

# 西南大学学报

## (自然科学版)

第 41 卷 第 5 期

总第 293 期

2019 年 5 月 20 日出版

## 目 次

### • 农业与生命科学 •

- 重庆辣椒上烟草轻型绿花叶病毒的分子检测及全基因组克隆分析 ..... 吴根土,  
徐 霞, 陈思敏, 孙 森, 楚成茹, 李明骏, 青 玲 (001)
- 日光温室秋冬番茄多抗优良品种的筛选 ..... 杨超沙, 王国华,  
尹伟平, 尹庆珍, 王静瑶, 曹秀莲, 李宁馨 (008)
- 新疆亚洲玉米螟不同地理种群临界光周期的研究  
..... 阿依谢姆古丽·亚库普, 安尼瓦尔·库尔班 (015)
- 北美红枫秋季呈色的生理机制研究 ..... 吴琰琰, 刘玉民, 闫洋洋 (021)
- 玄参、川明参枯落物水浸液对烤烟的化感效应 ..... 赵新梅, 陈延智, 刘 京,  
杨水平, 王 军, 张东艳, 莫静静, 何大敏, 张 雪 (030)
- 天元白垩纪恐龙动物群研究及化石保护利用对策  
..... 姜 涛, 唐 鹰, 肖振华, 汪大春 (037)

### • 数理科学与化学 •

- 小测度缺陷下 Maxwell 方程解的唯一性 ..... 小巴桑次仁, 多布杰 (044)
- 求解带间断系数非线性椭圆问题的两重网格法 ..... 李 明, 郑渊顺, 赵金娥 (048)
- 基于分块思想的 Pickands 型估计量 ..... 胡 爽, 彭作祥 (053)
- 最优控制问题的 Tikhonov 正则化 ..... 赵清梅, 张俊容 (059)
- Holling-II 型三种群食物网模型的 Hopf 分岔行为研究  
..... 康 举, 黄头生, 孟天祥, 张化永 (064)
- 纳米银为基底的表面增强拉曼光谱研究香豆素与牛血清白蛋白的相互作用  
..... 陈 蓉, 周光明, 罗 丹, 张璐涛 (072)

• 经济研究 •

- 碳排放交易制度下的低碳经济发展——基于非期望 DEA 与 DID 模型的分析 ..... 王钊, 王良虎 (085)

- 基于 AHP 的农业主题公园综合评价——以川东低山丘陵区 17 个农业主题公园为例 ..... 张羽, 骆云中, 谢德体, 杨娟 (096)

- 基于 SWOT 分析的重庆自由贸易区建设发展战略探索 ..... 刘敏 (104)

- 城市土地集约利用评价及驱动因子分析 ..... 赵会顺, 陈超, 高素芳 (112)

• 地球与环境科学 •

- 三峡水库不同高程消落区水分变化对土壤有机碳的影响 ..... 樊晶晶, 慈恩, 连茂山, 李兰婷, 谢德体 (120)

- 四川盆地夏季区域性极端降水事件特征及其成因 ..... 罗玉, 陈超, 马振峰, 刘佳, 李小兰, 杨蓉 (128)

• 工程与信息技术 •

- 2000—2013 年中国主要城市空间形态变化研究 ..... 郭煜琛, 田国行, 赵芮, 申鑫杰, 董宝宝, 何瑞珍 (139)

- 低功耗交直流小功率测量系统的设计与实现 ..... 瞿惠琴, 谷永先, 吴孔培, 叶倩 (149)

- 日本冒险游戏场发展对我国儿童游戏场建设的启示 ..... 李圆圆 (155)

# JOURNAL OF SOUTHWEST UNIVERSITY

## (NATURAL SCIENCE EDITION)

Vol. 41 No. 5

Total No. 293

May. 20, 2019

---

### CONTENTS

Molecular Detection and Cloning and Sequence Analysis of the Complete Genome of

*Tobacco mild green mosaic virus* on Pepper Plants in Chongqing ..... WU Gen-tu,  
XU Xia, CHEN Si-min, SUN Miao, CHU Cheng-ru, LI Ming-jun, QING Ling (001)

Comparison Test of Multi-Resistant and High-Quality Tomato Cultivars in a Solar Greenhouse

