

ISSN 1674-5124
CN 51-1714/TB



CHINA MEASUREMENT & TEST

11

2018
第44卷 总第244期

中文核心期刊

中国科技核心期刊

中国科技论文统计源期刊

中国学术期刊综合评价数据库全文收录期刊

中国期刊(光盘版)全文收录期刊

《万方数据---数字化期刊群》全文收录期刊

RCCSE中国核心学术期刊(A)

美国《化学文摘》(CA)收录期刊

美国《剑桥科学文摘(工程技术)》(CSA)收录期刊

美国《剑桥科学文摘(自然科学)》(CSA)收录期刊

俄罗斯《文摘杂志》收录期刊

美国《乌利希期刊指南》收录期刊



环境保护专题

主管：中国测试技术研究院



中国测试

China Measurement & Test

1975年创刊(月刊)
第44卷 总第244期
2018年11月
2018.11

目 次

水污染与控制

| | | |
|---|------------------|----|
| 无汞测试高氯低有机物浓度模拟工业废水 COD 的原理 | 韦 聪, 何美玲, 韦景悦, 等 | 1 |
| 金属有机骨架材料吸附去除水体中重金属研究进展 | 许淑霞, 杨 超, 陈 强 | 12 |
| 地表水中石油类监测技术的研究与建议 | 解 鑫, 袁 懋, 王业耀, 等 | 19 |
| 顶空 / 气相色谱 - 质谱法测定水中四乙基铅及水样保存研究 | 邢冠华, 刘 睿, 谭 丽, 等 | 24 |
| 不同捕集管对水中挥发性有机物分析影响初探 | 邢利利, 李 佳, 黄 春, 等 | 29 |
| In(OH) ₃ 共沉淀 - 电感耦合等离子体质谱法测定海水中的稀土元素 | 杨武琳, 陈火荣, 李荣茂 | 36 |
| 超高效液相色谱 / 串联质谱法直接测定地表水中残留的恶唑酸 | 张 玉, 吴佳伦, 吴晓峰, 等 | 40 |
| 液液微萃取 - 气相色谱质谱法测定生活饮用水中的 5 种菊酯类农药 | 潘晓春 | 45 |

大气污染与控制

| | | |
|--------------------------------------|------------------|----|
| CNG 公交车道路排放与行驶工况相关性研究 | 王志强, 张翠平, 汪 洋, 等 | 50 |
| 低浓度 NO 和 SO ₂ 混合气体的测量方法研究 | 王艳萍, 郭永彩, 凡凤莲, 等 | 56 |

土壤污染与固体废弃物

| | | |
|---|------------------|----|
| 气相色谱 - 负化学源质谱法对土壤中 BDE-209 含量的测定 | 赵亚娴, 鲁炳闻, 赵彦辉, 等 | 61 |
| 土壤和沉积物中汞含量测定及应用 | 张 倩, 韩贵琳, 阳昆桦, 等 | 66 |
| 一种利用 QuEChERS-GC/MS 测定苹果种植土壤中 5 种常见菊酯类农药的方法研究 | 杨敬坡, 王文军, 郭延凯, 等 | 71 |
| 一种自动石墨消解 -ICP-MS 法监测工业区土壤中微量砷、汞、硒、锑元素残留方法的建立 | 闫学全 | 77 |
| 非正规垃圾填埋场土壤污染及修复方法探讨 | 付 康, 张 涵, 廖 镛 | 81 |
| 微波消解 - 原子荧光光谱法测定脱硝催化剂中微量砷 | 闫月娥 | 88 |
| 热脱附分析苯系物吸附效率的探究 | 吴佳伦, 谢振伟, 张 玉, 等 | 92 |

标准物质与方法

| | | |
|-----------------------------|------------------|-----|
| 分光光度法测定大气降水中亚硝酸盐方法的改进 | 邢书才, 杨 永, 岳亚萍 | 99 |
| 臭氧标准参考光度计基本原理与应用现状 | 王帅斌, 范 洁, 杨 静, 等 | 103 |
| 气相质谱仪校准用氮气中 4 组分混合气体标准物质的研制 | 郑力文, 董了瑜, 邓凡锋, 等 | 110 |
| 农药中非登记成分检测方法研究进展及相关标准分析 | 冯德建, 许 洋, 唐祥凯, 等 | 116 |

环境生态评价

| | | |
|--------------------------------|------------------|-----|
| 油类污染物三维荧光光谱的瑞利散射消除方法 | 陈至坤, 黄 微, 沈小伟, 等 | 121 |
| 气相色谱法测定指示性多氯联苯纯度比较 | 黄林艳, 赵彦辉, 赵亚娴, 等 | 127 |
| 基于石墨相碳化氮的光催化降解有机污染物研究进展 | 朱派金, 张艺莹, 许淑霞 | 135 |
| 气相色谱 - 质谱法同时测定人体尿液中 16 种邻苯二甲酸酯 | 张 力, 雍 肆, 黄 祥, 等 | 142 |
| 海水总碱度分析仪进样管容量误差测量不确定度的评估 | 赵 虹, 王爱军, 石超英 | 147 |
| 高效液相色谱法测定桶装水及水桶中双酚 A 含量 | 刘 涛, 黄子晏 | 152 |
| 水力发电站智慧防雷措施与检测 | 李三雁, 杨昊东, 邓 勇 | 157 |

