

QK1857215

ACTA
SCIENTIAE
CIRCUMSTANTIAE

环境科学学报

Vol.38 No.11 第38卷 第11期

2018

www.actasc.cn



科学出版社
Science Press

万方数据



中国科学院生态环境研究中心 主办



目次

专论与综述

污水磷回收新产物——蓝铁矿 郝晓地,周健,王崇臣,等 (4223)

研究报告

高通量测序技术应用于污水处理厂细菌气溶胶群落结构分析 许光素,刘俊新,韩云平,等 (4235)

饮用水中隐孢子虫 qPCR 检测研究 李春格,李红岩,李罗英,等 (4243)

Methylobacterium sp. TP-1 好氧降解四溴双酚 A 机理及其功能酶研究 刘莉莉,汪烯烯,陈鑫,等 (4250)

分置式厌氧陶瓷膜生物反应器处理模拟生活污水试验研究 刘莉莉,高大文,张明慧 (4259)

聚离子液体刷接枝改性 PVDF 膜及其对药物硫酸氢氯吡咯雷分离性能研究 程媛媛,杜春慧,吴春金,等 (4266)

不同 C/N 对半悬浮生物填料的同步硝化反硝化过程的影响 郑丽纯,汤兵,郑义,等 (4273)

超薄 $g-C_3N_4$ 在可见光下协同 PDS 降解双氯芬酸钠的机理研究 金小愉,王枫亮,刘国光,等 (4283)

石墨烯修饰碳毡电极与微生物相互作用过程中的电化学特征 李云姣,朱维晃,郑飞,等 (4292)

$BiVO_4-Cu_2O/CuO$ 双光电极自偏压光电催化降解苯酚研究 李霞,崔玥昕,王雁,等 (4299)

镍铝复合金属氧化物电极电吸附去除水中硫代硫酸根研究 白钊玉,杨春风,董晶晶,等 (4306)

$Fe@Co/NC$ 改性石墨毡在电芬顿体系降解 EDTA-Ni 的研究 张君亚,陈元彩,胡勇有 (4313)

零价铁-过硫酸盐体系同时去除水中酸性橙 7 和磷 聂明华,吴乐良,余林兰,等 (4321)

丙酮活化过一硫酸盐性能及非自由基机制 许芬,陈家斌,张书源,等 (4333)

磷酸水热处理制备高比表面积高介孔率活性炭 王田,黄瑞毅,马培勇,等 (4340)

$UiO-66/UiO-66-PYDC$ 的制备及其对 UO_2^{2+} 吸附性研究 许成,张炜,陈元涛,等 (4350)

磁性羟基磷灰石/生物炭复合材料的制备及对 Pb^{2+} 的吸附性能 张连科,王洋,王维大,等 (4360)

铁碳促进 O_3/H_2O_2 体系深度处理准好氧矿化垃圾床渗滤液尾水中难降解有机物 邓禹南,陈炜鸣,崔瑜旗,等 (4371)

镁盐改性生物质炭的合成及其在废水氮磷资源化中的应用研究 James King'ori Njuguna,张荣斌,李远,等 (4383)

雨水花园运行寿命分析与价值估算 郭超,李家科,马越,等 (4391)

太湖流域河网 4 种典型抗生素的时空分布和风险评价 孙秋根,王智源,董建玮,等 (4400)

模拟 $Fe(III)$ 和盐水输入对闽江河口潮汐湿地沉积物及间隙水 Fe 和 S 含量和形态的影响 朱文凤,全川,罗敏,等 (4411)

过磷酸钙和腐烂苹果联合添加对猪粪堆肥过程中碳素转化和腐熟的影响 姜继韶,党森,王攀,等 (4422)

基于 MODIS 数据的中国气溶胶光学厚度时空分布特征 张亮林,潘竟虎,张大弘 (4431)

武汉市 2014—2017 年大气污染物分布特征及其潜在来源分析 高正旭,王晓玲,向华,等 (4440)

