷(687)  
 蚯蚓生物消解尾菜废弃物工艺参数优化 ..... 王海候 孟祥国 金梅娟 施林林 周新伟 陆长婴 沈明星(694)

## 第六期

**战略与管理**

- 生态环境视角下有机农业发展助推环境保护与绿色发展(1994—2019)  
 ..... 张弛 席运官 孔源 田伟 肖兴基 赵克强(703)  
 秸秆还田下的主要产地环境问题及其绿色防控技术 ..... 苏瑶 杨艳华 贾生强 喻曼 陈喜靖 沈阿林(711)  
 1961—2015年各国化肥消费量与人均GDP相关性分析  
 ..... 王博 徐志宇 王楷 李季 许艇 韩一军 习斌 郝晓燕 高尚宾(718)

**农业资源**

- 基于力学平衡模型的耕地多功能演变及其协调性分析——以珠江三角洲为例  
 ..... 余富祥 胡月明 刘振杰 李波 王璐(728)

## 农业资源与环境学报·第36卷·总目次

东北典型黑土区耕地有机质与pH的空间分布规律及其相互关系	刘忆莹 裴久渤 汪景宽(738)
临时用地土地复垦碳效应分析与测算——以广西为例	张中秋 胡宝清 张世康 韦金洪(744)
内蒙古玉米主产区农业热量资源变化及其对策探讨	张宝林 高聚林 王志刚 池梦雪 赵俊灵 郭佳 彭健(757)

## 农业生态与环境

长期定位耕作方式下冬小麦田根系呼吸对土壤呼吸的贡献	周鹏翀 沈莹 许姣姣 韩惠芳 宁堂原 李增嘉(766)
余江县水稻土剖面酸缓冲性能与酸化速率	唐贤 蔡泽江 徐明岗 文石林 高强 姚晨 陈玲英(774)
沈抚灌区耕地重金属Cd、Pb的变化特征分析	徐宁 魏忠义(783)
连作棉田间作洋葱、孜然对棉花光合特性及根系生长的影响	马怡茹 魏飞 马子豪 王超凡 孙新展 刘建国(792)
电动技术去除剩余污泥中重金属	王蓉 初正崑 宋宁宁 王凯荣 刘君 王芳丽(798)
番茄秸秆固定化芽孢杆菌M1对3环PAHs污染老化土壤修复效果	李岩 李成 张小雪 冯煊 王伟 冯圣东 宁国辉 王小敏 杨志新(806)
不同降雨强度下旱地农田氮磷流失规律	王月 房云清 纪婧 秦弋丰 马瑞君 李旭东(814)
滇池水体沉积物磷素特征及其对藻类的影响	程文娟 包立 罗雄鑫 张乃明(822)
铁合金厂周边室内积尘中重金属污染特征及健康风险评价	陶永刚 马鹏程 陈棉彪 黄楚珊 张丽娟 于云江 柳晓琳 许群 胡国成(829)

## 农产品安全

珠江河网淡水鱼、虾和河蚬重金属污染特性及安全性评价	谢文平 马丽莎 郑光明 刘书贵(839)
---------------------------	----------------------