During Autumn and Winter Cultivation ..... YANG Chao-sha, WANG Guo-hua,  
YIN Wei-ping, YIN Qing-zhen, WANG Jing-yao, CAO Xiu-lian, LI Ning-xin (008)

Study on the Critical Photoperiod of Different Geographical Populations of Xinjiang Asian

Corn Borer *Ostrinia furnacalis* (Guenée) ..... Ayxemgvl Yakup, Anwer Kurban (015)

Study of the Mechanism of Physiological Discoloration of North American

Red Maple (*Acer rubrum* L.) ..... WU Yan-yan, LIU Yu-min, YAN Yang-yang (021)

Allelopathic Effects of Leaf-Stem Litter Aqueous Extracts of *Scrophularia ningpoensis* and

*Chuanminshen violaceum* on Tobacco Growth ..... ZHAO Xin-mei,  
CHEN Yan-zhi, LIU Jing, YANG Shui-ping, WANG Jun,  
ZHANG Dong-yan, MO Jing-jing, HE Da-min, ZHANG Xue (030)

A Research of the Late Cretaceous Dinosaur Fauna in Tianshan, Zhuzhou and

Measures Proposed for Their Protection and Utilization ..... JIANG Tao,  
TANG Ying, XIAO Zhen-hua, WANG Da-chun (037)

Uniqueness of Solutions of Maxwell's Equations in the Presence of Defects with

Small Measurement ..... Basang Tsiring-Xiao, Duo Bujie (044)

A Two-Level Method for Solving Nonlinear Elliptic Problems with a Jumping Coefficient

..... LI Ming, ZHENG Zhou-shun, ZHAO Jin-e (048)

A Pickands-Type Estimator Based on the Block Method ..... HU Shuang, PENG Zuo-xiang (053)

The Tikhonov Regularization of the Optimal Control Problem

..... ZHAO Qing-mei, ZHANG Jun-rong (059)

Holling-II Functional Response ..... KANG Ju,

HUANG Tou-sheng, MENG Tian-xiang, ZHANG Hua-yong (064)

Surface-Enhanced Raman Spectroscopy with Nanosilver as the Substrate to Study the

Interaction Between Coumarin and Bovine Serum Albumin (BSA)

..... CHEN Rong, ZHOU Guang-ming, LUO Dan, ZHANG Lu-tao (072)

Adsorption Removal of Phosphate from Water with an Fe-Zr Bimetallic Organic Framework

..... CHEN Hong-cheng, HUANG Yu-ming, FENG Ping (080)

Low-Carbon Economy Development Under the Carbon Emission Trading Scheme (ETS)

—An Analysis Based on Undesired DEA and DID Models

..... WANG Zhao, WANG Liang-hu (085)

Comprehensive Evaluation of Agricultural Theme Parks Based on AHP

—A Case Study of 17 Agricultural Theme Parks in Low Mountain and Hill Regions of

Eastern Sichuan Basin ..... ZHANG Yu, LUO Yun-zhong, XIE De-ti, YANG Juan (096)

A SWOT Analysis-Based Research of the Establishment and Development Strategy of

Chongqing Free Trade Zone ..... LIU Min (104)

Evaluation of Urban Land Intensive Use and Analysis of Its Driving Factors

..... ZHAO Hui-shun, CHEN Chao, GAO Su-fang (112)

Effects of Water Variation at Different Altitudes in the Hydro-Fluctuating Areas of

Three Gorges Reservoir on Soil Organic Carbon ..... FAN Jing-jing,

CI En, LIAN Mao-shan, LI Lan-ting, XIE De-ti (120)

Characteristics and Causes of Regional Extreme Precipitation Events in Summer

Over Sichuan Basin ..... LUO Yu, CHEN Chao,

MA Zhen-feng, LIU Jia, LI Xiao-lan, YANG Rong (128)

A Study of the Changes in Urban Spatial Morphology of Major Chinese Cities

During 2000—2013 ..... GUO Yu-chen, TIAN Guo-hang,

ZHAO Rui, SHEN Xin-jie, DONG Bao-bao, HE Rui-zhen (139)

Design and Implementation of a Low-Power Measurement System for Low AC/DC

Power Consumption ..... QU Hui-qin, GU Yong-xian, WU Kong-pei, YE Qian (149)

Enlightenment from the Development of Adventure Playgrounds in Japan to the

Construction of Children's Playgrounds in China ..... LI Yuan-yuan (155)