



目 次

◆ 专论与综述

- 不同时空尺度下土壤微生物群落分布及驱动因素研究进展..... 康小虎, 刘 鑫, 刘姗姗, 李玥萍, 贾婷婷 (689)
- 改性纳米零价铁用于水土环境重金属污染修复的研究进展..... 谢剑雄, 钟 杰, 韦 行, 黄 玲, 孙梦强, 陈志良 (697)
- 土壤中苯并[a]芘生态毒性及植物修复研究进展..... 宋金梅, 蒋 宝, 李艳丹, 蔡敏琦, 张 丹 (711)
- 花岗岩红壤丘陵区崩岗侵蚀与典型切沟侵蚀的异同点探析..... 韦江杏, 邓羽松 (718)

◆ 研究报告

- 硝化抑制剂与不同氮肥配施对土壤硝化过程的抑制效果..... 马 丽, 梁雄英, 李冬佳, 董汶卿, 唐智萍, 郝杏中, 陈 骏, 喻海峰, 王孝忠, 刘 蕊, 张卫峰 (726)
- 柑橘大豆间作对土壤团聚体结构及其有机碳、氮分布的影响..... 曹 胜, 曾 斌, 邓素枫, 龚碧涯, 张 文, 罗赛男, 杨水芝 (735)
- 熟化垫料部分替代化肥对水稻-多花黑麦草轮作生产力、土壤肥力和重金属含量的影响..... 张文洁, 许能祥, 丁成龙, 李青丰 (742)
- 长期施肥改变玉米大豆轮作/连作黑土农田酸化速率和酸中和容量..... 徐 影, 李彦生, 刘晓冰, 金 剑, 于镇华 (750)
- 长期施肥对设施土壤活性有机碳含量及碳库管理指数的影响..... 周 珺, 王 莹, 孙德龙, 付瑞桐, 安 晶, 张玉玲 (760)
- 不同绿肥腐解对烟田土壤有效磷含量影响的微生物机制..... 王仕海, 尚 军, 汤红印, 陈 鹏, 黄占平, 魏忠秋, 王忠宇, 尚关兴, 易 凯, 尚德双, 李珍权, 王晓玥 (769)
- 不同种类和裂解温度生物质炭添加对稻田土壤微生物多样性和群落结构的影响..... 张童欣, 侯岳彤, 滕岳洪, 张晓杰, 金鑫鑫, 王 帅, 刘 艳, 张玉玲, 虞 娜, 邹洪涛 (776)
- 东川泥石流源区板岩表生细菌生物多样性..... 赵雯钰, 杨 宾, 程 诚, 王 琪, 臧胜刚, 盛下放 (788)
- 果树穴贮砖对南疆沙地土壤改良及温室石榴生长的影响..... 梁天强, 王祥兵, 姚东东, 张换换, 于 坤 (797)
- 枯草芽孢杆菌 hs032 对盐碱土理化性质及弥散能力的影响..... 郭彦钊, 巨秦伟, 于 烽, 黄敏刚, 齐 飞 (807)
- 施用蚓粪对滨海盐碱地土壤有机碳库及其稳定性的影响..... 卢 云, 秦天扬, 陈玮峰, 蔡 健, 许益伟, 李云龙, 左文刚, 陈硕桐, 单玉华, 柏彦超 (817)
- 外源 Ca^{2+} 对两种产脲酶细菌修复 Cd-As 复合污染水稻土的影响..... 王金坪, 费藏乐, 邵梦迪, 杨 润, 罗 燕, 黄金富, 蔡 倩, 伍 钧, 徐 敏 (826)
- 腐植酸钾协同微生物菌剂对矿区废弃地土壤改良的影响..... 陈 曦, 刘宝勇, 于 皓, 李多美, 季美彤, 赵 硕, 李室余, 綦丽莉 (833)
- GLDA 及其组合试剂对土壤中 As、Cd、Cu 和 Pb 的提取能力和机制..... 陈春发, 泮芝伟, 侯建国, 冯宏亮, 仓 龙, 王玉军 (841)
- 球磨纳米生物质炭在饱和多孔介质中的迁移与滞留机制..... 樊建新, 唐文巧, 吴兴钰, 石 姣 (849)
- 基于辅助变量的紫色土耕地土壤有机质空间预测..... 刘雅璇, 于 慧, 罗 勇 (857)
- 基于 Sentinel-2 数据的豫北平原耕作层土壤有机碳估算..... 贾德伟, 周 磊, 王 宁, 刘玉昕 (866)
- 北方农牧交错带不同人工植被类型土壤碳氮磷及其化学计量特征——以武川县为例..... 吴叶礼, 闵 雪, 赛 硕, 杨之恒, 邹 旭, 张 英, 丁国栋 (873)
- 基于机器学习和土壤关键要素的烤烟品质数字制图——以云南玉溪烟区为例..... 陶 怡, 王美艳, 史学正, 孙维侠, 王世航, 李湘伟, 朱云聪, 谢新乔 (879)
- 基于遗传算法和 BP 神经网络的矿区土壤重金属含量空间分布预测..... 赵 萍, 阮旭东, 刘亚风, 赵思逸, 孙 雨, 常 杰, 周 俊 (889)
- 土地利用变化对土壤类型的影响——以太仓和昆山两市为例..... 赵治东, 孙龙辉, 赵明松, 刘 峰, 徐胜祥, 李德成 (897)

