



目 次

• 轻工科学与工程 •

- PNIPAM/Fe³⁺/CNF-c 复合水凝胶的制备及其驱动性能研究 刘国栋, 徐 颖, 李志健, 等(1)
AlN/CF/PVDF 复合材料的结构与导热及介电性能研究 田 睿, 王海军(8)
腐殖酸对磷石膏中水溶态磷的吸附行为及其缓释效应 赵串串, 邓 同, 王竞铮, 等(16)

- 含有苯环结构的 PBAT 微塑料生物降解对土壤微生物群落结构的影响 李成涛, 吴婉晴, 梁右才, 等(22)
六种典型植物对排污口周边河床土壤 Cd 污染的修复研究 李静宇, 熊奉奎, 党秀丽(31)

• 食品科学与生物工程 •

- 柠檬酸对食用菌腐败菌的抑制作用及其作用机制 夏 飞, 张处处, 武子宁, 等(40)
乳及乳制品中羊乳铁蛋白含量的电泳迁移检测 王云娜, 何 悅, 孙娜娜, 等(46)
茯茶山楂降脂含片的制备工艺及其降脂作用研究 孙 颖, 王 慧, 杨文娟, 等(51)
基于网络药理学和分子对接技术的含笑内酯缓解痛风性关节炎作用机制研究 王 冰, 王 兰, 秦向阳(59)

• 化学与化学工程 •

- 可见光催化环丙基苯胺的[3+2]环化加成反应研究 张晓斐, 王 尧, 刘佳鑫, 等(68)
静电纺聚偏二氟乙烯纤维膜的制备及其在油水分离中的应用 杨 冬, 杨凯棣, 贾彤彤, 等(78)

- 纳米二氧化硅基虹彩膜的设计与表征 迟聪聪, 线佳荣, 白飞飞, 等(88)
- 活性物种钴周围化学环境对钴@碳基电催化剂析氢析氧活性的影响 王 婷, 李军奇, 张贝祎, 等(94)
- 氮杂环卡宾-铜配合物在有机催化反应中的应用研究进展 杨秀芳, 张晨阳, 张 金, 等(103)
- 材料科学与工程 •
- Glass-SiB₆ 涂层在 1 573 K 下的氧化行为研究 曹丽云, 袁 梦, 黄剑锋, 等(115)
- CoTiO₃/g-C₃N₄ 复合材料的醇敏醛敏双功能特性研究 卢 靖, 张 颖, 王亚军, 等(120)
- 高含量吡啶氮修饰的碳纳米管包覆 Ni₃ZnC_{0.7}/Ni 异质纳米粒子用作高效析氢电催化剂研究 尹红艳, 冯亮亮, 付常乐, 等(126)
- Li_xLa_{0.57}TiO₃ 固体电解质的制备及其性能研究 韦晗丹, 邵 亮, 李蓓君, 等(134)
- 二维 MXene 材料热输运性质的分子动力学模拟研究 汪 鑫, 安 盟, 陈海峰(141)
- 机械、电气工程与信息科学 •
- 室外动态场景图的构建及其三维重建方法研究 李 健, 康景尧, 杨 钧, 等(147)
- 基于改进 U-Net 网络的光伏板图像分割方法 任喜伟, 韩 欣, 钟 弈, 等(155)
- 基于改进 YOLOv5 的钢材表面缺陷检测 吴 敌, 李明辉, 马文凯, 等(162)
- 基于偏移角与欧式距离的声波驱动微粒控制算法 杨 豪, 杜晓刚, 张 衡, 等(170)
- 基于二值网络的自动驾驶目标检测方法 吴岳敏, 孙圣鑫, 王小龙, 等(176)
- 基于 ICS-INC 的局部阴影下光伏最大功率点追踪研究 朱娟娟, 刘新宇, 闫群民, 等(184)
- 基于 AlphaPose 模型的远距离行人头部姿态估计算法 赵思源, 彭春蕾, 张 云, 等(191)
- 基于注意卷积模块的遥感图像场景分类应用 王李祺, 高 翔, 程 蓉, 等(199)
- 物理与数学科学 •
- 基于信息熵加权的多视图子空间聚类算法 李顺勇, 许晓丽(207)