《农业资源与环境学报》2019年第36卷总目次	(847)
-------------------------	-------

**JOURNAL OF AGRICULTURAL RESOURCES AND ENVIRONMENT**  
**2019 Vol.36 Total Contents**

**No.1**

- Research progress on effects of soil pH on migration and transformation of mercury ..... DOU Wei-qiang, AN Yi, QIN Li, LIN Da-song, ZENG Qing-nan, XIA Qing(1)
- Effects of superfine activated phosphorus fertilizers on growth and phosphorus utilization of pakchoi ..... WANG Gui-wei, CHEN Bao-cheng, WANG Guo-peng, LI Han-hao, LIANG Hai, ZHOU Hua-min, CHEN Jian-qiu(9)
- Studies on application rates of nitrogen, phosphorus and potassium fertilizer in *Panax notoginseng* cultivation based on "3414" fertilizer experiment ..... SONG Xi-mei, ZHU Yong-quan, LU Ying-chun, CHEN Jun-wen, ZHANG Guang-hui, LONG Guang-qiang, YANG Sheng-chao(16)
- Accumulation and runoff loss potential risk of soil phosphorus in agricultural land near Qiantang River ..... YING Jin-yao, RUAN Yi-fei, WU Qi-feng, XIE Guo-xiong, ZHANG Ming-kui(26)
- Runoff characteristics of phosphorus and potassium from a perennial vegetable field under different nutrition managements ..... LI Meng-jun, AI Shao-ying, NING Jian-feng, WANG Rong-hui, YAO Jian-wu, YU Dan-ni(33)
- Effect of nitrogen fertilizer on Cd uptake by rape in different soil ..... ZHANG Qi, YANG Yang, TU Peng-fei, TAN Ke-fu, LUO Yan-li, ZENG Qing-ru(43)
- Evaluation of heavy metal pollution of farmland soil and agricultural products in a city of Anhui Province, China ..... YUE Jiao, YE Ming-liang, YANG Meng-li, CUI Jun-yi, MA You-hua(53)
- Effects of heterogeneous Cd stress on root growth of *Vicia faba* and *Sonchus asper* ..... LI Bo, YUAN Xing-chao, ZHAN Fang-dong, YIN Xiao-qing, JIANG Ming, QIN Li, ZU Yan-qun, LI Yuan(62)
- Effects of soil moisture and cadmium concentration on the growth of rape ..... SHI Xin-jie, LI Zhuo, ZHUANG Wen-hua, LIU Chao(71)
- Regulation effects of several organic manures on Pb chemical speciation and bioavailability in gray-purple soil ..... LI Shun-qi, LIU Jie, CHEN Jie, WANG Lu-yao, BAI Hong-cheng, WEI Shi-qiang(79)
- Soil quality changes of rare earth tailings before and after reclamation in south Jiangxi Province, China ..... ZHOU Cai-yun, ZHANG Qin, ZHAO Xiao-min, WAN Guang-yue, CHENG Xiao-di, GUO Xi(89)
- The spatial-temporal variation of soil organic matter and its influencing factors in Xiaohe River basin in eastern Loess Plateau, China ..... XIE Wen-yan, ZHOU Huai-ping, YANG Zhen-xing, FENG Yue-chen, BAI Xue, DU Yan-ling(96)
- Analysis of heavy metal concentrations in marine economic shellfish from eastern Guangdong Province and its health risk ..... ZHENG Qing-meい, LIU Xing-long, GUO Jiang-shan, ZHONG Yan-meい, HAN Chun-yan(105)
- Research on the adsorption performance of kitchen waste biochar for methylene blue ..... ZHANG Xin-wang, LI Bao-peng, SHEN Jian-guo, ZANG Zhi-lin, MA Xiao-han, XIN Yan-jun(115)
- Screening of the dominant strains in the algae-bacteria symbiotic system and effects of biogas slurry treatment ..... WANG Shu-ya, LI Zhi, GAO Yi-fan, SUN Li-qin, LI Dan, SUN Zhong-liang, JIANG Mei-ru(121)

**No.2**

- Analysis and prospect of resource utilization of ash and slag from agroforestry biomass-fired power plants in China ..... SHI Yan, XUE Cong, QIU Yu-ping(127)
- Reclamation potential of disaster devastating farmland under the background of Rural Revitalization: Case study in Beibei District, Chongqing City, China ..... HE Qing-ze, XIE De-ti, WANG San(140)
- Eco-environmental effects of land use conversion in oasis city in western China: A case study of Urumqi ..... AYTURSUN Xamxi, LIU Xin-ping, ZULPIYA Mamat, CHEN Qian-li, FENG Tong(149)

