

- ◆ 全国中文核心期刊
- ◆ 中国科学引文数据库
- ◆ 中国科技期刊数据库收录期刊
- ◆ 中国期刊全文数据库全文收录期刊
- ◆ 中国生物医学文献数据库 (CBM)
- ◆ 中国学术期刊综合评价数据库统计源期刊
- ◆ 中国科技论文统计源期刊 (中国科技核心期刊)
- ◆ 万方数据—数字化期刊群 (中国核心期刊遴选数据库)

- ◆ RCCSE中国核心学术期刊
- ◆ 美国化学文摘 (CA) 收录期刊
- ◆ 波兰哥白尼索引 (IC) 收录期刊
- ◆ 美国乌利希期刊指南 (Ulrich PD) 收录期刊
- ◆ 美国《剑桥科学文摘 (自然科学)》(CSA) 收录期刊
- ◆ 日本科学技术振兴机构中国文献数据库 (JST) 收录期刊
- ◆ 英国国际农业与生物科学研究中心数据库 (CABI) 收录期刊



环境科学与技术

Huanjing Kexue yu Jishu

ISSN1003—6504
Vol.42 No.4
2019



Environmental Science & Technology

ISSN 1003-6504



湖北省生态环境厅 主管
湖北省环境科学研究院 主办

目 次

SO₂和NO₂在高岭石表面的反应和协同效应
..... 杨静, 朱洪飞, 何静, 蔺尾燕, 祝婕, 邓文叶(1)

聚电解质多层膜/ α -Fe₂O₃改性阳极对MFC性能影响
..... 王美聪, 王紫诺, 张学军, 吴丹, 樊立萍(6)

互花米草碳、氮、磷化学计量特征及季节变化
..... 范全城, 谢文霞, 王志强, 李萍(12)

牡蛎壳改性聚丙烯的研究
..... 江李旺, 彭绍洪(20)

基于MCMC方法的SWMM模型参数不确定性分析
..... 李美水, 杨晓华(25)

废弃矿井微生物群落演替特征实验研究
..... 单爱琴, 张燕婷, 肖洁, 冯启言, 高波(31)

油田废水处理中絮体/气泡的形态及分形特征
..... 郭书雅, 陈文娟, 靖波, 张健, 尹先清, 李康(38)

化感效应及其对藻类光合作用影响的研究进展
..... 祁茜, 辛建攀, 李文明, 田如男(43)

放射性核素在地质材料中的迁移研究进展
..... 萧黎黎, 王芝芬, 花榕, 刘晓剑, 李阳, 董一慧, 朱健男, 何非凡, 戴雅红, 乐长高(53)

土壤镉污染及其修复技术研究进展
..... 张菊梅, 刘灵飞, 龙健, 李娟, 廖洪凯, 黄博聪, 罗超, 顾梦瑶(61)

纳米碳对土壤理化性质及其微生物的影响
..... 赵楚, 王霖娇, 盛茂银(71)

剩余污泥处理处置过程中的流变学问题
..... 冯宪凤, 丁杰伟(82)

LF精炼渣物化特性及综合利用
..... 杜昀聪, 伊元荣, 何秉宇(88)

文蛤和四角蛤蜊对石油烃富集排除及损伤效应
..... 任加云, 李学平, 苗晶晶(95)

乌鲁木齐市快速路林带内PM_{2.5}、PM₁₀污染特征研究
..... 阿丽亚·拜都热拉, 甄敬, 孙倩, 喀哈尔·扎依木(103)

广州市PM_{2.5}污染特征及潜在贡献源区分析
..... 黄俊, 廖碧婷, 王春林, 邓雪娇, 沈子琦, 汤静, 蓝静(109)

磁性碳纳米管复合材料的制备及其吸附性能研究
..... 鲁海军, 李元帅, 李晓丽(119)