CHINA MEASUREMENT&TEST

Vol.44
(Monthly)
Series No.244
November,2018
2018.11

CONTENTS

Water Pollution Control

| | | |
|---|--|----|
| A mercury-free COD analysis principle for simulated industrial wastewater with high-chlorine ion and low-organic concentration | WEI Cong, HE Meiling, WEI Jingyue, et al | 1 |
| Progress in adsorption removal of heavy metal ions from water with metal-organic frameworks | XU Shuxia, YANG Chao, CHEN Qiang | 12 |
| Research and suggestions of oil monitoring technology in surface water environment | XIE Xin, YUAN Mao, WANG Yeyao, et al | 19 |
| Study on the preservation of water samples and the determination of tetraethyl lead in water by headspace gas chromatography/mass spectrometry | XING Guanhua, LIU Rui, TAN Li, et al | 24 |
| Preliminary exploration on the effects of different trap tubes for volatile organic compounds analysis in water | XING Lili, LI Jia, HUANG Chun, et al | 29 |
| Determination of rare earth elements in seawater by inductively coupled plasma-mass spectrometry with pre-concentration of In(OH) ₃ co-precipitation | YANG Wulin, CHEN Huorong, LI Rongmao | 36 |
| Direct determination of oxolinic acid in surface water by high performance liquid chromatography-tandem mass spectrometry | ZHANG Yu, WU Jialun, WU Xiaofeng, et al | 40 |
| Determination of 5 pyrethroid pesticides in drinking water by liquid liquid microextraction coupled with gas chromatography-mass spectrometry | PAN Xiaochun | 45 |

Air Pollution Control

| | | |
|--|--|----|
| Study on the relationship between the on-board emission and driving condition from CNG bus | WANG Zhiqiang, ZHANG Cuiping, WANG Yang, et al | 50 |
| Research on measure method of low concentration NO and SO ₂ gas mixtures | WANG Yanping, GUO Yongcai, FAN Fenglian, et al | 56 |

Soil Pollution and Solid Waste

| | | |
|---|---|----|
| Determination of BDE-209 in soil by gas chromatography-negative chemical ionization mass spectrometry | ZHAO Yaxian, LU Bingwen, ZHAO Yanhui, et al | 61 |
| Determination and application of mercury in soil and sediment | ZHANG Qian, HAN Guilin, YANG Kunhua, et al | 66 |
| QuEChERS-GC/MS method for determination of 5 pyrethroid pesticide residues in planting soil of apple | YANG Jingpo, WANG Wenjun, GUO Yankai, et al | 71 |
| Automatic graphite digestion-ICP-MS method for detection of arsenic, mercury, selenium and antimony elements in industrial soil | YAN Xuequan | 77 |
| Discussion on soil pollution and remediation methods of irregular landfill sites | FU Kang, ZHANG Han, LIAO Lei | 81 |
| Determination of trace arsenic in denitrification catalyst by microwave digestion-atomic fluorescence spectrometry | YAN Yuee | 88 |
| Study on adsorption efficiency of benzene series by thermal desorption | WU Jialun, XIE Zhenwei, ZHANG Yu, et al | 92 |

Standard Substances and Methods

| | | |
|---|---|-----|
| The improvement of spectrophotometry for the determination of nitrite in atmospheric precipitation | XING Shuai, YANG Yong, YUE Yaping | 99 |
| Principles and application status of ozone standard reference photometer | WANG Shuaibin, FAN Jie, YANG Jing, et al | 103 |
| The development of gas chromatography-mass spectrometry calibration for 4 components in nitrogen mixture gas reference material | ZHENG Liwen, DONG Liaoyu, DENG Fanfeng, et al | 110 |
| Analysis of the test methods and relevant standards for non-registered active ingredient in pesticides | FENG Dejian, XU Yang, TANG Xiangkai, et al | 116 |

Environmental Ecology Assessment

| | | |
|---|---|-----|
| Elimination method of Rayleigh scattering for three dimensional fluorescence spectra of oil pollutants | CHEN Zhikun, HUANG Wei, SHEN Xiaowei, et al | 121 |
| Purity comparison of indicative PCBs determined by gas chromatographic methods | HUANG Linyan, ZHAO Yanhui, ZHAO Yaxian, et al | 127 |
| Progress in graphitic carbon nitride based nanomaterials for photodegradation of organic contaminants | ZHU Paijin, ZHANG Yiyang, XU Shuxia | 135 |
| Simultaneously determination of 16 PAEs in human urine by GC-MS | ZHANG Li, YONG Yi, HUANG Xiang, et al | 142 |
| Evaluation of measurement uncertainty of sample tube capacity error of the seawater total alkalinity analyzer | ZHAO Hong, WANG Aijun, SHI Chaoying | 147 |
| Determination of bisphenol A in barrelled water and buckets by high performance liquid chromatography | LIU Tao, HUANG Ziyuan | 152 |
| Intelligent lightning protection and testing measures for hydropower stations | LI Sanyan, YANG Haodong, DENG Yong | 157 |