- Effects of granulated maize straw incorporation on soil organic carbon contents and grain yield ..... ZHANG Li, LI Yu-yi, PANG Huan-cheng, WANG Jing, CONG Ping, ZHANG Jun-tong, GUO Jian-jun(160)
- Effect of polyhalite on peanut growth and nutrient uptake ..... LI Han-hao, LI Wen-qing, WANG Yuan, ZHAO Li-ya(169)
- Effects of extracts from *Paecilomyces Variotii* on the yield and quality of cherry radish(*Raphanus sativus L. var. radculus pers.*) ..... JIA Chun-hua, LIU Zhi-guang, ZHANG Min, JIA Ji-wen, ZHENG Lei, WANG Qing-bin, WANG Hong-feng(176)
- Evaluation of economic benefits and cadmium pollution risk in different cropping system in Chengdu Plain, China ..... LIU Hai-tao, CHEN Yi-bing, TIAN Jing, LIN Chao-wen(184)
- The effect of type and particle size of passivator on effective state of Cd and Pb in compound polluted soil ..... YUAN Qi-hui, BAO Li, ZHANG Nai-ming(192)
- Geochemical modeling of apatite assisted Pb immobilization driven by phosphate solubilizing fungi ..... ZHENG Jun-yi, JIANG Liu, HU Yun-xiao, GUO Chen-meng, TANG Ling-yi, LI Zhen(198)
- The in-situ translocation and transformation of the nitrogen of rural septic tank effluent in the soil at two typical temperatures ..... MENG Fan-fan, RUAN Jian-fei, WANG Wen-lin, WANG Fei-peng, LIU Bo, SANG Lu-yu(206)
- Research on yellow iris tolerance to cattle farm wastewater purification ..... DING Fei-fei, ZHANG Ke-qiang, QU Qing-bo, ZHAO Fu, YANG Peng, SHEN Chen(214)
- Variation of ammonia concentration and influence factors analysis in layer house ..... SHEN Feng-ju, LIU Xue-lan, ZHANG Ke-qiang(221)
- Study on influence of different agricultural residue film amounts on soil infiltration process of light sierozem ..... BAI Yi-ru, ZHANG Xing, WANG You-qi, ZHAO Yun-peng, WANG Yu(227)
- Accumulation of heavy metals in soil and vegetables of greenhouses in Hebei Province, China ..... SUN Shuo, LI Ju-mei, MA Yi-bing, ZHAO Hui-wei(236)
- The levels of 18 trace elements and health risk assessment in rice-crab(*Eriocheir sinensis*) from northeast China ..... QIN Dong-li, JIANG Hai-feng, HUANG Xiao-li, GAO Lei, WANG Peng, LIU Huan, HAN Gang(245)

### No.3

- Research progress of in-situ passivated remedial materials for heavy metal contaminated soil ..... WU Xiao-xiao, CAO Rong-bin, MI Chang-hong, LIN Da-song, WANG Tian-shu(253)
- Research status and prospects of the resource utilization of organic waste in urban and rural areas ..... LI Long-tao, LI Wan-ming, SUN Ji-min, CHU Fei, RAO Zhong-xiu, HUANG Feng-qiu(264)
- The classification and zoning of cultivated land quality improvement based on limiting factors : A case study of Jiutai District in Changchun City, China ..... HUANG Meng-jia, LI Shu-jie, DU Wan-ting, CAO Jing-wen, QI Lu(272)
- Effect of topographic attributes on soil texture class variations at a watershed scale : A case study of a basin in Pengshui County of Chongqing, China ..... MA Ran, LIU Hong-bin, WU Wei(279)
- Distribution characteristics and influencing factors of soil sulphur in Chongqing farmlands ..... LUO Man-lin, DOU Tian-yuan, XIANG Qiu-jie, HU Xiang-yu, MU Zhi-jian(287)
- Study on spatial distribution of zinc in soils in Zunyi City, China ..... ZHAO Jian, SHI Hua-ding, WU Xiao, HAN Xiao-bin, PENG Yu-long, MA Jin, LIU Jing(298)
- Effect of straw-derived carbon on carbon component of the low fertility soil at different nitrogen application rates ..... HE Zhen-chao, SU Yao, YU Man, CHEN Xi-jing, WAN Mei-xia, SHEN A-lin(304)
- Effects of controlled-release nitrogen and potassium fertilizer on cotton yield, fiber quality and soil fertility ..... YU Xiao-jing, TIAN Xiao-fei, ZHANG Min, LI Cheng-liang, SUN Ling-li, LIU Zhi-guang, CHEN Jian-qiu(313)
- Effects of wood vinegar on soil pH, EC, and the photosynthetic characteristics of eggplant leaves and root development ..... CHANG Qing, WANG Yong-liang, YANG Zhi-ping, HUANG Gao-jian, GUO Cai-xia(322)
- Study on composition and utilization potential of waste from planting and breeding in Shanxi Province, China ..... DU Yan-ling, ZHOU Huai-ping, CHENG Man, XIE Wen-yan, YANG Zhen-xing, GUO Jin, LÜ Qian-qian, WANG Zhi-wei(329)