单一纳米颗粒及其协同改性聚偏氟乙烯膜的性能	熊娟, 周墨, 高贻钧, 左行涛(126)
壳聚糖-富里酸协同调控 $\text{Ca}_x\text{Cd}_{1-x}\text{CO}_3$ 固溶体结晶	杨田丽, 聂桂花, 贺任, 王文磊, 张宁(130)
$\text{Cu}_2\text{O}/\text{Eu}_2\text{O}_3\text{-TiO}_2$ 的制备及光催化制取氢气和烷烃的研究	郑先君, 陈萍萍, 魏丽芳, 王焕新(136)
$\alpha\text{-SiW}_{11}\text{Cu}/\text{PANI}/\text{ZnO}$ 复合材料的制备及光降解亚甲基蓝	马荣华, 周光红, 刘春涛(141)
FeMn_x 与 $\text{FeMn}_x@\text{GO}$ 复合物对水中 $\text{As}(\text{III})$ 的吸附特性对比	邓天天, 王亚茹, 陈纳, 马培, 陈翠翠, 潘灿灵(147)
机械球磨固化修复六价铬污染土壤	许维通, 苑文仪, 李培中, 张紫薇, 王晓岩, 王临才, 白建峰, 王景伟(155)
矿区农田施用木炭和硫酸亚铁对水稻吸收累积镉砷的影响	李磊明, 张旭, 李劲, 刘小红, 司友斌(161)
麦秸秆制备石墨烯改性刹车片的工艺及性能研究	万轶, 李建亮, 熊万军(168)
北京城市副中心道路扬尘排放清单与控制情景	樊守彬, 杨涛, 李雪峰, 王凯, 亓浩云(173)
多场条件下低低温电除尘系统全流程数值模拟	温刚, 刘含笑, 周林海, 陈招妹, 冯国华(180)
基于改进 Logistic 回归模型在地质灾害评价中的应用	陈朝亮, 张文君, 钱静, 丁明涛, 邹强(188)
江汉平原黏土沉积物粒径与有机碳分布特征	刘锐, 马腾, 邱文凯, 刘妍君(194)
不同土壤中镍的离子活度研究	李波, 马义兵, 史奕(202)
溢油事故对河口滩涂大型底栖动物群落的影响	徐志豪, 吴健, 王敏, 刘文亮, 谭娟, 沙晨燕, 黄沈发(207)
郑州市在用汽车简易瞬态工况法排放限值研究	王梦雷, 金博强, 李顺义, 朱仁成, 张瑞芹, 王莉(214)
某垃圾填埋场地下水水化学与水质评价研究	刘国, 刘晏辉, 何天煜, 曾燧, 黄琴琴(221)
再生水项目国民经济评价体系研究	高旭阔, 刘奇(229)
《环境科学与技术》编辑部关于不法分子冒用《环境科学与技术》编辑部名义征稿欺诈的郑重声明	封三

