

中国科学引文源期刊 (CSCD)  
中国科技核心期刊  
中国农业核心期刊  
中国高校优秀科技期刊

ISSN 1000-2324  
CODEN SHNDEL

# 山东农业大学学报

(自然科学版)

JOURNAL OF SHANDONG AGRICULTURAL UNIVERSITY

Natural Science Edition

ISSN 1000-2324



9 771000 232005

4  
—  
2016

山东农业大学学报  
Journal of Shandong  
Agricultural University  
自然科学版  
(双月刊)

4  
2016  
(第 47 卷)

目 次

- 西兰花茎叶腐解液对不同蔬菜幼苗的化感效应 ..... 张学鹏, 宁堂原, 张洁莹, 等 (481)  
B9 对牡丹花期调控的影响 ..... 刘 娜, 秦安臣, 陈 雪, 等 (487)  
小麦 5DL 上基于 SNP 序列的新 SSR 标记的开发 ..... 陈 芳, 李文静, 邓志英, 等 (494)  
茎点霉生物学特性研究 ..... 杨玲玉, 王 颖, 程颖慧, 等 (501)  
不同碳源对球等鞭金藻生长和细胞组成的影响 ..... 王星宇, 黄旭雄 (506)  
一株烟草根际溶磷细菌的筛选鉴定及其培养基优化 ..... 刘 虎, 侯 贞, 易建华, 等 (514)  
烟草三类根腐类病害病原真菌多重 PCR 检测方法的建立 ..... 陆星星, 刘伟阳, 徐后娟 (520)  
松树响应松材线虫侵染的分子特征 ..... 徐 亮, 刘振宇, 李中新, 等 (525)  
基于灰色关联度的开发区典型企业集约用地评价 ..... 张 彦, 王瑷玲, 王瑞燕, 等 (531)  
基于统计分析和 BP 网络的土壤重金属污染研究 ..... 孙娓娓, 黄映雪, 张 杰, 等 (536)  
基于 GPS 定位导航的电力巡检 PDA 系统研发 ..... 王素珍, 刘树坤, 张德华, 等 (540)  
基于 3.0 GHz 频率的 S 波段船用导航雷达系统研究及实现 ..... 马天明 (548)  
高密度电法及瑞雷波法在现役高速公路路基检测中的应用 ..... 王渝龙 (553)  
基于巨型钢框架 - 混凝土核心筒结构的模型构建 ..... 徐 薇 (557)  
基于农业标准化的山东省节水灌溉分区研究 ..... 韦 梅, 刘福胜, 赵井辉, 等 (560)  
灌区明渠水位流量积算仪的研制与应用 ..... 刘玉海, 谢清华, 焦铭京, 等 (565)  
浅析传统内向型空间形态在现代建筑中的应用  
——以客家民居土楼为例 ..... 赵 君, 王学勇 (569)  
泰安环山路中段景观评价研究 ..... 杨乔韵, 孙 双, 秦华伟, 等 (573)  
泰安城市重点绿道规划研究 ..... 张 莹, 陈东田, 胡瑞伟, 等 (578)  
一种改进的面向分析法的在线手写签名鉴别方法 ..... 邵金平, 李文杰 (582)  
基于 GIS 和 .NET 的农业资源管理信息系统研究 ..... 马 超, 赵建军 (587)  
基于 NET 的农产品决策支持系统设计与实现 ..... 谭斯引 (591)  
基于交互式 FOA 算法和服装部件库的三维服装设计 ..... 陆哈翔, 刘晓刚 (595)  
由图结构确定的交换环研究 ..... 单金忻, 王荣荣, 王成敏 (600)  
基于信息流的体系作战效能动态评估 ..... 安 超, 李战武, 常一哲, 等 (604)  
基于高性能嵌入式平台的人体运动目标跟踪技术研究 ..... 崔 杰, 徐从体 (611)  
城郊型农业主导产业优选模型研究  
——以桂林市雁山区为例 ..... 谢兰兰 (616)  
股权众筹融资绩效影响因素的实证研究 ..... 陈 林, 余明阳 (623)  
阿魏酸酯酶的研究与应用进展 ..... 王 丽, 孙钦栋, 王贺祥 (628)  
影响植物富硒因素的研究进展 ..... 朱 薇, 杨守祥, 刘 庆 (636)

