聊城大学学报(自然科学版)

2026 年　　总 目 次　　第 39 卷

·智能控制理论与应用·

基于半张量积方法的绿地灌溉模糊系统设计 …… 周琳超,吕红丽,冯俊娥(1)

基于轻量化孪生网络的小样本轴承故障诊断 …… 王庆楠,陈倩,李涛,涂继辉(11)

使用 YOLOv8-OD 和 DeepSORT 的车辆跟踪算法 …… 童源,费树岷(24)

多代理强化学习驱动遗传算法求解软时间窗电动车路径规划问题 ……

…… 韩玉艳,安俊宇,杨晓宇,王玉亭,李寰,田鑫茹(32)

离散时间模糊 Markov 跳变系统基于区间观测器的故障检测 …… 王淑佳,朱淑倩(159)

基于输出反馈的电动汽车防爆胎固定时间控制 …… 韩之超,刘应霖,王嘉铭,孙宗耀,刘科力,赵军圣(171)

单连杆柔性关节机械臂系统的优化反步跟踪控制 …… 李熙,孙伟,殷县龙(183)

基于端到端深度强化学习的多订单动态柔性作业车间调度方法…… 王旭,李寰,韩玉艳,王玉亭,王雅坤(192)

无人直升机的预定义时间跟踪控制:一种基于时变增益扰动观测器的方法 ……

…… 郝传敏,曹腾,郭宝弟,王玉洁,杨少华(317)

随机环境载荷下的无人艇轨迹跟踪控制 …… 丛如悦,刘迎,李武全(328)

一类基于 Barbalat 引理的非线性系统自适应控制分析 …… 杜正昌,赵军圣(336)

模糊 Sheffer stroke 算子和模糊 Peirce arrow 算子的统一框架 …… 张美萍,张凤霞(346)

融合时序卷积网络与多头自注意力的时间序列预测模型 …… 王嵩巍,孙林(475)

基于融合社交模型的多智能体强化学习导航方法 …… 徐文博,胡春鹤(486)

不确定扰动下传染病传播的动态系统建模与确信可靠性分析 …… 刘雪,刘利英(498)

SX325 走心式数控车床的静动态特性分析及结构优化 …… 王士强,孙群,颜世格,绳立威,徐隆坤(508)

基于 Mamba 模型的可见光-红外-偏振图像融合方法 …… 朱金鹏,姜文博,杜涛(823)

频谱约束潜空间扩散模型及其在多变量时序生成中的应用 ……

…… 王晓涵,田宽,邱义杨,于晓枫,胡欣悦,杨新汝,王永康,罗桂富,杨芳,于旭(833)

基于多尺度的生成对抗网络图像超分辨率重建算法 …… 许宾,王宏兴(847)

基于线段截断与平行约束的点线视觉惯性里程计定位方法 …… 王奇,胡春鹤(855)

动梁定平台式龙门加工中心静动态特性分析及结构优化 …… 宿世涵,徐隆坤,孙群(866)

基于城乡差异化视角的基孔肯雅热最优防控策略分析 …… 谢文清,刘新灵,丁春晓(877)

·光纤通信与信息处理·

弹性光网络中面向提前预约服务请求的生存性感知路由频谱分配算法 …… 孔凌兴,望运武,顾家骅,朱敏(205)

RIS 辅助反向散射通信信道估计与相移优化算法…… 邱友静,徐勇军,唐鹏(217)

基于 DB-GS-Yolo11 的跨域智能无线感知算法 …… 孙海洋,李天成,刘广虎,徐凌伟(224)

优化实时交通流检测:一种将 YOLO 与图像预处理结合的研究 ……

…… 孙嘉豪,邹瑞滨,李和福,高扬,张葳琳,刘沅鑫(238)

联合物理模型和先验的无监督低照度图像增强 …… 刘凌风，梁玉雪，扈成双，张祯，刘鉴朗，邵凯鑫，陈勇(357)
DP-CS-NFDM 系统中频偏与偏振串扰的协同均衡方案……
…… 李旭升，许恒迎，许雅云，张义宁，杨立山，李晓政，庄聪豪(366)
基于二氧化钒的太赫兹超材料多功能吸收器 …… 刘恩博，王明红，吕太国(374)
加载引向器的 SSPPs 超宽带 Vivaldi 天线设计 …… 徐娟，王伟，王俊龙，王建超(382)
基于 GTM-Net 的隐蔽通信系统安全传输性能智能预测方法 …… 程涵冰，方珺，李天成，徐凌伟(518)
含有三参数的广义压缩态及其特性 …… 孟祥国(528)
面向 6G 通信的场调控拓扑超表面太赫兹探测器 …… 许文浩，孙作昂，王文哲，张敏，宋琦(535)
基于协同注意力和特征融合的多类型个人防护装备检测算法 …… 盛耀萱，李烨，张保存，陈洋军，刘庆一(633)
高增益圆极化顺序旋转磁电偶极子天线阵列设计 …… 徐娟，宋逢泽，李冰(643)
基于 CAZAC 序列的相干光通信系统偏振相关损耗时域监测方案 ……
…… 蓝海龙，许恒迎，岳耀政，许雅云，周天硕，张义宁(653)

