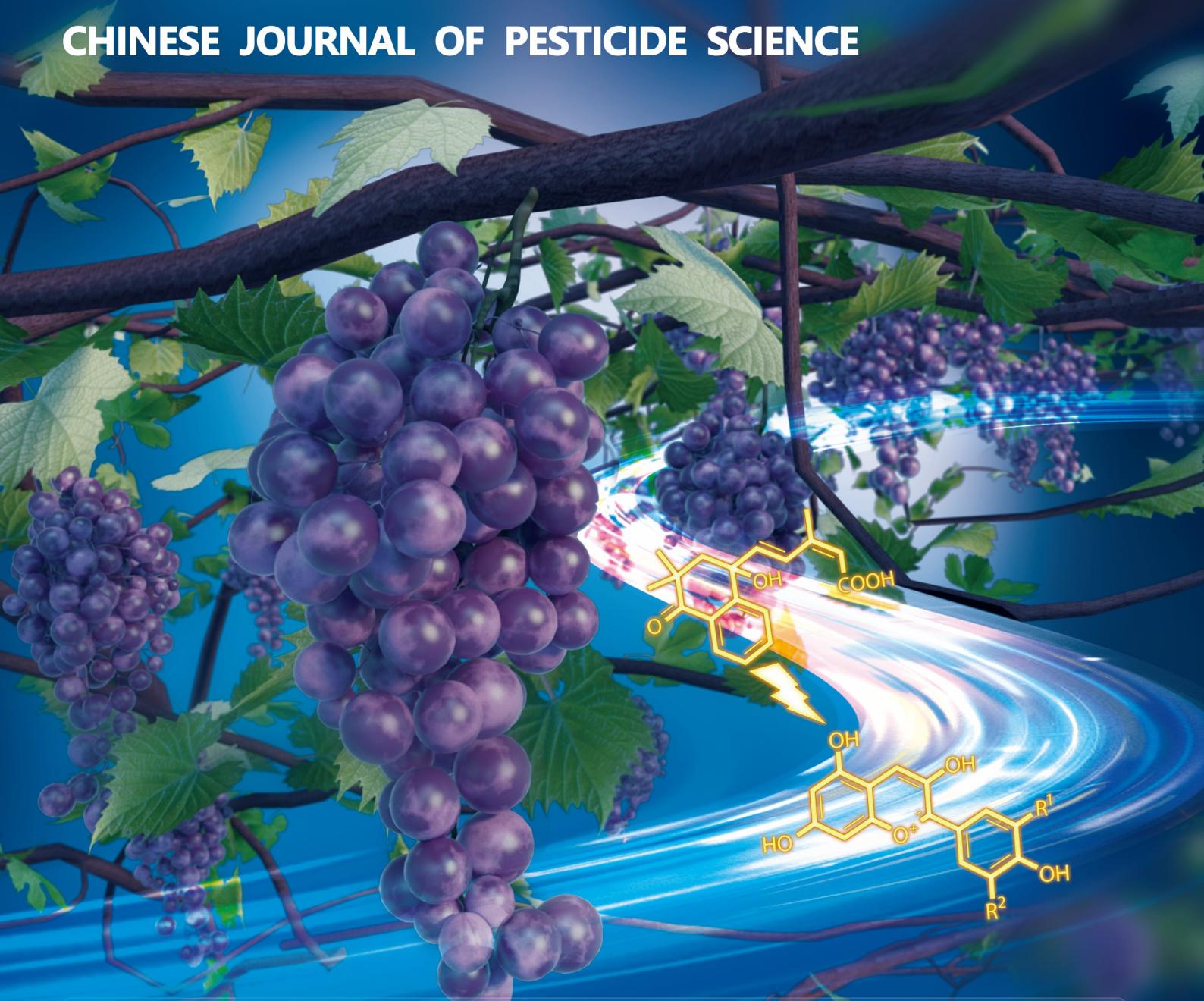


# 农药学学报

CHINESE JOURNAL OF PESTICIDE SCIENCE

3  
Vol. 24



封面文章推介：脱落酸功能类似物萘酮戊酸加速葡萄着色及提升葡萄品质

—p501

ISSN 1008-7303



2022

中国农业大学 主办

# 农药学学报

NONGYAOXUE XUEBAO

第 24 卷 第 3 期 2022 年 6 月

## 目 次

### 专论与综述

- 氟吡呋喃酮及其类似物研究进展 ..... 苏彦豪<sup>#</sup>, 许磊川<sup>#</sup>, 赵 宇, 张 倩, 李益豪, 王明安\*(435)  
植物病原真菌对甾醇脱甲基抑制剂类杀菌剂抗性分子机制研究进展 .....  
..... 刘凤华, 马迪成, 张晓敏, 李 金, 刘 峰\*, 慕 卫\*(452)