期刊基本参数: CN 42-1245/X*1978*m*A4*242*zh*P*¥40*5000*34*2019-04

本期责任编辑: 黄诗璟

CONTENTS

Reaction and Synergistic Effect of SO ₂ and NO ₂ on Kaolinite Surfaces·····	
·····YANG Jing, ZHU Hongfei, HE Jing, LIN Weiyan, ZHU Jie, DENG Wenyue(1)	
The Effect of Modification of ITO Anode with Multi-layered Polyelectrolytes/ α -Fe ₂ O ₃ on the Performance of MFC·····	
·····WANG Meicong, WANG Zinuo, ZHANG Xuejun, WU Dan, FAN Liping(6)	
Seasonal Variations in C, N and P Stoichiometry of <i>Spartina alterniflora</i> ·····	
·····FAN Quancheng, XIE Wenxia, WANG Zhiqiang, LI Ping(12)	
Study of Modified Polypropylene with Oyster Shell·····	
·····JIANG Liwang, PENG Shaohong(20)	
Parameter Uncertainty Analysis for SWMM Model Based on MCMC Method·····	
·····LI Meishui, YANG Xiaohua(25)	
Experimental Study of Microbial Community Succession Characteristics in Abandoned Mine Groundwater·····	
·····SHAN Aiqin, ZHANG Yanting, XIAO Jie, FENG Qiyang, GAO Bo(31)	
Morphological Change and Fractal Characteristics of Flocs/Bubbles in Treatment of Oilfield Wastewater·····	
·····GUO Shuya, CHEN Wenjuan, JING Bo, ZHANG Jian, YIN Xianqing, LI Geng(38)	
Research Advance on Allelopathy and Its Inhibitory Effects of Algae Photosynthetics·····	
·····QI Xi, XIN Jianpan, LI Wenming, TIAN Runan(43)	
Progress on the Migration of Key Radionuclides in Geological Materials·····	
·····XIAO Lili, WANG Zhifen, HUA Rong, LIU Xiaojian, LI Yang, DONG Yihui, ZHU Jiannan, HE Feifan, DAI Yahong, YUE Zhanggao(53)	
Research Progress on Soil Antimony Pollution and Its Remediation Technology·····	
·····ZHANG Jumei, LIU Lingfei, LONG Jian, LI Juan, LIAO Hongkai, HUANG Bocong, LUO Chao, GU Mengyao(61)	
Effects of Nanocarbon on Soil Physical and Chemical Properties and Microorganism·····	
·····ZHAO Chu, WANG Linjiao, SHENG Maoyin(71)	
Rheological Issues about the Treatment and Disposal of Excess Sewage Sludge·····	
·····FENG Xianfeng, DING Jiwei(82)	
Physicochemical Properties of LF Refining Slag and Comprehensive Utilization of Slag·····	
·····DU Yuncong, YI Yuanrong, HE Bingyu(88)	
Accumulation, Elimination and Damage Effect of Petroleum Hydrocarbons for Clams <i>Macraa veneriformis</i> and <i>Meretrix meretrix</i> ·····	
·····REN Jiayun, LI Xueping, MIAO Jingjing(95)	
Pollution Characteristics of PM _{2.5} and PM ₁₀ in Forest Belts along Expressway in Urumqi·····	
·····ALIYA Baidourela, ZHEN Jing, SUN Qian, KAHAEER Zhayimu(103)	
Analysis of the Characteristics and Potential Source Contribution of PM _{2.5} Pollution in Guangzhou·····	
·····HUANG Jun, LIAO Biting, WANG Chunlin, DENG Xuejiao, SHEN Ziqi, TANG Jing, LAN Jing(109)	