·新材料与智能制造·

镍离子掺杂 $MnCO_3$ 负极材料的合成及其电化学性能研究 ……
…… 李中宇，李怡暄，徐芳芳，况知凡，甘振鉴，刘红英，王石泉，刘建文(44)
环氧树脂增韧改性及其作用机制研究进展 …… 田战战，徐杨，王海跃，游畅祎，岳鹏帆，李婷，宇平(54)
功能微胶囊的构筑策略及其在涂层中的应用 …… 张佳妮，罗静(64)
SiC_p/Cu 基复合材料性能提升与界面调控优化的研究进展 ……
…… 张云龙，王俊青，张唯一，王伟娥，任晓雪，李成海，翟梓槭，刘德宝(75)
$Ba_{0.66}Sr_{0.34}TiO_3$-CuO 异质结压电光催化协同增强可见光催化性能研究……
…… 范保艳，杨爽，赵妍，刘海波，郭孝宇，王宗花(84)
应力释放对 InGaN/GaN 量子阱有源区发光特性的影响机制 ……
…… 郭一庸，武智波，徐昊一，李长富，高渊，冀子武(249)
生物基环氧树脂 Vitrimer 的制备及其闭环回收特性 …… 郑凯，胡杰，李春琳，刘霖，李成杰，马娟娟(255)
利用废弃电蚊香片制备 Fe_xO_y/C 复合微波吸收材料 …… 力国民，李泽宇，高洁，梁丽萍(263)
聚氨酯基电磁屏蔽材料研究进展 …… 孙嫣然，张中洋，战艳虎(274)
碳材料吸附挥发性有机物的研究进展 …… 米元章，崔龙哲，吕康乐(391)
调控 TiO_2 纳米管阵列管径以增强负载纳米钯催化剂的 Heck 反应性能……
…… 李擎，余行康，董昱，马娟娟，刘霖(404)
无金属 ATRP 调控的聚合物分子刷及其润湿性研究…… 王子岸，李鸿业，潘娜，马国招，王利平，李光(415)
基于稀土掺杂的增材制造钛合金力学性能与微观组织演化机制研究 ……
…… 张云龙，刘德宝，孙鹏飞，王兆彬，王伟娥，任晓雪，李成海，翟梓槭，李海涛(425)
石墨相氮化碳的改性及其在光催化析氢领域的最新进展 ……
…… 方俊亭，张子凡，凡纪鹏，邹菁，吴则星，王海涛(544)
$Bi_2MoO_6/Bi_2Sn_2O_7$ 复合材料的制备及其在畜禽养殖废水处理中的应用 ……
…… 庞子博，李景梅，齐君潇，唐羽胭，张仕川，李彦廷，李秀龙(556)
弹性石墨烯气凝胶热界面材料的制备及性能研究 …… 侯德旺，徐宇泽，郭聪，刘霖，李成杰(565)

不同水热路径制备 MoS_2@Fe_3O_4 复合材料及其吸波性能研究 …… 丁晓，薛培峰，王建国(573)
乙醇光催化转化研究进展 …… 刁明薇，赵振宇，刘一凡，魏振，刘雨溪，邓积光，戴洪兴，敬林(661)
阳离子表面活性剂促进界面反应动力学的机制与前沿进展 …… 段钟钰，韩露，李喜宝(673)
3D 打印脑电图电极的研究进展 …… 魏钟旺，李朋，刘皓(685)
木质素基光学材料的设计与应用 …… 管延华，刘海波，王若男，戴林(696)
可控制备纳米多孔 RuCuAl 合金作为碱性电解水析氢催化剂 ……
…… 解西淼，李倩，杨红晓，郝芹，黄招娣，徐彩霞(708)
C_3N_5-P25 二元量子点敏化 P25 复合材料在光催化还原 Cr(Ⅵ)中的应用 ……
…… 周永航，安兴龙，王敏，冯建光，孙琼(719)
$Cs_3Bi_2Br_xI_{9-x}$ 纳米晶的重结晶法制备及光催化性能探究 …… 刘兆磊，颜培建，孔祥晋(729)
紫外光固化易清洁涂层的制备及性能研究 …… 解旭，周杰，罗静(885)
C_3N_5 基光催化材料的合成、改性及其光催化应用研究进展 …… 赵亦倩，李蕊，刘艳萍，李世杰(896)
Sm^{3+} 掺杂 $BiFeO_3$-$BaTiO_3$ 高温无铅压电陶瓷的制备及性能研究 ……
…… 杨浩然，蒋陶，王芳，李金霞，周治，许嘉赓，陈渝(910)
纳米硅@壳聚糖@沥青核壳复合材料的制备及其锂离子电池负极性能研究 …… 宋旭杰，岳小林，周建华(921)
乙烯键合的三嗪基共价有机框架@TiO_2/$Ti_3C_2O_x$ 异质结的构建及其光催化废弃 PET 重整制氢的研究 …
…… 曹云濠，魏萍，周冰朴，彭超(931)
氮掺杂多孔碳/硫化锌复合材料的制备及电化学性能研究 ……
…… 李怡暄，王石泉，陈泽霖，张浩，张元庆，黄玉，李玲，池汝安，张燕青(941)