哈尔滨近地面 O_3 浓度特征 刘玉莲,周贺玲,裴宇航,等 (4454)

2017 年厦门金砖会晤期间气象因素与管控措施对空气质量的影响 张子睿,刘哲,戴潞泓,等 (4464)

长三角地区民航飞机起飞着陆(LTO)循环大气污染物排放清单 王瑞宁,黄成,任洪娟,等 (4472)

基于 CMAQ 与前馈神经网络的区域大气污染物浓度快速响应模型 石佳超,罗坤,樊建人,等 (4480)

天津污灌区菜地土壤团聚体中有机碳和重金属含量特征 王润珑,徐应明,王农,等 (4490)

氧化木糖无色杆菌(*Achromobacte rxylosoxidans*) LAX2 对 Cu 、 Pb 和 Cd 复合污染土壤的生物矿化修复研究 周野,王一莹,李哲,等 (4497)

施加盐基离子调控水稻 Cd 的吸收与累积 贾润语,李虹呈,王倩倩,等 (4505)

亚慢性氟暴露致小鼠海马损伤的影响及分子机制研究 年未未,汪晓宇,邵丹丹,等 (4512)

妊娠期染毒全氟辛酸对子代雌鼠肝脏损伤及 PPAR- α 通路的影响 李丹阳,宋鹏琰,张妍,等 (4520)

湿地生态系统服务价值能值评估——以珠江三角洲城市群为例 杨青,刘耕源 (4527)

基于生态足迹的三峡库区重庆段后续发展生态补偿标准量化研究 周健,官冬杰,周李磊 (4539)

东北地区能源消费碳排放时空演变特征及其驱动机制 杨迪,杨旭,吴相利,等 (4554)

《环境科学学报》2019 年征订启事 (4242)