期刊基本参数: CN37-1132/S \* 1955 \* b \* A4 \* 160 \* zh \* P \* ¥15.00 \* 800 \* 30 \* 2016-08

# JOURNAL OF SHANDONG AGRICULTURAL UNIVERSITY(NATURAL SCIENCE)

2016 Vol. 47 № 4

## CONTENTS

|   |  |
|---|--|
| Allelopathy of Decomposed Exudates from Broccoli Stalk on Seedlings Growth of Different Vegetables .....                          | ZHANG Xue - peng, NING Tang - yuan, ZHANG Jie - ying, et al. (481) |
| Study on the Regulation of B9 to the Abnormal Flower of <i>Paeonia suffruticosa</i> Andr. ....                                    | LIU Na, QIN An - chen, CHEN Xue, et al. (487)                      |
| Development of Wheat SNP - SSR Markers of 5DL Chromosome .....  | CHEN Fang, LI Wen - jing, DENG Zhi - ying, et al. (494)            |
| Study on Biological Characteristics of <i>Phoma</i> spp. ....   | YANG Ling - yu, WANG Ying, CHENG Ying - hui, et al. (501)          |
| Effect of Different Carbon Sources on Growth and Biochemical Composition of <i>Isochrysis galbana</i> .....                       | WANG Xing - yu, HUANG Xu - xiong (506)                             |
| Isolation and Identification of Tobacco Rhizosphere Phosphate Solubilizing Bacteria and Optimization of Medium .....              | LIU Hu, HOU Zhen, YI Jian - hua, et al. (514)                      |
| Establishment and Application of Multiplex PCR Method for Detection of Three Root Rotting Fungi on Tobacco .....                  | LU Xing - xing, LIU Wei - yang, XU Hou - juan (520)                |
| Molecular Characterization of <i>Pinus</i> spp. Response to the Infection of <i>Bursaphelenchus xylophilus</i> .....              | XU Liang, LIU Zhen - yu, LI Zhong - xin, et al. (525)              |
| The Evaluation on Typical Enterprise Intensive Land Use in Development Zone Based on Grey Relational Model .....                  | ZHANG Yan, WANG Ai - ling, WANG Rui - yan, et al. (531)            |
| Study on the Pollution of Heavy Metal in Soil Based on Statistical Analysis and BP Network .....                                  | SUN Wei - wei, HUANG Ying - xue, ZHANG Jie, et al. (536)           |
| Development for the Power Inspection PDA System Based on GPS Positioning and Navigation .....                                     | WANG Su - zhen, LIU Shu - kun, ZHANG De - hua, et al. (540)        |
| Research and Implementation of S Band Marine Navigation Radar System Based on 3.0 GHz Frequency .....                             | MA Tian - ming (548)   |
| The Application of the High Density Electrical Method and Rayleigh Method in the Subgrade Detection of In - service Highway ..... | WANG Yu - long (553)   |
| The Establishment of the Model of Giant Steel Frame - Concrete Tube Structure .....   | XU Lin (557)   |
| Research on the Dividing Areas of Water Saving Irrigation in Shandong Province Based on Agricultural Standardization .....        | WEI Mei, LIU Fu - sheng, ZHAO Jing - hui, et al. (560)             |
| Development and Application of Water Flow Integrator in Open Channel of Irrigated Area .....                                      | LIU Yu - hai, XIE Qing - hua, FAN Ming - jing, et al. (565)        |
| The Application of Traditional Internal - oriented Space Patterns in Modern Buildings<br>——A case of Hakka Tulou .....            | ZHAO Jun, WANG Xue - yong (569)                                    |
| The Evaluation on the Middle Landscapes around Mount Tai in Tai'an City .....   | YANG Qiao - yun, SUN Shuang, QIN Hua - wei, et al. (573)           |
| Study on the Design for Key Green Roads in Tai'an City .....  | ZHANG Ying, CHEN Dong - tian, HU Rui - yi, et al. (578)            |
| The Verification Method of an Improved Facet Analysis for Online Handwriting Signature .....                                      | SHAO Jin - ping, LI Wen - jie (582)                                |
| Study on the Management Information System of Agricultural Resources Based on GIS and .NET .....                                  | MA Chao, ZHAO Jian - jun (587)                                     |
| Design and Implementation of Decision Support System for Agricultural Products Based on NET .....                                 | TAN Si - yin (591)   |
| 3D Fashions Design Based on Interactive FOA Algorithm and Parts Library .....   | LU Han - xiang, LIU Xiao - gang (595)                              |
| Research on Commutative Ring Determined by the Graph Structure .....  | SHAN Jin - xin, WANG Rong - rong, WANG Cheng - min (600)           |
| Dynamic Evaluation on the Efficiency of Combat System Based on Information Flow .....   | AN Chao, LI Zhan - wu, CHANG Yi - zhe, et al. (604)                |
| Study on Object Tracking Technology of Human Motion Based on the Embedded Platform with High Performance .....                    | CUI Jie, XU Cong - ti (611)  |
| Study on the Optimal Model of Agricultural Leading Industry in Suburb<br>——A case analysis of Yanshan district, Guilin City ..... | XIE Lan - lan (616)  |
| Empirical Analysis on Influence Factors of Funding Performance of Equity Crowdfunding Projects .....                              | CHEN Lin, YU Ming - yang (623)                                     |
| A Review on Research and Applications of Feruloyl Esterase .....  | WANG Li, SUN Qin - dong, WANG He - xiang (628)                     |
| Advances of Factors Influencing Selenium Enrichment in Plants .....   | ZHU Wei, YANG Shou - xiang, LIU Qing (636)                         |