·生命科学与医药健康·

基于高低亲和力抗犬 PD-L1 抗体与肿瘤微环境响应性连接子的抗体偶联药物制备及初步性能评估 ……
…… 潘志远，任雨乐，徐进，朱漳帆，庄煌圳，高天宇，陈一，
郭梦慧，刘涛，王晨光，钱卫珠，侯盛，冀芦沙，李军，孙梓乔，王学堃，谢磊，张大鹏，郭怀祖，郭清城(94)
辅酶 Q10 纳米乳的工艺优化及其抗氧化性与体内生物利用率的研究 ……
…… 杨阳，史瑞婕，李明忠，肖爱爱，吴恒乾，蔡金翊，王正平(106)
线粒体电子传递链通过活性氧分子调控干细胞命运的机制及应用 …… 孙玲，陈菲(118)
大麦蔗糖转化酶基因(*HvINVs*)家族鉴定及表达分析 …… 孙会方，全晓艳(127)
海洋自絮凝菌在处理含盐污水中的应用研究 … 秦旭，杨萍，马浩然，田灏冉，田桂芬，樊祥宇，黄兆松(139)
独脚金内酯类似物的合成及其生物活性 …… 贺鸿飞，开林峰，秦超，吕培(148)
ZnS 量子点对米曲霉生长的影响 …… 张晓雨，刘华，李京洋，陈忠(282)
泊沙康唑生物利用度与制剂策略研究 …… 张志浩，吴恒乾，王正平，邬传宇，韩军(290)
新型 IDO 抑制剂的药效团模型构建与对接研究分析 …… 张士营，张安丽，刘雅婷，孙彬(300)
基于水杨酸结构的衍生物合成及其除草活性研究 …… 商金海，刘卓群，刘倩，于蕙珊，范润鹏，李攀(307)
口服固体制剂体外溶出度测试方法的应用探讨 …… 李琰，吴恒乾，王正平，闫秋霖，韩军(438)
基于 RPA-CRISPR/Cas12a 的支原体检测技术在生物药生产中的应用探索 ……
…… 高天宇，郭清城，潘志远，朱漳帆，庄煌圳，任雨乐，
陈一，郭梦慧，刘涛，王晨光，冀芦沙，钱卫珠，侯盛，李军，孙梓乔，王学堃，徐进，张大鹏，郭怀祖(447)