- Study on copper-containing wastewater treated by bio-modification of corn stalks ..... SONG Xiao-xiao, REN Bin-qiao, ZHAO Lu-yang, JIN Yu, OUYANG Feng-ju(337)
- Effects of reconstructing soil in open cast mining areas of the Loess Plateau on soil physical properties and vegetative growth ..... WANG Shu-fei, CAO Yin-gui, LUO Gu-bai, KUANG Xin-yu, SONG Lei, BAI Zhong-ke(344)
- Effects of different plant cultivations on the microbiological diversity of recultivated soil in mining area ..... ZHANG Bian-hua, JIN Dong-sheng, ZHANG Qiang, GAO Chun-hua, LI Jian-hua, JI Sheng-yu(355)
- Effects of ecological and conventional planting pattern on soil nutrients, microbes and heavy metals ..... WANG Yu-mei, ZHANG Xue-hua, SHENG Hu, CHEN Neng-chang(361)
- Epigenetic diversity variation characteristics of *Flaveria bidentis* genome DNA of different organs at different developmental stages ..... ZHANG Si-yu, QUAN Zhi-xing, TIAN Jia-yuan, YANG Dian-lin, LIU Hong-mei, WANG Hui(368)
- Effect of reclamation on the annual and seasonal characteristics of *Spartina alterniflora* population in Tiaozini coastal wetland ..... LIU Lu, YU Xia-ying, TANG Hong-gen, XIN Pei(376)
- Uptake and subcellular distribution of cadmium in *Datura stramonium* L. ..... ZHOU Zhen, YANG Su-qin, LIU Hai-tao, CHEN Xian-feng, CHEN Xin, ZHANG Biao(385)
- Study on the purification ability of 29 aquatic plants to rural domestic sewage ..... ZHANG Qian-ni, CHEN Yong-hua, YANG Hao-ran, CHEN Ming-li, LIU Jun(392)

