

# 农业环境科学学报

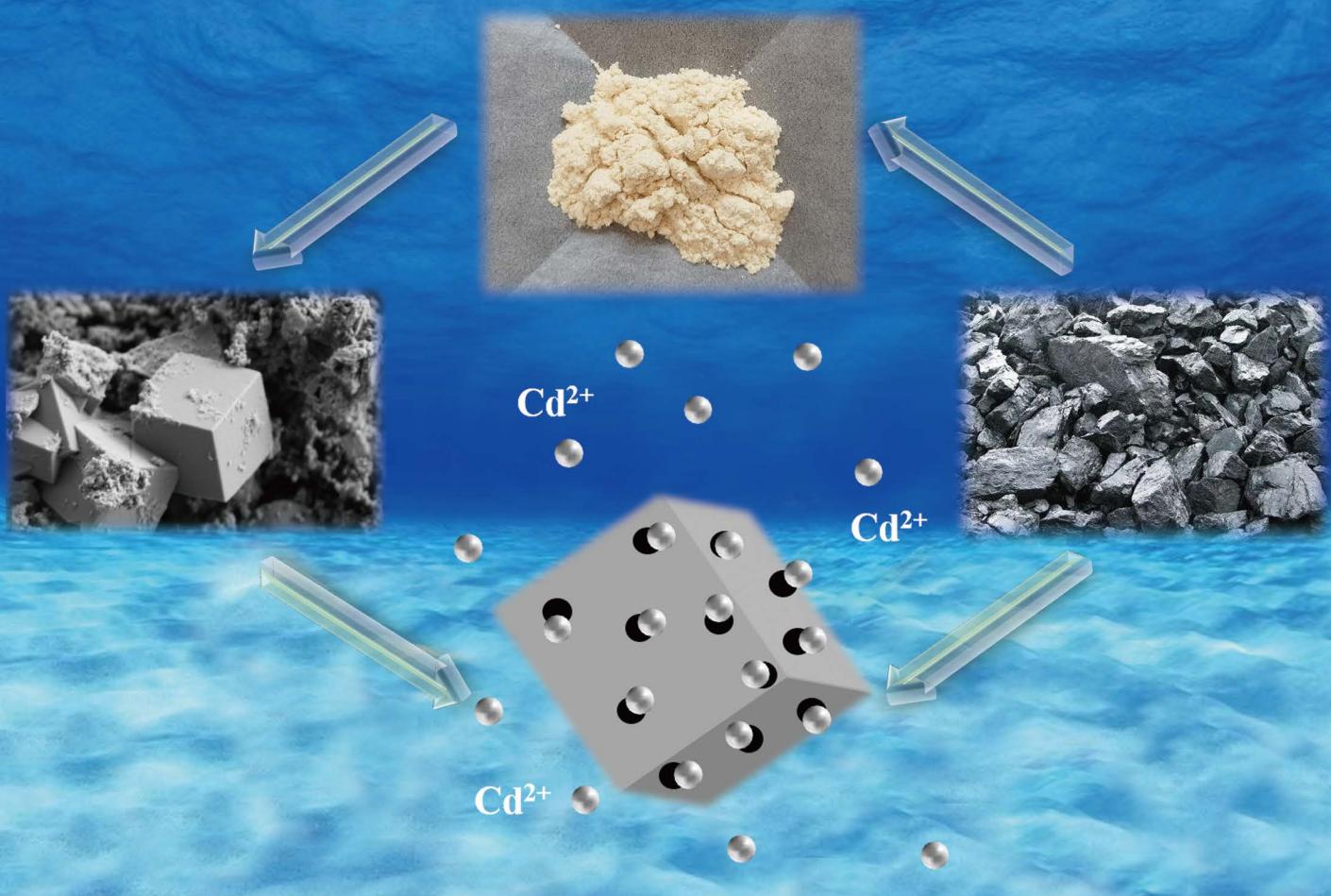
JOURNAL OF AGRO-ENVIRONMENT SCIENCE

中文核心期刊  
CODEN NHKXA7

## 封面文章

### 煤基NaA分子筛材料的合成及其对Cd<sup>2+</sup>的吸附

刘甜, 郭军康, 张蕾, 王孜昊, 喻先伟, 王家圆, 毕江涛



2023年2月

第42卷 第2期  
Vol.42 No.2



主办: 农业农村部环境保护科研监测所  
中国农业生态环境保护协会



## 专论与综述

- 《农业环境科学学报》2022年刊出论文简评 ..... 蔡祖聪(237)  
我国农业农村减排固碳标准现状与体系构建 ..... 霍丽丽 姚宗路 赵立欣 罗娟 张沛祯 张心怡(242)  
丛枝菌根真菌修复重金属污染土壤及增强植物耐性研究进展 ..... 苗志加 孟祥源 李书缘 马超 李晴 安贺銮 赵鑫 赵志瑞(252)

## 环境健康与农产品安全(农业农村部产地环境污染防治重点实验室协办)

- 微塑料与镉及其复合对小麦种子发芽的影响 ..... 王晓晶 杨毅哲 曹阳 张东明 代允超 吕家珑(263)  
施氮、锌对镉污染小麦产量及籽粒锌、镉含量的影响 ..... 陈旺 户少武 罗景升 李通 田超 何富豪 顾珈名 景立权 王云霞 杨连新(274)  
土壤外源铬的作物毒性响应及富集差异研究 ..... 徐国豪 刘英豪 常明慧 韩雪梅 李士伟 马义兵 李合莲(284)  
砷在铜藻中的亚细胞分布及细胞壁吸附作用研究 ..... 张鹏 刘玮 王朋云 王铁杆 钟晨辉 陶月良(291)  
