

# 净水技术

ISSN 1009-0177

CN 31-1513\TQ

CODEN JSJSAK

中国科技核心期刊

2012年华东地区优秀期刊

3

2013 Vol.32 No.3

WATER PURIFICATION TECHNOLOGY



上海三高  
SHANGHAI 3H

供水调度运行管理平台

SCADA系统

网址:www.shanghai3h.com

客服热线:+86-21-55572216

客户服务热线系统

营业收费管理系统

供水管网水力模拟系统

Datalog智能产品系列

建设

数字化水务大平台

ISSN 1009-0177



06>

9 7710 00000 7139

主管：上海市科学技术协会

主办：上海市净水技术学会

上海市城乡建设和交通委员会科学技术委员会办公室

# 目 次

## 专 论 与 综 述

- 含镉废水处理技术研究进展 ..... 常艳丽(1)  
综述高级氧化技术在废水处理中的应用 ..... 严 琼, 杨 俊(5)  
改善污泥厌氧消化性能的预处理技术 ..... 薄金贤, 朱南文, 袁海平, 等(8)

## 水 资 源 与 给 水 处 理

- 不同类型生物活性滤床对萘普生(NPX)的去除效果 ..... 雷 圣, 程秀梅, 邱江平, 等(15)  
改性麦饭石去除饮用水中的砷 ..... 常新强, 周 明, 沈 权(19)

## 污 废 水 处 理 及 回 用

- 水介质中 C60 纳米晶体颗粒对 Cu<sup>2+</sup>的吸附特性 ..... 卞为林, 张慧敏, 张 波, 等(23)  
臭氧-曝气生物滤池工艺在石化废水深度处理中的应用 ..... 桂新安, 张大鹏, 李 晖, 等(28)  
改性膨润土对污水中镉离子的吸附去除效率 ..... 张再勇, 程 励, 姚 哲(33)  
基于超滤处理工艺的洗车废水循环利用技术 ..... 马传军, 牟桂芹, 郭亚逢, 等(37)  
城市生活垃圾压缩中转站压滤污水的现状调查 ..... 黄长缨(41)  
生活垃圾焚烧厂渗沥液处理方式与分析 ..... 乐俊超(46)

## 分 析 与 监 测

- 在线固相萃取-二维高效液相-串联质谱法测定水中微囊藻毒素-LR  
..... 施 俭, 景澍闽, 陆 峰, 等(52)

## 设计与工程实例

- 商务楼宇用水量典型性调查与用水定额标准制定的依据 ..... 桂 轶(55)  
小城市污水量预测方法及相关规划参数的确定 ..... 周益洪(59)  
老港垃圾填埋渗沥液处理工艺设计方案 ..... 吴晓晖, 王声东(63)  
钢顶管工程外防腐技术的研究与应用 ..... 韩 濛(67)

## 水 环 境 治 理 与 修 复

- 青草沙水库生态护坡工程中常绿水生鸢尾定植初探 ..... 王先云, 孙静娴, 卢 宁, 等(72)  
寒溪水河道底泥疏浚固结一体化技术 ..... 董淑福, 赵由才(76)  
利用香根草吸收水体底泥中重金属 Cu 的效能分析 ..... 史春琼, 黄光团(82)

## 经 验 交 流

- 青草沙水库运行管理优化探索 ..... 陈 立, 陈蓓蓓, 张淑敏(85)  
区域二次供水优化整合技术的应用 ..... 于海涛(89)

- 广告目次 ..... (71)

# CONTENTS

## SUMMARIES AND THESES ON SPECIAL TOPICS

- Advances in Research of Technological Processes of Cadmium-Containing Wastewater Treatment ..... Chang Yanli (1)  
An Overview of Application for Advanced Oxidation Processes in Wastewater Treatment ..... Yan Qiong, Yang Jun (5)  
Technological Processes of Pretreatment of Anaerobic Digestion Improvement for Sewage Sludge ..... Lin Jinxian, Zhu Nanwen, Yuan Haiping, et al. (8)

## WATER RESOURCE AND WATER TREATMENT

- Removal Effect of Naproxen (NPX) in Sewage Water through Different Biological Activated Filter Beds ..... Lei Sheng, Cheng Xiumei, Qiu Jiangping, et al. (15)  
Removal of Arsenic in Drinking Water by Modified Maifanite Adsorption ..... Chang Xinqiang, Zhou Ming, Shen Quan (19)

## WASTEWATER TREATMENT AND REUSE

- Adsorption Characteristics of Cu<sup>2+</sup> by Nano-C60 Aggregates in Aqueous Medium ..... Bian Weilin, Zhang Huimin, Zhang Bo, et al. (23)  
Application of Ozone-Biological Aerated Filter(O<sub>3</sub>-BAF) Processes in Advanced Treatment of Petrochemical Wastewater ..... Gui Xinan, Zhang Dapeng, Li Hui, et al. (28)  
Adsorption Efficiency of Modified Calcined Bentonite for Cadmium Ion Removal in Wastewater ..... Zhang Zaiyong, Cheng Xun, Yao Zhe (33)  
Recycling and Reuse Technology of Car Washing Wastewater Based on Ultrafiltration Treatment Process ..... Ma Chuanjun, Mu Guiqin, Guo Yafeng, et al. (37)  
Investigation on Existing Circumstances of Leachate of Pressed Urban Domestic Solid Waste in Refuse Transfer Stations ..... Huang Changying (41)  
Analysis and Processing Mode for Leachate Treatment in Household Waste Incineration Plant ..... Le Junchao (46)

## WATER ANALYSIS AND MONITORING

- Determination of Microcystin-LR in Water by Online SPE Coupled with Two Dimensional HPLC-MS/MS ..... Shi Jian, Jing Shuming, Lu Feng, et al. (52)

## DESIGN AND ENGINEERING CASES

- Typicality Investigation of Water Consumption and Basis of Water Consumption Norm Standard for Commercial Buildings ..... Gui Yi (55)  
Forecasting Method of Municipal Sewage Quantity and Determination of Interrelated Parameters of Sewage Planning for a Small City ..... Zhou yihong (59)  
Design Proposal for Treatment Processes of Landfill Leachate in Laogang ..... Wu Xiaohui, Wang Shengdong (63)  
Research and Application of External Ani- Corrosion Technology for Steel Pipe in Pipe-Jacking Engineering ..... Han Meng (67)

## WATER ENVIRONMENTAL CONTROL AND RECOVERY

- Primary Exploration of Field Planting of *Iris Hexagonus* Applied to Ecological Slope Protection Engineering in Qingcaosha Reservoir ..... Wang Xianyun, Sun Jingxian, Lu Ning, et al. (72)  
Integrated Technology for Sediment Dredging and Consolidation of Hanxishui River ..... Dong Shufu, Zhao Youcai (76)  
Performance Analysis for Absorption of Heavy Metal (Cu) in Sediment of Water Body by Making Use of *Vetiveria Zizanioides* ..... Shi Chunqiong, Huang Guangtuan (82)

## EXCHANGES OF EXPERIENCES

- Exploration of Operation Management Optimization for Qingcaosha Reservoir ..... Chen Li, Chen Beibei, Zhang Shumin (85)  
Application of Optimization and Integration Technology in Regional Secondary Water Supply System ..... Yu Haitao (89)

## ADVERTISING CONTENTS