细胞状态对抗 RANKL 抗体报告基因法活性检测的影响及方法优化 …… 朱漳帆，袁海燕，侯盛，郭清城，徐进，张大鹏，李军，庄煌圳，任雨乐，高天宇，潘志远，陈一，郭梦慧，钱卫珠，郭怀祖(457)
幼犬源动物乳杆菌的分离及体外益生功能研究 …… 黄会明，陈梦瑶，赵思雨，宋嘉仪，韩雪，刘庆容，温敏(464)
原位荧光探针技术在作物逆境中的应用进展 …… 徐柏洋，全晓艳(583)
地舒单抗生物类似药 CMAB807 理化特性与功能活性相似性评估 …… 庄煌圳，郭清城，周朝欣，王晨光，范文强，朱漳帆，任雨乐，潘志远，陈一，郭梦慧，刘涛，冀芦沙，钱卫珠，侯盛，李军，孙梓乔，王学堃，张大鹏，郭怀祖，徐进(591)
咖啡酸苯乙酯抑制肺炎克雷伯菌增殖及生物膜形成的分子机制研究 …… 谢瑛琪，高双双，李婷，李宗泽，玄红专(603)
灵芝发酵液对凝固型酸奶品质特性的影响 …… 王会，张静华，黄钰芳，胡梓童，陈芳，孔峰，刘桂芹(614)
魔芋葡甘露聚糖基食品保鲜材料研究进展及产业化挑战与对策 …… 王保平，王月，程萍，张雪，范治平，韩军(622)
延胡索乙素新型给药系统研究进展 …… 徐诗博，符蕤鸯，苏晶晶，苏奕婧，张伟(737)
小麦钙调素结合蛋白基因鉴定与表达分析 …… 唐梦瑶，孙荣华，孙爽，年浩淼，田庚，秦余香(746)
工艺变更后英夫利西单抗生物类似药(CMAB008)在健康中国男性参与者中的生物等效性研究…… 郭梦慧，崔新宇，陈一，吴聪圆，孟迪，王晨光，周朝欣，范文强，冀芦沙，钱卫珠，孙梓乔，王学堃，张大鹏，徐进，郭亚军，郭清城，侯盛，李军(756)
炙甘草汤及其药食同源改良方联合 D-核糖/叶酸抗大鼠房颤的机制研究 …… 吴淑君，睢勇，李延辉，李楠，张令瑄，韩军，王正平(767)
纳米晶药物技术创新、稳定机制与应用研究进展 …… 欧阳振，王利利，张志浩，王正平，韩军(777)
“修复酶启动”的四面体 DNA 框架增强型杂交链式反应回路的构建及在细胞成像中的应用研究 …… 刘海慧，王小雨，刘敏，吴玉姝(789)
Tanespimycin 与小分子化合物联合调控微管蛋白 α-tubulin 乙酰化诱导 A549 细胞凋亡研究…… 朱鲁杰，宋昊，王琪琳(796)
IL-33/ST2 轴调控成脂分化作用与机制的研究进展…… 李成萍(807)
多金属氧酸盐生物活性研究进展 …… 张秋凤，付仕祺，黄现强，侍福梅(815)
拟南芥 *AtHSD* 基因家族的功能研究…… 魏情情，刘晓艺，门淑珍(950)
多肽功能化非标记型电化学生物传感器用于阿尔茨海默症标志物的检测 …… 徐璐，刘晨曦，马芬(961)
蒙古牛肝脏单细胞图谱构建及关键代谢因子筛选 …… 张书茵，Ahmed Zafar，张国丽，董新德，范瑞文(969)
生防菌在烟草青枯病防治中的研究与应用进展…… 凌聪，高娟(978)
玉米六叶期叶片空间梯度特征及其与生物量积累关系的探究 …… 门庆美，卢宪菊，郭尚敬，郭新宇，张颖(993)
奥马珠单抗 α(CMAB007)上市后变更的上游工艺表征与设计空间构建 …… 陈一，郭清城，郭梦慧，崔新宇，吴聪圆，孟迪，王晨光，周朝欣，范文强，冀芦沙，钱卫珠，侯盛，李军，孙梓乔，王学堃，郭亚军，张大鹏，徐进，郭怀祖(1002)

JOURNAL OF LIAOCHENG UNIVERSITY(EDITION NATURAL SCIENCE)

2026 **Contents** **Volume** 39

• Intelligent Control Theory and Applications •

Design of green space irrigation fuzzy system based on semi-tensor product method ····· ZHOU Linchao, LÜ Hongli, FENG June(1)
Few-shot fault diagnosis for bearing based on lightweight siamese networks ····· WANG Qingnan, CHEN Qian, LI Tao, TU Jihui(11)
Vehicle tracking algorithms using YOLOv8-OD and DeepSORT ····· TONG Yuan, FEI Shumin(24)
Multi-agent reinforcement learning-driven genetic algorithm for solving the soft time window electric vehicle routing problem ····· HAN Yuyan, AN Junyu, YANG Xiaoyu, WANG Yuting, LI Huan, TIAN Xinru(32)
Fault detection based on interval observers for discrete-time fuzzy Markov jump systems ····· WANG Shujia, ZHU Shuqian(159)
Output feedback fixed-time control strategy for run-flat tires of electric vehicles ····· HAN Zhichao, LIU Yinglin, WANG Jiaming, SUN Zongyao, LIU Keli, ZHAO Junsheng(171)
Optimized backstepping tracking control for a single-link flexible joint robotic arm system ····· LI Xi, SUN Wei, YIN Xianlong(183)
An end-to-end deep reinforcement learning method for multi-order dynamic flexible job shop scheduling problem ····· WANG Xu, LI Huan, HAN Yuyan, WANG Yuting, WANG Yakun(192)
Predefined-time tracking control of unmanned helicopter: a time-varying gain disturbance observer-based approach ····· HAO Chuanmin, CAO Teng, GUO Baodi, WANG Yujie,YANG Shaohua(317)
Trajectory tracking control of unmanned surface vehicles under stochastic environmental loads ····· CONG Ruyue, LIU Ying, LI Wuquan(328)
Adaptive control analysis of a class of nonlinear systems based on Barbalat's lemma ····· DU Zhengchang,ZHAO Junsheng(336)
A unified framework of fuzzy Sheffer stroke operation and fuzzy Peirce arrow operation ····· ZHANG Meiping, ZHANG Fengxia(346)
Time series prediction model integrating temporal convolutional networks and multi-head self-attention ····· WANG Songwei, SUN Lin(475)
An integrated social-model approach to multi-agent navigation ····· XU Wenbo, HU Chunhe(486)
Dynamic system modeling and belief reliability analysis of infectious disease transmission under uncertainty ····· LIU Xue, LIU Liying(498)
Analysis of static and dynamic characteristics and structural optimization of the SX325 swiss-type CNC lathe ····· WANG Shiqiang, SUN Qun, YAN Shige, SHENG Liwei,XU Longkun(508)
Visible-infrared-polarization image fusion based on Mamba model ····· ZHU Jinpeng, JIANG Wenbo, DU Tao(823)
Spectral-constrained latent diffusion model and its application in multivariate time series generation ····· WANG Xiaohan, TIAN Kuan, QIU Yiyang, YU Xiaofeng, HU Xinyue, YANG Xinru, WANG Yongkang, LUO Guifu, YANG Fang, YU Xu(833)
Multi-scale generative adversarial etwork-based algorithm for image super-resolution reconstruction ····· XU Bin,WANG Hongxing(847)
Point-line visual-inertial odometry localization method based on line segment truncation and parallel constraints ····· WANG Qi, HU Chunhe(855)
Static and dynamic characteristic analysis and structural optimization of a moving-beam fixed-table gantry machining center ····· SU Shihan, XU Longkun, SUN Qun(866)
Based on the urban-rural differentiation perspective: analysis of optimal prevention and control strategies for chikungunya fever ····· XIE Wenqing, LIU Xinling, DING Chunxiao(877)