◆ 研究简报

- 浙北地区不同土地利用方式对土壤理化性质的影响..... 鲁晨妮, 朱日清, 孙 达, 徐再萌, 朱静娜, 胡文凌, 章 斐, 陈 贵 (906)
- 土壤有效硼提取及测定方法比较..... 孙玉芳, 黄 蓉, 王 璐, 尹 媛, 朱 波, 唐昊冶 (914)

CONTENTS

Distribution Patterns and Drivers of Soil Microbial Communities at Different Spatiotemporal Scales: A Review	
.....	KANG Xiaohu, LIU Xin, LIU Shanshan, LI Yueping, JIA Tingting (689)
Modified Nanoscale Zero-valent Iron for Remediation of Heavy Metal Contamination in Soil and Water Environments: A Review	
.....	XIE Jianxiong, ZHONG Jie, WEI Hang, HUANG Ling, SUN Mengqiang, CHEN Zhiliang (697)
Advances of Ecological Toxicity and Phytoremediation of Benzo[a]pyrene in Soil	
.....	SONG Jinmei, JIANG Bao, LI Yandan, CAI Minqi, ZHANG Dan (711)
Analysis of Similarities and Differences Between Benggang Erosion in Granitic Red Soil Hilly Area and Typical Gully Erosion	
.....	WEI Jiangxing, DENG Yusong (718)
Inhibitory Effects of Nitrification Inhibitors Combined with Different Nitrogen Fertilizers on Soil Nitrification Process	
.....	MA Li, LIANG Xiongying, LI Dongjia, DONG Wenqing, TANG Zhiping, HAO Xingzhong, CHEN Jun, YU Haifeng, WANG Xiaozhong, LIU Rui, ZHANG Weifeng (726)
Effects of Citrus and Soybean Intercropping on Soil Aggregate Structure, Organic Carbon and Nitrogen Distribution	
.....	CAO Sheng, ZENG Bin, DENG Sufeng, GONG Biya, ZHANG Wen, LUO Sainan, YANG Shuizhi (735)
Effects of Different Proportions of Fermentation Bed Paddings Replacing Chemical Fertilizer on Crop Productivity, Soil Fertility and Heavy Metals Under Italian Ryegrass–Rice Rotation	
.....	ZHANG Wenjie, XU Nengxiang, DING Chenglong, LI Qingfeng (742)
Long-term Fertilizer Application Alters Acidification Rate and Acid-Neutralizing Capacity in Corn and Soybean Rotational/Continuous Cropping Systems of Mollisol Field	
.....	XU Ying, LI Yansheng, LIU Xiaobing, JIN Jian, YU Zhenhua (750)
Effects of Long-term Fertilization on Soil Labile Organic Carbon Content and Carbon Pool Management Index in Greenhouse	
.....	ZHOU Jun, WANG Ying, SUN Delong, FU Ruitong, AN Jing, ZHANG Yuling (760)
Deciphering Microbial Mechanism Underlying Changes of Available Phosphorus Content in Tobacco-planting Soils During Different Green Manure Decomposition	
.....	WANG Shihai, SHANG Jun, TANG Hongyin, CHEN Peng, HUANG Zhanping, WEI Zhongqiu, WANG Zhongyu, SHANG Guanxing, YI Kai, SHANG Deshuang, LI Zhenquan, WANG Xiaoyue (769)
Effects of Adding Different Types and Pyrolysis Temperatures of Biochar on Soil Microbial Diversity and Community Structure in Paddy fields	
.....	ZHANG Tongxin, HOU Yuetong, TENG Yuehong, ZHANG Xiaojie, JIN Xinxin, WANG Shuai, LIU Yan, ZHANG Yuling, YU Na, ZOU Hongtao (776)
Biodiversity of Bacterial Communities Inhabiting Slate Surfaces of Debris Flow Areas in Dongchuan, China	
.....	ZHAO Wenyu, YANG Bin, CHENG Cheng, WANG Qi, ZANG Shenggang, SHENG Xiafang (788)
Effects of Fruit Tree Hole Storage Bricks on Soil Improvement and Greenhouse Pomegranate Growth in Sandy Land of Southern Xinjiang	
