



目 次

◆专论与综述

- 探索生命极限的模式生物——南极土壤自由生活线虫 *Plectus murrayi* 及其环境适应性特征 薛 夏, 王中华, 李绍建, 姜 瑛 (925)
- $\delta\text{-MnO}_2$ 在环境中的演化及其与金属离子的相互作用研究进展 毕莉艳, 李祖然, 王 磊, 湛方栋, 梁新然, 李 元 (935)
- 铝同晶替代对铁(氢)氧化物表面活性的影响研究进展 徐晋玲, 赵爱霞, 杨雅楠, 王 凤 (943)
- ◆研究报告
- 基于高氮投入和基因型差异的水稻氮素营养特征 陈天祥, 杨顺瑛, 苏彦华 (954)
- 长期连续秸秆还田和生物质炭施用对稻田 N_2O 排放的影响 靳鹏辉, 陈 哲, 王 慧, 徐 乔, 胡天龙, 周 蓉, 蔺兴武, 刘 琦, 谢祖彬 (964)
- 亚热带地区土壤硝酸盐异化还原成铵速率的空间差异和驱动因素 铁文周, 黄雪娇, 黄金兰, 蒋代华 (974)
- 分根区交替滴灌施肥频率对土壤水氮运移及番茄产量的影响 刘宇航, 冯许钰, 董光华, 刘 霞, 王 丹, 申丽霞, 刘荣豪 (983)
- 长期外源有机物料添加对川中丘陵区农田土壤养分和有机碳组分的影响 刘 玲, 崔俊芳, 杨红薇, 唐家良 (991)
- 不同分子量碳源对砂姜黑土磷素有效性和玉米磷吸收的影响 阳 琴, 徐 博, 占丰瑞, 赵 华, 李虹颖, 熊启中, 孙瑞波, 李 硕, 张朝春, 叶新新 (1001)
- 磷肥对酸性红壤上玉米不同部位丛枝菌根真菌群落的影响 薛壮壮, 冯童禹, 王 超, 沈仁芳 (1008)
- 强还原处理配施枯草芽孢杆菌对百合土壤酚酸的影响 夏 青, 刘子豪, 张晶清, 林于蓝, 曾粮斌, 张金波, 蔡祖聪, 赵 军 (1016)
- 有机肥施用对植烟土壤氮素矿化及土壤酶和微生物群落的影响 刘 威, 陈小龙, 赵园园, 王德勋, 谢天琪, 吕建国, 金东峰, 史宏志 (1025)
- 不同园地土壤细菌亚群的结构与功能分异 喻 言, 刘 浩, 匡崇婷, 巩梦梦, 董 雷, 曹 慧 (1035)
- 苯系物(BTEX)长期污染对土壤和地下水微生物群落及代谢潜能的影响 荀小云, 邢伟然, 王佳渊, 康含之, 夏 磊, 李朋发, 王 晴, 宋 昕, 王保战, 蒋建东 (1044)
- 不同污染方式下铅对茶园土壤氮素转化及其相关微生物和酶活性的影响 邓青梅, 余文静, 江文字, 孙依萌, 王泽楷, 葛高飞 (1054)
- 砂姜黑土中兼具促生功能的纤维素降解菌的筛选及其应用 张子赟, 朱 林, 胡占琴, 朱媛媛, 卫正宇, 张朝春, 徐文思, 马 超 (1062)
- 新银合欢林土壤理化性质-微生物生物量耦合协调关系研究 宋 亮, 赵冰琴, 申远洋, 朱万庆, 杜祥运, 高儒章, 许文年 (1070)
- 海鲜壳生物质炭对酸性土壤的改良效果与机制探究 赵文瑞, 张文娟, 胡 慧, 宋钰洁, 王海厚, 杨莹莹, 卞子怡, 王 聪, 赵 宽 (1080)
- 不同饲料作物对苏打盐碱土改良效应研究 秦子元, 邬佳宾, 郑和祥, 李天佑, 周裕栋, 王 军, 高春山 (1088)
- 农旅融合背景下水田改林地对土壤性质影响 杨东伟, 姜文莹, 王丽丽, 陈方圆, 章明奎 (1097)
- 机器学习在氮循环领域的应用研究进展 王欣怡, 王昌昆, 马海艺, 刘 杰, 袁自然, 姚成硕, 潘贤章 (1106)
- 仰韶村遗址文化层土壤微形态研究 查理思, 吴克宁, 魏洪斌, 曾佩慧, 肖晓薇 (1114)
- 大兴安岭北部寒温带针叶林表层土壤冻融变化特征 张 鹏, 贾丙瑞 (1122)
- 永定河典型护岸植被土壤水分入渗特征及影响因素 朱美菲, 程金花 (1129)
- 南昌不同城市化强度土壤粒度组成和分形特征及其影响因素 张佛熠, 承 勇, 阳雅荧, 韦 培, 金涛涛, 凌婉茹, 尹 婕, 刘 玮, 王 琼 (1138)
- ◆研究简报
- 贵州务川汞矿区土壤丛枝菌根真菌多样性研究 刘 婷, 饶 熙, 龚 琳, 李小霞, 肖仲久, 彭宇龙 (1146)
- 高效液相色谱分析土壤氨基糖的质量控制方法 杨 洋, 张心昱, 张应华, 于颖超, 董欣妮 (1152)
- ◆书评
- 《小流域淤地坝淤积过程对坝地土壤有机碳矿化作用机制》专家评述 曹小曙 (1160)