红树林退化对微塑料表面细菌群落特征的影响 ..... 李大圳 章宇晴 付茜茜 陈海鹰 邓惠 葛成军(299)  
镉、铅、锌复合胁迫对滇杨幼苗富集及转运镉的影响 ..... 王艳霞 郑武扬 侯磊 何承忠 郎爽 岩肖明 李思泽(310)

## 土壤环境(中国土壤学会土壤环境专业委员会协办)

- 施加钝化剂及叶面肥对大田小麦-玉米轮作Cd吸收转运的影响 ..... 曹阳 李撑娟 王辉 代允超 孙本华 张东明 王晓晶 吕家珑(319)  
成都平原西缘典型水稻土壤风险元素及磷、硒来源解析与评价 ..... 张峻基 施泽明 廖容 王钰 王新宇(327)  
高低硅秸秆生物炭的表征及对Cd<sup>2+</sup>的吸附特性与机理 ..... 谭丹 王衡 梅闻 邹礼阳 蔡昆争(339)  
镧改性生物炭在砂柱中单独运移及与Cr(VI)共运移 ..... 顾鑫锋 潘慧 张连毅 丁竹红(352)  
左氧氟沙星在铁氧化物表面的吸附:动力学和pH的影响 ..... 刘自超 任亚男 周文静 刘春晖 李孜娴 杨金康 孙齐状 王龙 赵鹏(362)  
翻压紫云英水稻土游离氨基酸动态及剖面分异 ..... 杨静 鲍清涛 邢世和 周碧青 张黎明 杨文浩(373)  
石灰性农田土壤-水稻系统根际与非根际土氮转化速率差异 ..... 何晓茜 刘汐霓 黄宇潇 兰婷(384)  
植酸对碳酸盐绿锈转化的影响 ..... 孙亚丽 姜冠杰 江睿 兰帅 李阳 严玉鹏 张瑛(393)  
降水变化和氮沉降对荒漠草原土壤细菌群落结构及酶活性的影响 ..... 图纳热 红梅 闫瑾 叶贺 梁志伟 王占海(403)  
氮素形态与温度对鲁西沙区林地土壤有机碳矿化的交互作用 ..... 陈庆海 陶宝先 商玉冰 占敏 李合印 李甘霖 李艳春(414)