.....	LIANG Tianqiang, WANG Xiangbing, YAO Dongdong, ZHANG Huanhuan, YU Kun (797)
Effect of <i>Bacillus subtilis</i> hs032 on Physicochemical Properties and Dispersal Capacity of Saline Soil	
.....	GUO Yanzhao, JU Qinwei, YU Feng, HUANG Mingang, QI Fei (807)
Effects of Vermicompost Application on Organic Carbon Pool and Its Stability in Coastal Saline-alkaline Soil	
.....	LU Yun, QIN Tianyang, CHEN Weifeng, CAI Jian, XU Yiwei, LI Yunlong, ZUO Wengang, CHEN Shuotong, SHAN Yuhua, BAI Yanchao (817)
Effect of Exogenous Ca^{2+} on Remediation of Cd-As Co-contaminated Paddy Soil by Two Urease-producing Bacteria	
.....	WANG Jinping, FEI Cangle, SHAO Mengdi, YANG Run, LUO Yan, HUANG Jinfu, CAI Qian, WU Jun, XU Min (826)
Effects of Combined Applications of Potassium Humate with Different Microbial Agents on Soil Improvement of Mine Wasteland	
.....	CHEN Xi, LIU Baoyong, YU Hao, LI Duomei, JI Meitong, ZHAO Shuo, LI Shiyu, QI Lili (833)
Abilities and Mechanisms of GLDA and Its Combined Complexing Agents to Extract As, Cd, Cu and Pb from Soil	
.....	CHEN Chunfa, PAN Zhiwei, HOU Jianguo, FENG Hongliang, CANG Long, WANG Yujun (841)
Mechanisms of Transport and Retention of Ball-milled Nano-biochar in Saturated Porous Media	
.....	FAN Jianxin, TANG Wenqiao, WU Xingyu, SHI Jiao (849)
Soil Organic Matter Prediction of Purple Soil Based on Auxiliary Variables	
.....	LIU Yaxuan, YU Hui, LUO Yong (857)
Estimation of Soil Organic Carbon in Plow Layer of Northern Henan Plain Based on Sentinel-2 Data	
.....	JIA Dewei, ZHOU Lei, WANG Ning, LIU Yuxin (866)
Soil C, N and P Contents and Their Stoichiometry Under Different Artificial Vegetation Types in Agro-pastoral Zone of Northern China: A Case Study of Wuchuan County	
.....	WU Yeli, MIN Xue, SAI Shuo, YANG Zhiheng, ZOU Xu, ZHANG Ying, DING Guodong (873)
Digital Mapping of Flue-Cured Tobacco Quality Based on Machine Learning and Soil Key Elements—A Case Study of Yuxi Tobacco Area in Yunnan Province, China	
.....	TAO Yi, WANG Meiyang, SHI Xuezheng, SUN Weixia, WANG Shihang, LI Xiangwei, ZHU Yuncong, XIE Xinqiao (879)
Prediction of Spatial Distribution of Soil Heavy Metal Contents in Mining Areas Based on Genetic Algorithm and BP Neural Network	
.....	ZHAO Ping, RUAN Xudong, LIU Yafeng, ZHAO Siyi, SUN Yu, CHANG Jie, ZHOU Jun (889)
Effects of Land Use Type Change on Soil Types: A Case Study of Taicang and Kunshan Cities	
.....	ZHAO Zhidong, SUN Longhui, ZHAO Mingsong, LIU Feng, XU Shengxiang, LI Decheng (897)
Effects of Different Land-use Types on Soil Physicochemical Properties in Northern Zhejiang Province	
.....	LU Chenni, ZHU Riqing, SUN Da, XU Zaimeng, ZHU Jingna, HU Wenling, ZHANG Fei, CHEN Gui (906)
Comparative Study of Extraction and Determination Methods for Soil Available Boron	
.....	SUN Yufang, HUANG Rong, WANG Lu, YIN Yuan, ZHU Bo, TANG Haoye (914)