#### No.4

- Advances in the application of activated water irrigation ..... MU Yan, ZHAO Guo-qing, ZHAO Qiao-qiao, LIU Hao, WANG Quan-jiu(403)
- Space regionalization based on resources and environmental carrying capacity ..... LIANG Yu-zhe, XIE Xiao-yu, GUO Tai-sheng, WU Ming-hua, WANG Lu(412)
- Evaluation of county level cultivated land quality and productivity in south China : A case study of Wuchuan City, Guangdong Province ..... DAI Wen-ju, WANG Dong-jie, LU Ying, GOU Wu-long, WEN Tai-bin, WANG Lu, CHEN Fei-xiang(419)
- Study of growth poles and factors driving land consolidation in Guangxi based on improved grey relational analysis method ..... ZHANG Zhong-qiu, HU Bao-qing, LI Ying, WEI Jin-hong(431)
- Soil bulk density difference, ground penetrating radar feature identification, and simulation for a reclaimed soil profile in the dumping site of an open pit mine ..... LUO Gu-bai, CAO Yin-gui, BAI Zhong-ke, HUANG Yu-han, WANG Shu-fei(441)
- Analysis of biomass differences in *Melilotus suaveolens* Ledeb. based on different ratios of reconstructed soil materials ..... KUANG Xin-yu, CAO Yin-gui, LUO Gu-bai, LI Shu-zhi, BAI Zhong-ke(453)
- Methods of soil organic and inorganic phosphorus fractionation in karst areas ..... CHEN Meng-jun, SHU Ying-ge, XIAO Sheng-yang(462)
- Regulation effect of nitrogen application on promotion of phosphorus uptake of crops under intercropping ..... QIAN Han-ling, ZHU Qi-lin, ZHOU Long, LONG Guang-qiang, TANG Li(471)
- Estimation of annual production amount of livestock and poultry manure and its environmental effect in Shanxi Province , China ..... LI Dan-yang, SUN Shao-ze, MA Ruo-nan, LI Guo-xue, LI Shu-yan(480)
- Characteristics of nutrients in anaerobic effluents from large-scale livestock farms in North China Plain ..... FU Li, ZHANG Ke-qiang, GAO Wen-xuan, DU Hui-ying(487)
- Study on microbiological formula of spent mushroom compost ..... CHEN Zhi-kun, LU Qiang-qiang, REN Ying-ying, ZHANG Zhao, ZHAO Ning, HUANG Biao(494)
- Hot spots and trends of cultivated land ecological risk evaluation : Visualization analysis based on CiteSpace ..... LI Yi-shan, WU Da-fang, LIU Yan-yan(502)
- Distribution characteristics and ecological risk assessment of soil heavy metal in Helan County of Ningxia, China ..... ZHOU Qin-li, WANG Xue-dong, LI Zhi-tao, WANG Xia-hui, HE Jun, JI Guo-hua(513)
- Effects of cadmium pollution in soil on growth and cadmium uptake of wheat ..... ZHANG Qi, LI Ren-ying, XU Xiang-hua, XIE Xiao-jin, Chambe E A(522)

- Effects of functionalized montmorillonite on rhizospheric enzyme activities in Cd contaminated soil ..... CHEN Ze-xiong, ZHU Huang-rong, ZHOU Zhi-jun, ZHAO Qiu-xiang(528)
- Pollution characteristics and risk assessment of PAHs in agricultural soil in suburb of Beijing ..... ZHOU Jie, ZHANG Jing-suo, LIU Xiao-xia, FENG Yang, WANG Hong-ting, XU Shu-bo, PANG bo(534)
- Effect of different carbon and nitrogen sources on degradation of phthalate degrading bacteria ..... WANG Zi-wei, LIU Hong, WANG Chun-long, LÜ Zhi-hang, LIU Ze-ping, CHEN Wen-jing, WANG Zhi-gang(541)
- Distribution of *Meloidogyne* spp. in tobacco field of Yuxi, Yunnan Province and biological control against *Meloidogyne* spp. ..... SONG Li, ZHOU Pei-pei, LI Yang, ZHANG Li-meng, ZHAO Jin-long, ZHANG Cui-ping, LUO Xiu-lian, NA Hong-yan, LIU Fang, GU Xing-hui, RUAN Wei-bin(546)