## 水体环境

- 铁基生物炭海绵与沉水植物协同净化水体中的氮磷 ..... 王 港 陈 丹 李江舟 张翠萍 纳红艳 代 快 杨肖娥(424)  
稻虾共作水域沉积物有机磷农药残留特征及其对磷循环驱动机制  
..... 瞿梦洁 韩玉成 万智鹏 谭 艳 安珈奇 梅运军 刘广龙(434)

## 废弃物处理及资源化利用

- 煤基NaA分子筛材料的合成及其对Cd<sup>2+</sup>的吸附 ..... 刘 甜 郭军康 张 蕾 王孜昊 喻先伟 王家圆 毕江涛(443)  
休耕田对水产养殖废水抗生素去除及风险评估 ..... 聂正鑫 蒋芷榆 刘燕青 曹 美 李先宁(451)  
猪粪厌氧消化进程中雌激素的去除效能及机制 ..... 庄 捷 赵斌成 薛锦辉 张文艺(461)

## 农业与全球变化

- 增温条件下施硅对稻田CH<sub>4</sub>厌氧氧化过程的影响 ..... 谢 晴 薛梦琪 周 聪 张耀鸿 娄运生 高霄鹏 贾仲君(472)

## 环境信息

本期推介文章作者团队:陕西科技大学环境科学与工程学院 郭军康 陕西省土壤污染修复与尾矿资源化创新团队(封二) 江西农业大学国土资源与环境学院 张嵚 土壤化学与环境研究团队(封三)

# CONTENTS

(Monthly•Started in 1982)

JOURNAL OF AGRO-ENVIRONMENT SCIENCE

Vol.42 No.2 Feb. 20, 2023

- Review of papers published on *Journal of Agro-Environment Science* in 2022 ..... CAI Zucong(237)
- Current status and construction of a standard system for greenhouse gas emission mitigation and carbon sequestration in agricultural and rural areas of China ..... HUO Lili, YAO Zonglu, ZHAO Lixin, LUO Juan, ZHANG Peizhen, ZHANG Xinyi(242)
- Research progress on arbuscular mycorrhizal fungi(AMF) in remediation of heavy metal contaminated soil and enhancement of plant tolerance ..... MIAO Zhijia, MENG Xiangyuan, LI Shuyuan, MA Chao, LI Qing, AN Heluan, ZHAO Xin, ZHAO Zhirui(252)
- Effect of microplastics, cadmium, and their combination on wheat seed germination ..... WANG Xiaojing, YANG Yizhe, CAO Yang, ZHANG Dongming, DAI Yunchao, LÜ Jialong(263)
- Effects of nitrogen and zinc application on yield, zinc and cadmium concentration in wheat grain under cadmium pollution ..... CHEN Wang, HU Shaowu, LUO Jingsheng, LI Tong, TIAN Chao, HE Fuhao, GU Jiaming, JING Liqian, WANG Yunxia, YANG Lianxin(274)
- Toxicity response and difference in accumulation of exogenous soil chromium in crops ..... XU Guohao, LIU Yinghao, CHANG Minghui, HAN Xuemei, LI Shiwei, MA Yibing, LI Helian(284)
- Subcellular distribution of arsenic in *Sargassum horneri* and the role of the cell wall in arsenic biosorption ..... ZHANG Peng, LIU Wei, WANG Pengyun, WANG Tiegan, ZHONG Chenhui, TAO Yueliang(291)
- Effects of mangrove degradation on the characteristics of bacterial communities colonizing microplastics ..... LI Dazhen, ZHANG Yuqing, FU Qianqian, CHEN Haiying, DENG Hui, GE Chengjun(299)
- Effects of Cd, Pb, and Zn combined stress on Cd accumulation and translocation in *Populus yunnanensis* seedlings ..... WANG Yanxia, ZHENG Wuyang, HOU Lei, HE Chengzhong, LANG Shuang, YAN Xiaoming, LI Size(310)
- Effects of passivating agents and foliar fertilizers on cadmium uptake and transport in wheat-maize rotation ..... CAO Yang, LI Chengjuan, WANG Hui, DAI Yunchao, SUN Benhua, ZHANG Dongming, WANG Xiaojing, LÜ Jialong(319)
- Source apportionment and evaluation of potentially toxic elements, P and Se, for paddy soils in the western margin of Chengdu Plain, China ..... ZHANG Junji, SHI Zeming, LIAO Rong, WANG Yu, WANG Xinyu(327)
- Characteristics and mechanisms of Cd<sup>2+</sup> adsorption by high- and low-silicon straw biochar ..... TAN Dan, WANG Heng, MEI Chuang, GAO Liyang, CAI Kunzheng(339)
- Transport of single La-modified biochar in a sand column and its co-transport with Cr(VI) ..... GU Xinfeng, PAN Hui, ZHANG Lianyi, DING Zhuhong(352)
- Effects of kinetics and pH on adsorption of levofloxacin on iron oxide surfaces ..... LIU Zichao, REN Yanan, ZHOU Wenjing, LIU Chunhui, LI Zixian, YANG Jinkang, SUN Qizhuang, WANG Long, ZHAO Peng(362)
- Dynamic and profile variations of free amino acids in paddy soil applied with Chinese milk vetch ..... YANG Jing, BAO Qingtao, XING Shihe, ZHOU Biqing, ZHANG Liming, YANG Wenhao(373)