• Optical Fiber Communication and Information Processing •

A survivable touting and spectrum assignment algorithm for advanced reservation service requests in elastic optical networks ····· KONG Lingxing, WANG Yunwu, GU Jiahua, ZHU Min(205)
Channel estimation and phase-shift ptimization for RIS-assisted backscatter communication ····· QIU Youjing, XU Yongjun, TANG Peng(217)

Intelligent wireless cross-domain sensing algorithm based on DB-GS-Yolo11 ····· SUN Haiyang, LI Tiancheng, LIU Guanghu, XU Lingwei(224)
Optimizing real-time traffic flow detection: an integrated approach combining YOLO with advanced image preprocessing ··· SUN Jiahao, ZOU Ruibin, LI Hefu, GAO Yang, ZHANG Weilin, LIU Yuanxin(238)
Unsupervised low-light image enhancement with joint physical modeling and a priori ····· LIU Lingfeng, LIANG Yuxue, HU Chengshuang, ZHANG Zhen, LIU Jianlan, SHAO Kaixin, CHEN Yong(357)
Synergistic equalization of frequency offset and polarization crosstalk in DP-CS-NFDM systems ··· LI Xusheng, XU Hengying, XU Yayun, ZHANG Yining, YANG Lishang, LI Xiaozheng, ZHUANG Conghao(366)
Multifunctional terahertz metamaterial absorber based on vanadium dioxide ····· LIU Enbo, WANG Minghong, LÜ Taiguo(374)
Design of ultra-wideband Vivaldi antennas for SSPPs loaded with directors ····· XU Juan, WANG Wei, WANG Junlong, WANG Jianchao(382)
Intelligent prediction algorithm of secure transmission performance of covert communication systems based on GTM-Net ··· CHENG Hanbing, FANG Jun, LI Tiancheng, XU Lingwei(518)
New generalized squeezed states with three parameters and their nonclassical behaviors ····· MENG Xiangguo(528)
Field-controlled topological metasurface Terahertz detector for 6G communications ····· XU Wenhao, SUN Zuoang, WANG Wenzhe, ZHANG Min, SONG Qi(535)
A multi-type personal protective equipment detection algorithm based on synergistic attention and feature fusion ····· SHENG Yaoxuan, LI Ye, ZHANG Baocun, CHEN Yangjun, LIU Qingyi(633)
High-gain circularly polarized sequentially rotating magnetoelectric dipole antenna array design ····· XU Juan, SONG Fengze, LI Bing(643)
Polarization-dependent loss time-domain monitoring scheme based on CAZAC sequences for coherent optical communication systems ····· LAN Hailong, XU Hengying, YUE Yaozheng, XU Yayun, ZHOU Tianshuo, ZHANG Yining(653)