CONTENTS

Model Organism Exploring Life Limit: <i>Plectus murrayi</i> , A Free-living Nematode in Antarctic Soil, and Its Environmental Adaptability	XUE Xia, WANG Zhonghua, LI Shaojian, JIANG Ying (925)
Evolution of $\delta\text{-MnO}_2$ in Environment and Its Interaction with Metal Ions: A Review	BI Liyan, LI Zuran, WANG Lei, ZHAN Fangdong, LAING Xinran, LI Yuan (935)
Effect of Al Substitution on Surface Reactivity of Iron (Hydr) Oxides: A Review	XU Jinling, ZHAO Aixia, YANG Ya'nan, WANG Feng (943)
Characteristics of Nitrogen Nutrition in Rice Based on High Nitrogen Input and Genotype Differences	CHEN Tianxiang, YANG Shunying, SU Yanhua (954)
Effects of Long-term Continuous Straw Incorporation and Biochar Application on N_2O Emission from Paddy Field	JING Penghui, CHEN Zhe, WANG Hui, XU Qiao, HU Tianlong, ZHOU Rong, LIN Xingwu, LIU Qi, XIE Zubin (964)
Spatial Difference and Driving Factors of Soil Nitrate Dissimilation to Ammonium in Subtropical Area	TIE Wenzhou, HUANG Xuejiao, HUANG Jinlan, JIANG Daihua (974)
Effect of Fertilization Frequency on Soil Water, Nitrogen Transport and Tomato Yield Under Alternate Partial Root-zone Drip Irrigation	LIU Yuhang, FENG Xuyu, DONG Guanghua, LIU Xia, WANG Dan, SHEN Lixia, LIU Ronghao (983)
Effects of Exogenous Organic Materials on Soil Nutrients and Organic Carbon Components in Hilly Region of Central Sichuan, China	LIU Ling, CUI Junfang, YANG Hongwei, TANG Jialiang (991)
Effects of Carbon Sources with Different Molecular Weights on Phosphorus Availability and Phosphorus Uptake in Maize	YANG Qin, XU Bo, ZHAN Fengrui, ZHAO Hua, LI Hongying, XIONG Qizhong, SUN Ruibo, LI Shuo, ZHANG Chaochun, YE Xinxin (1001)
Effects of Phosphorus Fertilizer on Arbuscular Mycorrhizal Fungi Community in Different Parts of Maize in Acidic Red Soil	XUE Zhuangzhuang, FENG Tongyu, WANG Chao, SHEN Renfang (1008)
Effects of Reductive Soil Disinfestation and <i>Bacillus subtilis</i> Inoculant on Soil Phenolic Acids of Lily	XIA Qing, LIU Zihao, ZHANG Jingqing, LIN Yulan, ZENG Liangbin, ZHANG Jinbo, CAI Zucong, ZHAO Jun (1016)
Effects of Organic Fertilizers on Nitrogen Mineralization, Soil Enzyme Activities and Microbial Communities in Tobacco-planting Soil	LIU Wei, CHEN Xiaolong, ZHAO Yuanyuan, WANG Dexun, XIE Tianqi, LÜ Jianguo, JIN Dongfeng, SHI Hongzhi (1025)
Structural and Functional Differentiation of Soil Bacterial Sub-communities Under Different Gardens	YU Yan, LIU Hao, KUANG Chongting, GONG Mengmeng, DONG Lei, CAO Hui (1035)