CONTENTS

New product of phosphorus recovery—Vivianite	HAO Xiaodi, ZHOU Jian, WANG Chongchen, et al (4223)
Application of high-throughput sequencing technology to analyze the community structure of bacterial aerosols in wastewater treatment plants	XU Guangsu, LIU Junxin, HAN Yunping, et al (4235)
<i>Cryptosporidium</i> qPCR assay in drinking water	LI Chunge, LI Hongyan, LI Luoying, et al (4243)
Studies on aerobic degradation mechanism of tetrabromobisphenol A and functional enzymes of <i>Methylobacterium</i> sp. TP-1	LIU Lili, WANG Xixi, CHEN Xin, et al (4250)
External anaerobic ceramic membrane bioreactor treating synthetic domestic sewage	LIU Lili, GAO Dawen, ZHANG Minghui (4259)
Poly(ionic liquid) brushes grafted PVDF membrane and its separation properties to the drug clopidogrel hydrogen sulfate	CHENG Yuanyuan, DU Chunhui, WU Chunjin, et al (4266)
Effect of different C/N ratios on the process of simultaneous nitrification and denitrification in a biofilm reactor packed with semi-suspended bio-carriers	ZHENG Lichun, TANG Bing, ZHENG Yi, et al (4273)
Mechanism of synergistic degradation of sodium diclofenac with PDS and ultrathin g-C ₃ N ₄ under visible light	JIN Xiaoyu, WANG Fengliang, LIU Guoguang, et al (4283)
Electrochemical characteristics of the interaction between graphene modified carbon felt electrode and microbe	LI Yunjiao, ZHU Weihuang, ZHENG Fei, et al (4292)
Photoelectrocatalytic degradation of phenol in a self-driven system with BiVO ₄ -Cu ₂ O/CuO dual photoelectrode	LI Xia, CUI Yuexin, WANG Yan, et al (4299)
Study on electroadsorption of thiosulfate in water by NiAl-LMO electrode	BAI Zhaoyu, YANG Chunfeng, DONG Jingjing, et al (4306)
Degradation of EDTA-Ni wastewater by Fe@N-doped carbon-stabilized Co nanoparticles materials supported graphite felt in electro-Fenton system	ZHANG Junya, CHEN Yuancai, HU Yongyou (4313)
Simultaneous removal of acid orange 7 and phosphate from water using zero-valent iron activated persulfate system	NIE Minghua, WU Leliang, YU Lintan, et al (4321)
Performance and non-radical mechanism of activation of peroxymonosulfate by acetone	XU Fen, CHEN Jiabin, ZHANG Shuyuan, et al (4333)
Preparation of mesoporous activated carbon with high specific surface area by H ₃ PO ₄ hydrothermal pretreatment	WANG Tian, HUANG Ruiyi, MA Peiyong, et al (4340)
Preparation of UiO-66/UiO-66-PYDC and their absorptive properties on uranyl ions	XU Cheng, ZHANG Wei, CHEN Yuantao, et al (4350)
Preparation of magnetic hydroxyapatite/biochar composite and its adsorption behavior of Pb ²⁺ and recycling performance	ZHANG Lianke, WANG Yang, WANG Weida, et al (4360)
Degradation of recalcitrant organics in SAARB treatment effluent of landfill leachate by iron-carbon-O ₃ /H ₂ O ₂ process	DENG Yunan, CHEN Weiming, CUI Yuqi, et al (4371)
Synthesis and characterization of magnesium modified biochar for ammonia and phosphorus immobilization from simulated wastewater	James King'ori Njuguna, ZHANG Rongbin, LI Yuan, et al (4383)
Fate analysis and value estimation for rain gardens	GUO Chao, LI Jiake, MA Yue, et al (4391)
Spatial-temporal distribution and risk evaluation of four typical antibiotics in river networks of Taihu Lake Basin	SUN Qiugen, WANG Zhiyuan, DONG Jianwei, et al (4400)
Effects of saltwater incursion and ferric iron enrichment on abundance and fractions of Fe and S in pore water and sediment of a tidal freshwater wetland in the Min River estuary	ZHU Wenfeng, TONG Chuan, LUO Min, et al (4411)
Influences of calcium superphosphate, rotten apples and their mixture on organic matter transformation and compost maturity during pig manure composting	JIANG Jishao, DANG Sen, WANG Nian, et al (4422)
Spatio-temporal distribution characteristics of aerosol optical depths in China based on MODIS data	ZHANG Lianglin, PAN Jinghu, ZHANG Dahong (4431)
Variation characteristics and potential sources of air pollutants during 2014—2017 in Wuhan	GAO Zhengxu, WANG Xiaoling, XIANG Hua, et al (4440)
Characteristics of near surface O ₃ concentration in Harbin	LIU Yulian, ZHOU Heling, PEI Yuhang, et al (4454)
The influence of meteorological factors and control measures on air quality during the 2017 Xiamen BRICS summit	ZHANG Zirui, LIU Zhe, DAI Luhong, et al (4464)
Air pollutant emission inventory from LTO cycles of aircraft in civil aviation airports in the Yangtze River Delta Region, China	WANG Ruining, HUANG Cheng, REN Hongjuan, et al (4472)
Rapid response model of regional air pollutant concentration based on CMAQ and feed forward neural network	SHI Jiachao, LUO Kun, FAN Jianren, et al (4480)
Characteristics of organic carbon and heavy metals in aggregates of wastewater irrigation soils of Tianjin	WANG Runlong, XU Yingming, WANG Nong, et al (4490)
The remediation of complex Cu, Pb and Cd polluted soil through biomineralization by <i>Achromobacte rxylosoxidans</i> LAX2	ZHOU Ye, WANG Yiyang, LI Zhe, et al (4497)
Application of base cations to regulate Cd absorption and accumulation in rice	JIA Runyu, LI Hongcheng, WANG Qianqian, et al (4505)
Effects of subchronic exposure to fluorine on hippocampal injury in mice and its molecular mechanism	NIAN Weiwei, WANG Xiaoyu, SHAO Dandan, et al (4512)
Effect of pregnancy exposure to perfluorooctanoic acid (PFOA) on liver injury and ppar-α pathway of female offspring mice	LI Danyang, SONG Pengyan, ZHANG Yan, et al (4520)
Wetland ecosystem services assessment based on emergy: A case of Pearl River Delta Urban Agglomeration	YANG Qing, LIU Gengyuan (4527)
Quantitative study on the ecological compensation standard of the follow-up development of the Three Gorges Reservoir area of Chongqing based on the ecological footprint	ZHOU Jian, GUAN Dongjie, ZHOU Lilei (4539)
Spatio-temporal evolution characteristics of carbon emissions from energy consumption and its driving mechanism in Northeast China	YANG Di, YANG Xu, WU Xiangli, CAO Yuanhe, et al (4554)