• Advanced Materials and Intelligent Manufacturing •

Synthesis of nickel-doped $MnCO_3$ anode and its electrochemical performance ····· LI Zhongyu, LI Yixuan, XU Fangfang, KUANG Zhifan, GAN Zhenjian, LIU Hongying, WANG Shiquan, LIU Jianwen(44)
Research progress on toughening modification of epoxy resin and their mechanism ····· TIAN Zhanzhan, XU Yang, WANG Haiyue, YOU Changyi, YUE Pengfan, LI Ting, YU Ping(54)
Construction strategies of functional microcapsules and their application in coatings ····· ZHANG Jiani, LUO Jing(64)
Research progress on performance improvement and interface control optimization of SiC_p/Cu matrix composites ····· ZHANG Yunlong, WANG Junqing, ZHANG Weiyi, WANG Weie, REN Xiaoxue, LI Chenghai, ZHAI Ziyu, LIU Debao(75)
Study on the piezo-photocatalytic synergy in $Ba_{0.66}Sr_{0.34}TiO_3$-CuO heterojunction for enhanced visible-light catalytic performance ··· FAN Baoyan, YANG Shuang, ZHAO Yan, LIU Haibo, GUO Xiaoyu, WANG Zonghua(84)
Mechanism of strain relaxation effects upon luminescence characteristics of InGaN/GaN quantum well active regions ····· GUO Yiyong, WU Zhibo, XU Haoyi, LI Changfu, GAO Yuan, JI Ziwu(249)
Preparation of bio-based epoxy resin Vitrimer and its closed-loop recycling characteristics ····· ZHENG Kai, HU Jie, LI Chunlin, LIU Lin, LI Chengjie, MA Juanjuan(255)
Preparation of Fe_xO_y/C composite microwave absorbing materials from discarded vaporizing mats ····· LI Guomin, LI Zeyu, GAO Jie, LIANG Liping (263)
Research progress of polyurethane-based electromagnetic shielding materials ····· SUN Yanran, ZHANG Zhongyang, ZHAN Yanhu(274)
Progress on the adsorption of volatile organic compounds by carbon materials ····· MI Yuanzhang, CUI Longzhe, LÜ Kangle(391)
Tuning the diameter of TiO_2 nanotube arrays to enhance the Heck reaction performance of supported nano palladium catalysts ····· LI Qing, YU Xingkang, DONG Yu, MA Juanjuan, LIU Lin(404)
Study on polymer brushes controlled by metal-free ATRP and their wettability ····· WANG Zi'an, LI Hongye, PAN Na, MA Guozhao, WANG Liping, LI Guang(415)
The effect of rare earth doping on the mechanical properties and microstructure evolution mechanism of additively manufactured titanium alloys ····· ZHANG Yunlong, LIU Debao, SUN Pengfei, WANG Zhaobin, WANG Weie, REN Xiaoxue, LI Chenghai, ZHAI Ziyu, LI Haitao(425)
Recent progress in modification strategies of graphitic carbon nitride and their applications for photocatalytic hydrogen evolution ····· FANG Junting, ZHANG Zifan, FAN Jipeng, ZOU Jing, WU Zexing, WANG Haitao(544)
Preparation of Bi_2MoO_6/$Bi_2Sn_2O_7$ composite and its application in treating livestock wastewater ····· PANG Zibo, LI Jingmei, QI Junxiao, TANG Yuyan, ZHANG Shichuan, LI Yanting, LI Xiulong(556)

Preparation and properties of elastomeric graphene aerogel thermal interface materials ····· HOU Dewang, XU Yuze, GUO Cong, LIU Lin, LI Chengjie(565)
Study on preparation and microwave absorption performance of MoS_2@Fe_3O_4 composite prepared by different hydrothermal routes ····· DING Xiao, XUE Peifeng, WANG Jianguo(573)
Recent advances in photocatalytic ethanol conversion ····· DIAO Mingwei, ZHAO Zhenyu, LIU Yifan, WEI Zhen, LIU Yuxi, DENG Jiguang, DAI Hongxing, JING Lin(661)
Cationic surfactants for interfacial reaction kinetics: mechanistic insights and emerging advances ····· DUAN Zhongyu, HAN Lu, LI Xibao(673)
Research progress of 3D-printed EEG electrodes ····· WEI Zhongwang, LI Peng, LIU Hao(685)
Design and applications of lignin-based optical materials ····· GUAN Yanhua, LIU Haibo, WANG Ruonan, DAI Lin(696)
Controllable preparation of nano-porous RuCuAl alloy for alkaline hydrogen evolution ····· XIE Ximiao, LI Qian, YANG Hongxiao, HAO Qin, HUANG Zhaodi, XU Caixia(708)
Application of C_3N_5-P25 binary quantum dots sensitized P25 composite materials in photocatalytic reduction of Cr(VI) ····· ZHOU Yonghang, AN Xinglong, Wang Min, FENG Jianguang, SUN Qiong(719)
Study on the recrystallization preparation and photo-catalytic performance of $Cs_3Bi_2Br_xI_{9-x}$ nanocrystals ····· LIU Zhaolei, YAN Peijian, KONG Xiangjin(729)
Preparation and performance study of UV-curable easy-to-clean coatings ····· XIE Xu, ZHOU Jie, LUO Jing(885)
Progress in the synthesis, modification and photocatalysis applications of C_3N_5-based photocatalytic materials ····· ZHAO Yiqian, LI Rui, LIU Yanping, LI Shijie(896)
Preparation and properties of Sm^{3+}-doped $BiFeO_3$-$BaTiO_3$ high-temperature lead-free piezoelectric ceramics ····· YANG Haoran, JIANG Tao, WANG Fang, LI Jinxia, ZHOU Zhi, XU Jiageng, CHEN Yu(910)
Preparation and lithium-ion battery anode performance of nano-Si@chitosan@pitch core-shell composite materials ····· SONG Xujie, YUE Xiaolin, ZHOU Jianhua(921)
Construction of ethylene-bridged triazine-based COF@TiO_2/$Ti_3C_2O_x$ heterojunctions for photocatalytic hydrogen production via waste PET reforming ····· CAO Yunhao, WEI Ping, ZHOU Bingpu, PENG Chao(931)
Synthesis of nitrogen-doped porous carbon and zinc sulfide composite and its electrochemical performance ····· LI Yixuan, WANG Shiquan, CHEN Zelin, ZHANG Hao, ZHANG Yuanqing, HUANG Yu, LI Ling, CHI Ru'an, ZHANG Yanqing(941)