Synthesis and Adsorption Properties of Magnetic Carbon Nanotubes Composites.....	.....
.....	.....LU Haijun, LI Yuanshuai, LI Xiaoli (119)
Properties of Single Nanoparticle and Synergistic Modification of PVDF Membrane.....	.....
.....	.....XIONG Juan, ZHOU Zhao, GAO Yijun, ZUO Xingtao(126)
Study on the Synergistic Regulation of Ca,Cd ₁₋ CO ₃ by Chitosan-Fulvic Acid.....	.....
.....	.....YANG Tianli, NIE Guihua, HE Ren, WANG Wenlei, ZHANG Ning(130)
Synthesis of Cu ₂ O/Eu ₂ O ₃ -TiO ₂ and Its Photocatalytic Production of Hydrogen and Alkanes.....	.....
.....	.....ZHENG Xianjun, CHEN Pingping, WEI Lifang, WANG Huanxin(136)
Preparation of α -SiW ₁₁ Cu/PANI/ZnO Composites and Photodegradation of Methylene Blue.....	.....
.....	.....MA Ronghua, ZHOU Guanghong, LIU Chuntao (141)
Comparison of Adsorption Characteristic for As(III) in Wastewater Using FeMn, and FeMn,@GO Complex.....	.....
.....	.....DENG Tiantian, WANG Yaru, CHEN Na, MA Pei, CHEN Cuicui, PAN Canling(147)
Solidification and Remediation of Hexavalent Chromium Spiked Soil Using Mechanical Ball Milling Treatment.....	.....
.....	.....XU Weitong, YUAN Wenyi, LI Peizhong, ZHANG Ziwei, WANG Xiaoyan, WANG Lincui, BAI Jianfeng, WANG Jingwei(155)
Effects of Charcoal and Ferrous Sulfate Amendments on Rice Cd and As Uptake in a Contaminated Paddy Soil in Mining Area.....	.....
.....	.....LI Leiming, ZHANG Xu, LI Jing, LIU Xiaohong, SI Youbin(161)
Process and Properties of Graphene Modified Brake Pads by Wheat Straw.....	.....
.....	.....WAN Yi, LI Jianliang, XIONG Wanjun(168)
Emission Inventory and Control Scenario Analysis for Road Fugitive Dust in Sub-center of Beijing.....	.....
.....	.....FAN Shoubin, YANG Tao, LI Xuefeng, WANG Kai, QI Haoyun(173)
The Whole Process Numerical Simulation of Low-low ESP System Based on Multi-field Conditions.....	.....
.....	.....WEN Gang, LIU Hanxiao, ZHOU Linhai, CHEN Zhaomei, FENG Guohua(180)
Application of Improved Logistic Regression Model in Geological Hazard Evaluation.....	.....
.....	.....CHEN Chaoliang, ZHANG Wenjun, QIAN Jing, DING Mingtao, ZOU Qiang(188)
Distribution Characteristics of Particle Size and Organic Carbon in Clay Sediments in Jiangnan Plain.....	.....
.....	.....LIU Rui, MA Teng, QIU Wenkai, LIU Yanjun(194)
The Study of Nickel Speciation in Different Soils.....	.....
.....	.....LI Bo, MA Yibing, SHI Yi(202)
Stress of Oil Spill on Community Structure of Benthic Macroinvertebrate in the Estuarine Tidal Marshes.....	.....
.....	.....XU Zhihao, WU Jian, WANG Min, LIU Wenliang, TAN Juan, SHA Chenyan, HUANG Shenfa(207)
Study on Emission Limits under VMAS for In-use Vehicles in Zhengzhou.....	.....
.....	.....WANG Menglei, JIN Boqiang, LI Shunyi, ZHU Rencheng, ZHANG Ruiqin, WANG Li(214)
Study on Water Chemistry and Water Quality Evaluation of Groundwater in a Landfill.....	.....
.....	.....LIU Guo, LIU Yanhui, HE Tianyu, ZENG Yi, HUANG Qinqin(221)
National Economic Evaluation of Reclaimed Water Project.....	.....
.....	.....GAO Xukuo, LIU Qi(229)



善待臭氧 安享阳光
ACT OZONE FRIENDLY STAY SUN SAFE

加速淘汰含氢氯氟烃 HCFC ACCELERATED PHASEOUT

2009-2010

基线水平
2009-2010平均值
Baseline
Average of 2009 and
2010 levels

2013

冻结在基线水平
Freeze at baseline

2015

削减基线水平10%
10% reduction of baseline

2020

削减基线水平35%
35% reduction of baseline

2025

削减基线水平67.5%
67.5% reduction of baseline

2030

削减基线水平97.5%
97.5% reduction of baseline

2040

2030-2040年
允许保留年均2.5%的维修用

Annual average of 2.5% of baseline
for servicing during 2030-2040

HCFCs的生产和使用涉及化工、制冷空调、建筑保温、泡沫塑料以及医疗器械等行业的相关产品。加速淘汰HCFCs不仅对保护臭氧层意义重大，也会为减缓全球气候变化带来好处。

HCFC production and consumption involve products in a number of sectors, such as chemical production, refrigeration and air conditioning, building insulation, foam production and medical devices. By accelerating the phaseout of HCFCs, there are potentials for doubling benefits to the ozone and climate.