## No.5

- Regional characteristics and pathway optimization of China's rural toilet improvement ..... WANG Yong-sheng, LIU Yan-sui, LONG Hua-lou(553)
- Impacts of power transmission projects on the surrounding soil environment: Prevention and control ..... HUANG Zhi-yuan, LIU Bao-hua, CUI Xing-yi, XU Yang-gui, TANG Ze-ping, LI Hua-shou(561)
- A novel technology and its engineering application for rural domestic sewage treatment ..... CHEN Pei-zhen, ZHAO Jian-jun, ZHENG Xiang-qun(570)
- Study on the operating condition of CAST integrated equipment for the treatment of rural domestic sewage ..... YANG Da-chuan, HUANG Zhi-ping, ZHENG Hong-yan, MI Chang-hong, DING Jian(575)
- Ecological compensation standard assessment for the anaerobic tank-soil bed system in treating the rural domestic sewage in Chaohu Lake basin area ..... DING Jian, WU Xiao-fei, HUANG Zhi-ping, ZHENG Hong-yan, MI Chang-hong, ZHENG Hong-jie(584)
- Emergy analysis and ecological compensation standard of the runoff nutrient recycling system in rice-wheat rotation systems ..... ZHU Bing-ying, CHEN Liu-gen, SHENG Jing, ZHENG Jian-chu(592)
- Influence of different crop rotations and fertilization methods on nitrogen and phosphorus runoff losses in Erhai Lake basin, China ..... YAO Jin-ling, GUO Hai-gang, NI Xi-yun, WANG Feng, ZHENG Hong-yan, YANG Huai-qin, YANG Su-shu, REN Tian-zhi(600)
- Correlation analysis of fertilization parameters in rice ..... HOU Xian-da, LIU Shu-tian, WANG Shuo-jin, JIA Shu-gang, HOU Yan-lin, LU Ling(614)
- Influence of water saving reform on the depth of shallow groundwater of different landforms in Shenwu irrigation areas ..... HAN Tian-kai, DING Xue-hua, PAN Chun-yang, LIU Yue(620)
- Ecological risk assessment and control of non-point source pollution in cultivated land based on the entropy weight-set pair model: Using Changji Prefecture, Xinjiang, China as an example ..... YUAN Wei-peng, LIU Xin-ping(630)
- Effects of PBAT biodegradable mulch film on the physical and chemical properties of soil and tomato yield in southern Xinjiang, China ..... WANG Bin, WAN Yan-fang, WANG Jin-xin, SUN Jiu-sheng, HUAI Guo-long, CUI Lei, ZHANG Yan-hong, WEI Yan-hong, LIU Guo-hong(640)
- The impacts of different degradable plastic mulches on growth and yield of Xinjiang cotton ..... DOU Qiao-qiao, TANG Qiu-xiang, WU Feng-quan, LIN Tao, HE Wen-qing, YAN Chang-rong, YANG Zai-lei(649)
- Effect of biochar and peat on the growth of *Impatiens balsamina* as a growth medium ..... WANG Yuan, LI Wen-qing, LI Han-hao(656)
- Effects of biochar amendments on heavy metal content in soil-tobacco system ..... ZHAO Jian, ZHU Wen-bin, WANG Yu, ZHU Qian-xiang, PENG Yu-long, LIU Jing, HAN Xiao-bin, XIA Zhi-lin, WANG Shen-qiang(664)
- Characteristics of estrogen contamination in organic fertilizers derived from livestock manures ..... HAN Jin, CHENG Peng-fei, ZHOU Xian, WANG Jian, LING Wan-ting(673)
- Characteristics of estrogen degradation in livestock manures during composting ..... HAN Jin, CHENG Peng-fei, ZHOU Xian, WANG Jian, LING Wan-ting(679)

Generation and application of whole-cell cellulase for straw feed

..... YU Xiao, XIE Xiao-hang, YE Meng, LI Hua-nan, LIU Xiao-peng, SONG Hui-ting(687)

Optimization of parameters of earthworm digestion of vegetable waste

..... WANG Hai-hou, MENG Xiang-guo, JIN Mei-juan, SHI Lin-lin, ZHOU Xin-wei, LU Chang-ying, SHEN Ming-xing(694)

## No.6

Analysis of organic agriculture development promoting environmental protection and green development from the perspective of ecological environment(1994—2019)

..... ZHANG Chi, XI Yun-guan, KONG Yuan, TIAN Wei, XIAO Xing-ji, ZHAO Ke-qiang(703)

Main problems of agricultural production areas after straw returning and the respective green control technologies