• Life Sciences and Medicine Health •

Preparation and preliminary evaluation of antibody-drug conjugates targeting canine PD-L1 using high/low affinity anti-PD-L1 antibodies and tumor microenvironment-responsive linkers ····· PAN Zhiyuan, REN Yule, XU Jin, ZHU Weifan, ZHUANG Huangzhen, GAO Tianyu, CHEN Yi, GUO Menghui, LIU Tao, WANG Chenguang, QIAN Weizhu, HOU Sheng, JI Lusha, LI Jun, SUN Ziqiao, WANG Xuekun, XIE Lei, ZHANG Dapeng, GUO Huaizu, GUO Qingcheng(94)
Optimization of preparation process of coenzyme Q10 nanoemulsion and investigation of its antioxidant activity and bioavailability ····· YANG Yang, SHI Ruijie, LI Mingzhong, XIAO Aiai, WU Hengqian, CAI Jinyi, WANG Zhengping(106)
The mechanism and applications of mitochondrial electron transport chain in regulating stem cell fate through reactive oxygen species ····· SUN Ling, CHEN Fei(118)
Identification and expression analysis of barley sucrose invertase genes (*HvINVs*) family ····· SUN Huifang, QUAN Xiaoyan(127)
The application of marine self-flocculating bacteria in the treatment of saline wastewater ····· QIN Xu, YANG Ping, Ma Haoran, TIAN Haoran, TIAN Guifen, FAN Xiangyu, HUANG Zhaosong(139)
Synthesis and bioactivity of strigolactone analogues ····· HE Hongfei, KAI Linfeng, QIN Chao, LÜ Pei(148)
The effect of ZnS quantum dots on the growth of *Aspergillus oryzae* ····· ZHANG Xiaoyu, LIU Hua, LI Jingyang, CHEN Zhong(282)
Research on the Bioavailability and formulation strategy of posaconazole ····· ZHANG Zhihao, WU Hengqian, WANG Zhengping, WU Chuanyu, HAN Jun(290)
Pharmacophore model construction and docking study analysis of novel IDO inhibitors ····· ZHANG Shiying, ZHANG Anli, LIU Yating, SUN Bin(300)
The study on synthesis of salicylic acid derivatives and their herbicidal activity ····· SHANG Jinhai, LIU Zhuoqun, LIU Qian, YU Yishan, FAN Runpeng, LI Pan(307)
Discussion on the application of *in vitro* dissolution test method for oral solid dosage forms ····· LI Yan, WU Hengqian, WANG Zhengping, Yan Qiulin, HAN Jun(438)
Exploration of RPA-CRISPR/Cas12a-based *mycoplasma* detection technology for application in biopharmaceutical production ····· GAO Tianyu, GUO Qingcheng, PAN Zhiyuan,