Difference in nitrogen transformation rates between rhizosphere and bulk soil in a calcareous soil–rice system

..... HE Xiaoqian, LIU Xini, HUANG Yuxiao, LAN Ting(384)

Effects of myo-inositol hexakisphosphate on the transformation of carbonate green rust

..... SUN Yali, JIANG Guanjie, JIANG Rui, LAN Shuai, LI Yang, YAN Yupeng, ZHANG Qin(393)

Effects of precipitation variation and nitrogen deposition on soil bacterial community structure and enzyme activity in desert steppe

..... TU Nare, HONG Mei, YAN Jin, YE He, LIANG Zhiwei, WANG Zhanhai(403)

Combined effects of nitrogen forms and temperature on soil organic carbon mineralization of forest in the sandy area of western

Shandong Province, China ..... CHEN Qinghai, TAO Baoxian, SHANG Yubing, ZHAN Min, LI Heyin, LI Ganlin, LI Yanchun(414)

Iron-based biochar sponge and submerged plant synergistic purification on nitrogen and phosphorus in water

..... WANG Gang, CHEN Dan, LI Jiangzhou, ZHANG Cuiping, NA Hongyan, DAI Kuai, YANG Xiaoe(424)

Residual characteristics of organophosphorus pesticides in sediments of rice–crayfish water and mechanisms driving phosphorus cycling

..... QU Mengjie, HAN Yucheng, WAN Zhipeng, TAN Yan, AN Jiaqi, MEI Yunjun, LIU Guanglong(434)

Synthesis of coal-based NaA molecular sieve material and Cd<sup>2+</sup> adsorption

..... LIU Tian, GUO Junkang, ZHANG Lei, WANG Zihao, YU Xianwei, WANG Jiayuan, BI Jiangtao(443)

Risk assessment of antibiotics removal from aquaculture wastewater from fallow fields

..... NIE Zhengxin, JIANG Zhiyu, LIU Yanqing, CAO Xian, LI Xianning(451)

Estrogen removal and its mechanism during anaerobic digestion of pig manure

..... ZHUANG Jie, ZHAO Bincheng, XUE Jinhui, ZHANG Wenyi(461)

Effects of silicon application on anaerobic CH<sub>4</sub> oxidation in a paddy field under nighttime warming

..... XIE Qing, XUE Mengqi, ZHOU Cong, ZHANG Yaohong, LOU Yunsheng, GAO Xiaopeng, JIA Zhongjun(472)