Effects of Long-term BTEX Contamination on Soil and Groundwater Microbial Communities and Metabolic Potential	GOU Xiaoyun, XING Weiran, WANG Jiayuan, KANG Hanzhi, XIA Lei, LI Pengfa, WANG Qing, SONG Xin, WANG Baozhan, JIANG Jiandong (1044)
Effects of Lead on Nitrogen Transformation and Related Microorganisms and Enzyme Activities in Tea Garden Soil Under Different Pollution Modes	DENG Qingmei, YU Wenjing, JIANG Wenyu, SUN Yimeng, WANG Zekai, GE Gaofei (1054)
Screening and Application of Cellulose Decomposing Bacteria with Growth Promoting Function on Shajiang Black Soil	ZHANG Ziyun, ZHU Lin, HU Zhanqin, ZHU Yuanyuan, WEI Zhengyu, ZHANG Chaochun, XU Wensi, MA Chao (1062)
Evaluation of Coupling Coordination Relationship Between Soil Physicochemical Properties and Microbial Biomass of <i>Leucaena leucocephala</i> Plantation	SONG Liang, ZHAO Bingqin, SHEN Yuanyang, ZHU Wanqing, DU Xiangyun, GAO Ruzhang, XU Wennian (1070)
Improvement Effects and Mechanisms of Seafood Shell Biochars on Acidic Soils	ZHAO Wenrui, ZHANG Wenjuan, HU Hui, SONG Yujie, WANG Haihou, YANG Yingying, BIAN Ziyi, WANG Cong, ZHAO Kuan (1080)
Improvement Effects of Different Feed Crops on Soda Saline-alkali Soil	QIN Ziyuan, WU Jiabin, ZHENG Hexiang, LI Tianyou, ZHOU Yudong, WANG Jun, GAO Chunshan (1088)
Effect of Land-use Change from Paddy Field to Forest Land on Soil Properties Under Background of Integration of Agriculture and Tourism	YANG Dongwei, JIANG Wenyng, WANG Lili, CHEN Fangyuan, ZHANG Mingkui (1097)
Estimation of Soil Organic Matter Content Based on Dual-temporal Satellite Remote-sensing Spectral Index	WANG Xinyi, WANG Changkun, MA Haiyi, LIU Jie, YUAN Ziran, YAO Chengshuo, PAN Xianzhang (1106)
Soil Micromorphology of Cultural Layers in Yangshao Village Site	ZHA Lisi, WU Kening, WEI Hongbin, ZENG Peihui, XIAO Xiaowei (1114)
Characteristics of Topsoil Freeze-Thaw Cycles in Cold Temperature Needle-leaved Forest of Northern Daxing'anling in Northeast China	ZHANG Peng, JIA Bingrui (1122)
Soil Water Infiltration and Influencing Factors of Typical Revetment Vegetation in Yongding River	ZHU Meifei, CHENG Jinhua (1129)
Particle Size Composition, Fractal Characteristics and Influencing Factors of Soils with Different Urbanization Intensities in Nanchang	ZHANG Foyi, CHENG Yong, YANG Yaying, WEI Pei, JIN Taotao, LING Wanru, YIN Jie, LIU Wei, WANG Qiong (1138)
Diversity of Arbuscular Mycorrhizal Fungi in Wuchuan Mercury Mining Area, Guizhou Province	LIU Ting, RAO Xi, GONG Lin, LI Xiaoxia, XIAO Zhongjiu, PENG Yulong (1146)
Quality Control for Determining Amino Sugar Contents in Soil by High Performance Liquid Chromatography	YANG Yang, ZHANG Xinyu, ZHANG Yinghua, YU Yingchao, DONG Xinni (1152)