### 研究论文

- 三氟羧草醚类似物的合成及除草活性 .....  
..... 赵卓然, 李佳康, 李占斌, 陈 雨, 黄玉乾, 李文琪, 姬志勤, 魏少鹏\*(465)  
致病疫霉对镰菌胺敏感基线的建立及抗性风险评估 .....  
..... 杨 坡, 吴 杰, 路 粉, 赵建江, 毕秋艳, 韩秀英, 李 洋, 王文桥\*(474)  
河南省灰飞虱田间种群对 12 种杀虫剂的抗性现状分析 .....  
..... 蔡玉彪, 窦 涛, 高富涛, 尹新明, 刘向阳\*, 任应党\*(483)  
上海市水稻田千金子对 3 种乙酰辅酶 A 羧化酶抑制剂的抗性现状及酶突变机制 .....  
..... 袁国徽, 田志慧, 高 原, 沈国辉\*(492)  
脱落酸功能类似物萘酮戊酸对葡萄着色与品质提升的影响 .....  
..... 王 涛, 丁珊珊, 韩小强, 张 莉, 汤显军, 李晓斌, 梁更生, 高志成, 李佳奇, 覃兆海\*(501)  
生防枯草芽孢杆菌 HMB19198 发酵培养基的筛选及优化 .....  
..... 曲远航, 郭庆港\*, 李社增, 宣立锋, 张晓云, 马 平(509)  
pH 响应型毒死蜱水凝胶体系的构建及其缓释性能 ..... 查显艳, 侯雪娟, 南 慧, 田 江\*(520)  
植保无人飞机施药防治烟草棉铃虫的可行性和添加助剂倍达通的作用 .....  
..... 刘晓慧, 郭 建, 侯秋强, 刘春明, 杜亚辉, 石 鑫,  
..... 袁亮亮, 黄 坤, 杨代斌, 袁会珠, 闫晓静\*(530)  
20% 异丙甲·苄泡腾片剂的研制及其对稻田杂草的防治效果 .....  
..... 延卫垚, 杨景涵, 马英剑, 秦敦忠, 陈 旺, 陈志洋, 冯建国\*(536)  
羌活提取物微乳剂制备及体外抗真菌活性 ... 张智蕊, 赵 晴, 李宗霖, 寇俊杰, 李 娇, 徐凤波, 李庆山\*(544)  
基于荧光探针技术检测 30 种农兽药及其二元、三元组合对 CYP3A4 酶的联合毒性 .....  
..... 朱新月, 陈立森, 何深贵, 赵 鑫, 程林丽, 崔京南\*(552)

虫螨腈及其代谢物溴代吡咯腈在芥菜上的残留行为与膳食风险评估 .....	孙瑞卿, 王 霞, 任鹏程, 金 静, 李晋栋, 乔雄梧, 秦 曙*(563)
QuEChERS-高效液相色谱-串联质谱法检测吡噻菌胺、肟菌酯及代谢物在番茄中的残留及长期膳食风险评估 .....	李若同, 胡继业*(572)
双唑草腈对3种水生生物的急性毒性及初级生态风险评估 .....	孔玄庆, 蒋 煜, 罗泽伟, 喻 快, 成淑芬, 欧阳文森, 李建明, 金晨钟, 欧晓明*(581)
液相色谱-串联质谱法测定中药材浙八味中30种有机磷农药残留 .....	虞 森, 姚 芳, 张 寒, 王 娇, 齐沛沛, 王新全*(591)
QuEChERS-气相色谱-串联质谱法测定中药材水蛭中73种农药残留 .....	郑坤明 (601)
超高效液相色谱-四极杆-飞行时间质谱法快速筛查香橼中180种农药残留 .....	陈 婷*, 张 文, 刘光瑞, 朱仁愿, 闫 君, 王行智, 戚鹏飞, 陈 敏(610)
加工过程对大米中农药残留影响的萃取分析 .....	王迎鑫, 段锦森, 高庆超, 张志勇, 梁 颖*(621)
农作物病虫害防治农药速查系统构建与应用 .....	邱荣洲, 陈韶萍, 赵 健, 池美香, 林建伟, 黄 婷, 翁启勇*(630)