SHANDONG NONGYE  
DAXUE XUEBAO  
(ZIRAN KEXUE BAN)  
2016 Vol.47 No.4



山东农业大学学报  
(自然科学版)  
(双月刊)  
(1955年创刊)  
2016年4月第47卷第4期

JOURNAL OF SHANDONG  
AGRICULTURAL UNIVERSITY  
(NATURAL SCIENCE EDITION)  
(Bimonthly, Started in 1955)  
Vol.47 No.4 Apr. 2016

主办单位: 山东农业大学  
主编: 温孚江 教授  
编辑出版: 山东农业大学学报编辑部  
印刷装订: 泰安农大印刷有限公司  
发 行: 山东农业大学学报编辑部  
(地址: 山东省泰安市 邮编: 271018)  
电子邮件: nongdaxuebao@163.com  
网 址: <http://www.sdau.edu.cn/keyan/xuebao.htm>  
国外发行: 中国出版对外贸易总公司  
(北京399信箱 邮政编码: 100011)

Sponsored by Shandong Agricultural University  
Chief Editor: Wen fu-jiang (Professor)  
Edited by Editorial Department of Journal of Shandong  
Agricultural University  
Printed: Shandong Agricultural University Printing Co., Ltd  
Distribution by Editorial Department of Shandong  
Agricultural University  
E-mail: nongdaxuebao@163.com  
<http://www.sdau.edu.cn/keyan/xuebao.htm>  
(Taian, Shandong Province P.R.China Postcode:271018)

公开发行

国际标准刊号: ISSN 1000-2324  
国内统一刊号: CN37-1132/S

国内定价: 15.00 元  
国外定价: 4.00 美元