ZHU Weifan, ZHUANG Huangzhen, REN Yule, CHEN Yi, GUO Menghui, Liu Tao, WANG Chenguang, JI Lusha, QIAN Weizhu, HOU Sheng, LI Jun, SUN Ziqiao, WANG Xuekun, XU Jin, ZHANG Dapeng, GUO Huaizu(447)
Impact of cellular states on the activity detection of anti-RANKL antibody using a reporter gene assay: method optimization ····· ZHU Weifan, YUAN Haiyan, HOU Sheng, GUO Qingcheng, XU Jin, ZHANG Dapeng, LI Jun, ZHUANG Huangzhen, REN Yule, GAO Tianyu, PAN Zhiyuan, CHEN Yi, GUO Menghui, QIAN Weizhu, GUO Huaizu(457)
Isolation and *in vitro* assessment of probiotic properties of *Lactobacillus animalis* isolated from puppies ····· HUANG Huiming, CHEN Mengyao, ZHAO Siyu, SONG Jiayi, HAN Xue, LIU Qingrong, WEN Min(464)
Progress in the application of in situ fluorescence probe technology in crop adversity ····· XU Boyang, QUAN Xiaoyan(583)
Analytical and functional similarity assessment of denosumab biosimilar CMAB807 ····· ZHUANG Huangzhen, GUO Qingcheng, ZHOU Chaoxin, WANG Chenguang, FAN Wenqiang, ZHU Weifan, REN Yule, PAN Zhiyuan ,CHEN Yi, GUO Menghui, LIU Tao, JI Lusha, QIAN Weizhu , HOU Sheng, LI Jun, SUN Ziqiao, WANG Xuekun, ZHANG Dapeng, GUO Huaizu, XU Jin(591)
Study on the molecular mechanism of caffeic acid phenethyl ester inhibiting the proliferation and biofilm formation of *Klebsiella pneumoniae* ····· XIE Yingqi, GAO Shuangshuang, LI Ting, LI Zongze, XUAN Hongzhuan(603)
Effect of *Ganoderma lucidum* fermentation broth on the quality characteristics of set yogurt ····· WANG Hui, ZHANG Jinghua, HUANG Yufang, HU Xintong, CHEN Fang, KONG Feng, LIU Guiqin(614)
Research progress and industrialization challenges and strategies for konjac glucomannan-based food preservation materials ····· WANG Baoping, WANG Yue, CHENG Ping, ZHANG Xue, FAN Zhiping, HAN Jun(622)
Research progress on tetrahydropalmatine novel drug delivery systems ····· XU Shibo, FU Ruisi, SU Jingjing, SU Yijing, ZHANG Wei(737)
Identification and expression analysis of calmodulin binding protein gene in wheat ····· TANG Mengyao, SUN Ronghua, SUN Shuang, NIAN Haomiao, TIAN Geng, QIN Yuxiang(746)
A bioequivalence study of the post-change infliximab biosimilar CMAB008 in healthy Chinese male participants ····· GUO Menghui, CUI Xinyu, CHEN Yi, WU Congyuan, MENG Di, WANG Chenguang, ZHOU Chaoxin, FAN Wenqiang, JI Lusha, QIAN Weizhu, SUN Ziqiao, WANG Xuekun, ZHANG Dapeng, XU Jin, GUO Yajun, GUO Qingcheng, HOU Sheng, LI Jun(756)
Zhigancao decoction and its medicinal-food homo-logous formula combined with D-ribose/folic acid against atrial fibrillation in rats ····· WU Shujun, SUI Yong, LI Yanhui, LI Nan, ZHANG Lingxuan, HAN Jun, WANG Zhengping(767)
Advances in nanocrystal drug: technological innovations, stabilization mechanisms, and applications ····· OUYANG Zhen, WANG Lili, ZHANG Zhihao, WANG Zhengping, HAN Jun(777)
Construction of a "repair enzyme-initiated" tetrahedral DNA framework-enhanced hybridization chain reaction circuit and its application in cellular imaging research ····· LIU Haihui, WANG Xiaoyu, LIU Min, WU Yushu(789)
Combined effects of tanespimycin with other small molecule drugs on apoptosis induction in A549 cells by modulating α-tubulin acetylation ····· ZHU Lujie, SONG Hao, WANG Qilin(796)
Research progress on the roles and mechanism of IL-33/ST2 axis in regulating adipogenic differentiation ····· LI Chengping(807)
Research progress on the biological activities of polyoxometalates ····· ZHANG Qiufeng, FU Shiqi, HUANG Xianqiang, SHI Fumei(815)
Functional studies of the *AtHSD* gene family in *Arabidopsis thaliana* ····· WEI Qingqing, LIU Xiaoyi, MEN Shuzhen(950)
Study on the detection of alzheimer's disease using peptide-functionalized electrochemical sensors ····· XU Lu, LIU Chenxi, MA Fen(961)
Construction of a single-cell atlas of Mongolian cattle liver and screening of key metabolic factors ····· Zhang Shuyin, Ahmed Zafar, Zhang Guoli, Dong Xinde, Fan Ruiwen(969)
Research and applications of biocontrol agents in the management of tobacco bacterial wilt ··· LING Cong, GAO Juan(978)
Spatial gradient characteristics of maize leaves at the V6 stage and their relationship with biomass accumulation ····· MEN Qingmei, LU Xianju, GUO Shangjing, GUO Xinyu, ZHANG Ying(993)
Upstream process characterization and design space for post-approval change of omalizumab α (CMAB007) ····· CHEN Yi, GUO Qingcheng, GUO Menghui, CUI Xinyu, WU Congyuan, MENG Di , WANG Chenguang, ZHOU Chaoxin, FAN Wenqiang, JI Lusha, QIAN Weizhu, HOU Sheng, LI Jun, SUN Ziqiao, WANG Xuekun, GUO Yajun, ZHANG Dapeng, XU Jin, GUO Huaizu(1002)