## 研究简报

粉蝶性信息素(R)-2,6-二甲基-5-庚烯-1-醇的不对称合成 .....	王李锋, 杨宇雄, 原超楠, 王雪扬, 边庆花, 王 敏, 钟江春*(637)
嘧菌酯/聚丙烯腈微球的制备及缓释性能 .....	张钟凯#, 应彩娇#, 程志强, 于晓斌*(643)
唑啉草酯的水解及光解特性 .....	欧 将, 刘开林, 滕玉婷, 曾利红, 张贵群, 聂春林, 欧晓明*(649)
高效阴离子交换-积分脉冲法检测氨基寡糖素农药中游离氨基葡萄糖 .....	陈炜瑶, 吴国权*, 李 彬, 高凡钦(655)

## 相关信息及其他

本期封面文章：脱落酸功能类似物蔡酮戊酸加速葡萄着色及提升葡萄品质(p501-508)；书讯《农药分析化学》(2022年第一版)(p451)；书讯《世界农药大全-杀菌剂卷》(第二版)(p562)；农药分析研究论文中容易混淆的几个术语(后插页)；《农药学学报》编委会名单(后插页)；科学家精神 育人篇-杨石先先生(封二)；新书推荐《农药残留分析原理与方法》(封三)；成都新朝阳作物科学股份有限公司(封底)

注：“#”为并列第一作者；“\*”为通信作者。

期刊基本参数：

CN 11-3995/S \* 1999 \* b \* A4 \* 224 \* zh \* P \* ￥50.00 \* 25 \* 2022-6 \* n

# CHINESE JOURNAL OF PESTICIDE SCIENCE

## (*Chin. J. Pestic. Sci.*)

Vol. 24 No. 3 June 2022

## CONTENTS

### MONOGRAPHS AND REVIEWS

- Recent research progress on flupyradifurone and its analogues .....  
..... SU Yanhao<sup>#</sup>, XU Leichuan<sup>#</sup>, ZHAO Yu, ZHANG Qian, LI Yihao, WANG Ming'an\* (435)
- Research progress on molecular resistance mechanism of plant pathogenic fungi to sterol demethylase inhibitors .....  
..... LIU Fenghua, MA Dicheng, ZHANG Xiaomin, LI Jin, LIU Feng\*, MU Wei\* (452)

### RESEARCH REPORTS

- Synthesis and herbicidal activity of acifluorfen analogues .....  
..... ZHAO Zhuoran, LI Jiakang, LI Zhanbin, CHEN Yu, HUANG Yuqian, LI Wenqi, JI Zhiqin, WEI Shaopeng\* (465)
- Establishment of sensitivity baseline of *Phytophthora infestans* to valifenalate and risk assessment of resistance .....  
..... YANG Po, WU Jie, LU Fen, ZHAO Jianjiang, BI Qiuyan, HAN Xiuying, LI Yang, WANG Wenqiao\* (474)
- Resistance monitoring of the field populations of *Laodelphax striatellus* (Hemiptera: Delphacidae) to twelve insecticides in Henan Province of China ..... CAI Yubiao, DOU Tao, GAO Futao, YIN Xinming, LIU Xiangyang\*, REN Yingdang\* (483)
- Resistance status of *Leptochloa chinensis* to three acetyl-CoA carboxylase (ACCase) inhibitors in rice fields in Shanghai and involved ACCase gene mutations ..... YUAN Guohui, TIAN Zhihui, GAO Yuan, SHEN Guohui\* (492)
- Influence of abscisic acid functional analog natenpac on grape coloring and quality improvement .....  
..... WANG Tao, DING Shanshan, HAN Xiaoqiang, ZHANG Li, TANG Xianjun, LI Xiaobin, LIANG Gengsheng, GAO Zhicheng, LI Jiaqi, QIN Zhaohai\* (501)
- Screening and Optimization of *Bacillus subtilis* HMB19198 fermentation medium .....  
..... QU Yuanhang, GUO Qinggang\*, LI Shezeng, XUAN Lifeng, ZHANG Xiaoyun, MA Ping (509)
- Construction of pH-responsive chlorpyrifos hydrogels system and its controlled-release property .....  
..... ZHA Xianyan, HOU Xuejuan, NAN Hui, TIAN Jiang\* (520)
- Feasibility of the plant protection unmanned aerial vehicle for controlling tobacco bollworm (*Helicoverpa armigera*) and the effect of adjuvant Beidatong ..... LIU Xiaohui, GUO Jian, HOU Qiuqiang, LIU Chunming, DU Yahui, SHI Xin, YUAN Liangliang, HUANG Kun, YANG Daibin, YUAN Huizhu, YAN Xiaojing\* (530)
- Preparation of metolachlor + bensulfuron-methyl 20% effervescent tablets and its control efficacy on weeds in paddy field .....  
..... YAN Weiyao, YANG Jinghan, MA Yingjian, QIN Dunzhong, CHEN Wang, CHEN Zhiyang, FENG Jianguo\* (536)
- Preparation and *in vitro* antifungal activity of *Notopterygii Rhizoma et Radix* extract microemulsion .....  
..... ZHANG Zhirui, ZHAO Qing, LI Zonglin, KOU Junjie, LI Jiao, XU Fengbo, LI Qingshan\* (544)