..... SU Yao, YANG Yan-hua, JIA Sheng-qiang, YU Man, CHEN Xi-jing, SHEN A-lin(711)

Correlation of GDP per capita and chemical fertilizer consumption of different countries from 1961 to 2015

..... WANG Bo, XU Zhi-yu, WANG Kai, LI Ji, XU Ting, HAN Yi-jun, XI Bin, HAO Xiao-yan, GAO Shang-bin(718)

The coordination and evolution of farmland multifunctionality based on a mechanical model:A case study of the Pearl River Delta

..... YU Fu-xiang, HU Yue-ming, LIU Zhen-jie, LI Bo, WANG Lu(728)

Spatial distribution and relationship between organic matter and pH in the typical black soil region of northeast China

..... LIU Yi-ying, PEI Jiu-bo, WANG Jing-kuan(738)

Analysis of carbon effects of temporary land reclamation using Guangxi as an example

..... ZHANG Zhong-qiu, HU Bao-qing, ZHANG Shi-kang, WEI Jin-hong(744)

Agricultural thermal resource changes and corresponding agricultural strategies in major maize production regions of Inner Mongolia

..... ZHANG Bao-lin, GAO Ju-lin, WANG Zhi-gang, CHI Meng-xue, ZHAO Jun-ling, GUO Jia, PENG Jian(757)

Contribution of root respiration to soil respiration in a winter wheat field under long-term localized tillage

..... ZHOU Peng-chong, SHEN Ying, XU Jiao-jiao, HAN Hui-fang, NING Tang-yuan, LI Zeng-jia(766)

Research on buffering capacity and acidification rate of paddy soil profiles in Yujiang County

..... TANG Xian, CAI Ze-jiang, XU Ming-gang, WEN Shi-lin, GAO Qiang, YAO Chen, CHEN Ling-ying(774)

Analysis on the variation character of heavy metals Cd and Pb in the cultivated land of Shenfu sewage irrigation district

..... XU Ning, WEI Zhong-yi(783)

Effects of continuous cropping cotton intercropping onion and cumin on photosynthetic characteristics and root growth of cotton

..... MA Yi-ru, WEI Fei, MA Zi-hao, WANG Chao-fan, SUN Xin-zhan, LIU Jian-guo(792)

Removal of heavy metals from residual sludge by electrokinetic remediation technology

..... WANG Rong, CHU Zheng-kun, SONG Ning-ning, WANG Kai-rong, LIU Jun, WANG Fang-li(798)

Remediation effects of 3-ring PAH-contaminated soil by immobilized *Bacillus* sp. M1 with tomato straw in coal mining area

..... LI Yan, LI Cheng, ZHANG Xiao-xue,

FENG Xuan, WANG Wei, FENG Sheng-dong, NING Guo-hui, WANG Xiao-min, YANG Zhi-xin(806)

The loss of nitrogen and phosphorus from dryland farmland under different rainfall intensities

..... WANG Yue, FANG Yun-qing, JI Jing, QIN Yi-feng, MA Rui-jun, LI Xu-dong(814)

Characteristics of phosphorus in the sediment of Dianchi Lake and its effects on algae

..... CHENG Wen-juan, BAO Li, LUO Xiong-xin, ZHANG Nai-ming(822)

Pollution characteristics and potential health risk assessment of heavy metals in household dusts around ferroalloy factory

..... TAO Yong-gang, MA Peng-cheng, CHEN Mian-biao,

HUANG Chu-shan, ZHANG Li-juan, YU Yun-jiang, LIU Xiao-lin, XU Qun, HU Guo-cheng(829)

Pollution status and safety assessment of heavy metals in natural fish, shrimp, and shellfish from Pearl River waterway

..... XIE Wen-ping, MA Li-sha, ZHENG Guang-ming, LIU Shu-gui(839)

*Journal of Agricultural Resources and Environment* 2019 Vol.36 Total Contents ..... (847)