Journal of Shaanxi University of Science & Technology

Published on Apr. 25. 2023

Vol. 41 No. 2 Sum No. 207

CONTENTS

- Study on preparation and actuating performance of PNIPAM/Fe³⁺/CNF-c composite hydrogel
..... LIU Guo-dong, XU Ying, LI Zhi-jian, et al(1)
- Study on the structure, thermal conductivity and dielectric properties of AlN/CF/PVDF composites
..... TIAN Rui, WANG Hai-jun(8)
- Adsorption behaviour of humic acid on water-soluble phosphorus in phosphogypsum and its slow release effect ZHAO Chuan-chuan, DENG Tong, WANG Jing-zheng, et al(16)
- Effects of biodegradation of PBAT microplastics with benzene ring structure on soil microbial community structure LI Cheng-tao, WU Wan-qing, LIANG You-cai, et al(22)
- Study on remediation of Cd pollution in riverbed soil around sewage outfall by six typical plants
..... LI Jing-yu, XIONG Feng-kui, DANG Xiu-li(31)
- Antibacterial effect and mechanism of citric acid on spoilage bacteria of edible mushroom
..... XIA Fei, ZHANG Chu-chu, WU Zi-ning, et al(40)
- Determination of goat lactoferrin in milk and dairy products by electrophoretic mobility shift assay ...
..... WANG Yun-na, HE Yue, SUN Na-na, et al(46)
- Study on the technology of making fuzhuan tea fructus crataegi tablet and its effects on lowering lipids
..... SUN Ying, WANG Hui, YANG Wen-juan, et al(51)
- Study on mechanism of micheliolide in alleviating gouty arthritis based on network pharmacology and molecular docking technology WANG Bing, WANG Lan, QIN Xiang-ying(59)
- Study on visible-light-induced [3+2] cycloaddition of cyclopropylaniline
..... ZHANG Xiao-fei, WANG Yao, LIU Jia-xin, et al(68)
- Synthesis of electrospun PVDF nanofibrous membrane and its application in oil-water separation
..... YANG Dong, YANG Kai-di, JIA Tong-tong, et al(78)
- Design and characterization of nano-SiO₂ based iridescent films
..... CHI Cong-cong, XIAN Jia-rong, BAI Fei-fei, et al(88)
- Effect of chemical environment around active species cobalt on the hydrogen and oxygen precipitation ac-

tivity of cobalt@carbon based electrocatalysts	WANG Ting , LI Jun-qi , ZHANG Bei-yi , et al(94)
Research progress on application of N-heterocyclic carbene-copper complexes in organocatalytic reactions	YANG Xiu-fang , ZHANG Chen-yang , ZHANG Jin , et al(103)
Study on oxidation behavior of Glass-SiB ₆ coating at 1 573 K	CAO Li-yun , YUAN Meng , HUANG Jian-feng , et al(115)
Study on bifunctional properties of CoTiO ₃ /g-C ₃ N ₄ composites with alcohol and aldehyde sensitivity	LU Jing , ZHANG Ying , WANG Ya-jun , et al(120)
Study on Ni ₃ ZnC _{0.7} /Ni heterogeneous nanoparticles coated with high-content pyridine-nitrogen decorated carbon nanotubes as efficient H ₂ -evolution electrocatalysts	YIN Hong-yan , FENG Liang-liang , FU Chang-le , et al(126)
Study on preparation and performance of Li _x La _{0.57} TiO ₃ solid electrolyte	WEI Han-dan , SHAO Liang , LI Bei-jun , et al(134)
Study on molecular dynamics simulation of thermal transport properties in two-dimensional MXene materials	WANG Xin , AN Meng , CHEN Hai-feng(141)
Research on construction of outdoor dynamic scene graphs and 3D reconstruction method	LI Jian , KANG Jing-yao , YANG Jun , et al(147)
Photovoltaic panel image segmentation method based on improved U-Net network	REN Xi-wei , HAN Xin , ZHONG Yi , et al(155)
Surface defect detection of steel based on improved Yolov5	WU Di , LI Ming-hui , MA Wen-kai , et al(162)
Acoustic manipulation particle control algorithm based on the offset angle and Euclidean distance	YANG Hao , DU Xiao-gang , ZHANG Heng , et al(170)
Automatic driving object detection method based on binary network	WU Yue-min , SUN Sheng-xin , WANG Xiao-long , et al(176)
Research on photovoltaic maximum power point tracking under local shadow based on ICS-INC	ZHU Juan-juan , LIU Xin-yu , YAN Qun-min , et al(184)
Algorithm for long-range pedestrian head pose estimation based on AlphaPose model	ZHAO Si-yuan , PENG Chun-lei , ZHANG Yun , et al(191)
Classification application of remote sensing image scene based on the attention convolution module ...	WANG Li-qi , GAO Xiang , CHENG Rong , et al(199)
Multi-view subspace clustering algorithm based on information entropy weighting	LI Shun-yong , XU Xiao-li(207)