《环境科学学报》第六届编委会名单

主 编：曲久辉

副 主 编：刘文清 杨志峰 彭永臻 袁志国 俞汉青 朱 彤 毕 军
王书肖

学术顾问：汤鸿霄 郝吉明 陶 澍 江桂斌 傅伯杰 赵进才 贺克斌
张远航 彭平安

编 委：(按姓氏笔画排)

马 军	王书肖	王金南	王学军	王建龙	王晓昌	王爱杰
文湘华	尹大强	毕 军	曲久辉	朱 彤	朱利中	全 燮
刘 永	刘文清	刘会娟	麦碧娴	杨 敏	杨志峰	吴丰昌
何品晶	余 刚	张利田	陈同斌	欧阳志云	周启星	郑 华
郑君瑜	郑明辉	胡 春	胡勇有	俞汉青	袁志国	贾晓珊
黄 霞	崔宝山	彭永臻	潘 纲			

编辑部主任：杨桂华

责 任 编 辑：卜庆杰 王 虎

环 境 科 学 学 报

(Huanjing Kexue Xuebao)

(月刊, 1981 年创刊)

2018 年 11 月 第 38 卷 第 11 期

ACTA SCIENTIAE CIRCUMSTANTIAE

(Monthly, Started in 1981)

Vol.38, No.11, November 2018

主 管 中国科学院
主 办 中国科学院生态环境研究中心
协 办 环境水质学国家重点实验室
北京师范大学环境学院
编 辑 《环境科学学报》编辑委员会
北京 2871 信箱 邮政编码 100085
电话：(010)62941073
E-mail: hjkxxb@cees.ac.cn
网址: www.actasc.cn
主 编 曲 久 辉
出 版 科 学 出 版 社
北京东黄城根北街 16 号
(邮政编码 100717)
印刷装订 北京宝昌彩色印刷有限公司
发 行 处 科学出版社
电话: 010-64017032, 64017539
国外总发行 中国国际图书贸易总公司
(北京 399 信箱, 100044)
出 版 日 期 每月 6 日

Sponsored by Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences,
State key Laboratory of Environmental Aquatic Chemistry,
School of Environmental Sciences, Beijing Normal University

Edited by the Editorial Board of Acta Scientiae Circumstantiae
(P.O.Box 2871, Beijing 100085, China)

Editor-in-Chief Qu Jiuhui

Published by Science Press (16 Donghuangchenggen North Street Beijing 100717, China)

Distributed by Science Press Tel: 010-64034563, E-mail: journal@cspg.net

International distributed by China International Book Trading Corporation (Guoji Shudian)
(P.O.Box 399, Beijing 100044, China)

中国标准刊号: ISSN 0253-2468
CN 11-1843/X

CODEN: HKXUDL

国内邮发代号: 82-625
订购处: 全国各地邮政局

国外发行代号: M410
定价: 90.00 元

网上购买请扫以下二维码



ISSN 0253-2468



11>

9 770253 246180