Detecting the combined toxicity of 30 pesticides and veterinary drugs and their binary and ternary combinations toward CYP3A4 based on fluorescence probe technology .....	ZHU Xinyue, CHEN Lisen, HE Shengui, ZHAO Xin, CHENG Linli, CUI Jingnan <sup>*</sup> (552)
Residue behavior and dietary risk assessment of chlorfenapyr and its metabolite tralopyril in mustard .....	SUN Ruiqing, WANG Xia, REN Pengcheng, JIN Jing, LI Jindong, QIAO Xiongwu, QIN Shu <sup>*</sup> (563)
Residue and chronic dietary risk assessment of penthiopyrad, trifloxystrobin and their metabolites in tomato by QuEChERS-high performance liquid chromatography-tandem mass spectrometry .....	LI Ruotong, HU Jiye <sup>*</sup> (572)
Acute toxicities of pyraclonil to three aquatic organisms and its primary ecological risk assessment .....	KONG Xuanqing, JIANG Yu, LUO Zewei, YU Kuai, CHENG Shufen, OUYANG Wensen, LI Jianming, JIN Chenzhong, OU Xiaoming <sup>*</sup> (581)
Determination of 30 organophosphorus pesticides in eight traditional Chinese medicine in Zhejiang (Zhebawei) by liquid chromatography-tandem mass spectrometry .....	YU Miao, YAO Fang, ZHANG Han, WANG Jiao, QI Peipei, WANG Xinquan <sup>*</sup> (591)
Determination of 73 pesticides in traditional Chinese medicine Hirudo by QuEChERS-gas chromatography-tandem mass spectrometry .....	ZHENG Kunming <sup>*</sup> (601)
Rapid screening of 180 pesticide residues in Fructus Citri by ultra performance liquid chromatography coupled with quadrupole-time of flight mass spectrometry .....	CHEN Ting <sup>*</sup> , ZHANG Wen, LIU Guangrui, ZHU Renyuan, YAN Jun, WANG Xingzhi, QI Pengfei, CHEN Min (610)
Meta-analysis of food processing on pesticide residues in rice .....	WANG Yingxin, DUAN Jinmiao, GAO Qingchao, ZHANG Zhiyong, LIANG Ying <sup>*</sup> (621)
Construction and application of pesticide fast searching system for crop diseases and pests control .....	QIU Rongzhou, CHEN Shaoping, ZHAO Jian, CHI Meixiang, LIN Jianwei, HUANG Ting, WENG Qiyong <sup>*</sup> (630)

## RESEARCH NOTES

Asymmetric synthesis of ( <i>R</i> )-2,6-dimethylhept-5-en-1-ol, sex pheromone of acarid mites, <i>Tyreophagus</i> sp. (Astigmata: Acaridae) ... WANG Lifeng, YANG Yuxiong, YUAN Chaonan, WANG Xueyang, BIAN Qinghua, WANG Min, ZHONG Jiangchun <sup>*</sup> (637)	
Preparation and release properties of azoxystrobin/polyacrylonitrile microspheres .....	ZHANG Zhongkai <sup>#</sup> , YING Caijiao <sup>#</sup> , CHENG Zhiqiang, YU Xiaobin <sup>*</sup> (643)
Hydrolysis and photolysis characteristics of pinoxaden .....	OU Jiang, LIU Kailin, TENG Yuting, ZENG Lihong, ZHANG Guiqun, NIE Chunlin, OU Xiaoming <sup>*</sup> (649)
High performance anion exchange-integral pulse method for detection of free glucosamine in amino-oligosaccharins pesticides .....	CHEN Weiyao, WU Guoquan <sup>*</sup> , LI Bin, GAO Fanqin (655)

Note: <sup>#</sup> Equal contribution. <sup>\*</sup> Corresponding author.