



Phosphorus recovery from wastewater by struvite crystallization: Property of aggregates



CONTENTS

Aquatic environment

- A review of environmental characteristics and effects of low-molecular weight organic acids in the surface ecosystem
Min Xiao, Fengchang Wu 935
- Review on water leakage control in distribution networks and the associated environmental benefits
Qiang Xu, Ruijing Liu, Qiuwen Chen, Ruonan Li 955
- Synthesis of carbon-coated magnetic nanocomposite (Fe₃O₄@C) and its application for sulfonamide antibiotics removal from water
Xiaolei Bao, Zhimin Qiang, Jih-Hsing Chang, Weiwei Ben, Jiuhui Qu 962
- Removal of phosphate from wastewater using alkaline residue
Yubo Yan, Xiuyun Sun, Fangbian Ma, Jiansheng Li, Jinyou Shen, Weiqing Han, Xiaodong Liu, Lianjun Wang 970
- Immunotoxic effects of an industrial waste incineration site on groundwater in rainbow trout (*Oncorhynchus mykiss*)
Nadjet Benchalgo, François Gagné, Michel Fournier 981
- Phosphorus recovery from wastewater by struvite crystallization: Property of aggregates (**Cover story**)
Zhilong Ye, Yin Shen, Xin Ye, Zhaoji Zhang, Shaohua Chen, Jianwen Shi 991
- Adaptation of microbial communities to multiple stressors associated with litter decomposition of *Pterocarya stenoptera*
Gaozhong Pu, Jingjing Tong, Aimeng Su1, Xu Ma, Jingjing Du, Yanna Lv, Xingjun Tian 1001
- Effect of alkalinity on nitrite accumulation in treatment of coal chemical industry wastewater using moving bed biofilm reactor
Baolin Hou, Hongjun Han, Shengyong Jia, Haifeng Zhuang, Qian Zhao, Peng Xu 1014
- Distribution and seasonal variation of estrogenic endocrine disrupting compounds, N-nitrosodimethylamine, and N-nitrosodimethylamine formation potential in the Huangpu River, China
Ai Zhang, Yongmei Li, Ling Chen 1023
- Effects of ferrous and manganese ions on anammox process in sequencing batch biofilm reactors
Xiaoli Huang, Dawen Gao, Sha Peng, Yu Tao 1034

Atmospheric environment

- Characteristics of secondary inorganic aerosol and sulfate species in size-fractionated aerosol particles in Shanghai
Shilei Long, Jianrong Zeng, Yan Li, Liangman Bao, Lingling Cao, Ke Liu, Liang Xu, Jun Lin, Wei Liu, Guanghua Wang, Jian Yao, Chenyan Ma, Yidong Zhao 1040
- In-vehicle VOCs composition of unconditioned, newly produced cars
Krzysztof Brodzik, Joanna Faber, Damian Łomankiewicz, Anna Gołda-Kopek 1052
- Sulfur evolution in chemical looping combustion of coal with MnFe₂O₄ oxygen carrier
Baowen Wang, Chuchang Gao, Weishu Wang, Haibo Zhao, Chuguang Zheng 1062

Terrestrial environment

- Enhancing plant-microbe associated bioremediation of phenanthrene and pyrene contaminated soil by SDBS-Tween 80 mixed surfactants
Hewei Ni, Wenjun Zhou, Lizhong Zhu 1071
- Growth and metal uptake of energy sugarcane (*Saccharum* spp.) in different metal mine tailings with soil amendments
Xin Zhang, Yongguan Zhu, Yuebin Zhang, Yunxia Liu, Shaochun Liu, Jiawen Guo, Rudan Li, Songlin Wu, Baodong Chen 1080
- A restoration-promoting integrated floating bed and its experimental performance in eutrophication remediation
Yiming Guo, Yunguo Liu, Guangming Zeng, Xinjiang Hu, Xin Li, Dawei Huang, Yunqin Liu, Yicheng Yin 1090

Environmental biology

- Microbial community functional structure in response to micro-aerobic conditions in sulfate-reducing sulfur-producing bioreactor
Hao Yu, Chuan Chen, Jincai Ma, Xijun Xu, Ronggui Fan, Aijie Wang 1099
- Degradation of dichloromethane by an isolated strain *Pandoraea pnomenusa* and its performance in a biotrickling filter
Jianming Yu, Wenji Cai, Zhuowei Cheng, Jianmeng Chen 1108
- Humic acid-enhanced electron transfer of *in vivo* cytochrome c as revealed by electrochemical and spectroscopic approaches
Jiahuan Tang, Yi Liu, Yong Yuan, Shungui Zhou 1118
- Evaluation of *Bacillus* sp. MZS10 for decolorizing Azure B dye and its decolorization mechanism
Huixing Li, Ruijing Zhang, Lei Tang, Jianhua Zhang, Zhonggui Mao 1125
- Biodegradation of pyrene by *Phanerochaete chrysosporium* and enzyme activities in soils: Effect of SOM, sterilization and aging
Cuiping Wang, Hongwen Sun, Haibin Liu, Baolin Wang 1135

Environmental health and toxicology

- Primary neuronal-astrocytic co-culture platform for neurotoxicity assessment of di-(2-ethylhexyl) phthalate
Yang Wu, Ke Li, Haoxiao Zuo, Ye Yuan, Yi Sun, Xu Yang 1145

Environmental catalysis and materials

- Characterization and reactivity of biogenic manganese oxides for ciprofloxacin oxidation
Jinjun Tu, Zhendong Yang, Chun Hu, Jiuhui Qu 1154
- Effects of particle composition and environmental parameters on catalytic hydrodechlorination of trichloroethylene
by nanoscale bimetallic Ni-Fe
Jianjun Wei, Yajing Qian, Wenjuan Liu, Lutao Wang, Yijie Ge, Jianghao Zhang, Jiang Yu, Xingmao Ma 1162
- Heterogeneous Fenton-like degradation of 4-chlorophenol using iron/ordered mesoporous carbon catalyst
Feng Duan, Yuezhu Yang, Yuping Li, Hongbin Cao, Yi Wang, Yi Zhang 1171
- Photocatalytic removal of NO and NO₂ using titania nanotubes synthesized by hydrothermal method
Nhat Huy Nguyen, Hsunling Bai 1180
- Efficient dechlorination of chlorinated solvent pollutants under UV irradiation by using the synthesized TiO₂ nano-sheets in aqueous phase
Landry Biyoghe Bi Ndong, Murielle Primaelle Ibondou, Zhouwei Miao, Xiaogang Gu,
Shuguang Lu, Zhaofu Qiu, Qian Sui, Serge Maurice Mbadinga 1188
- Biogenic C-doped titania templated by cyanobacteria for visible-light photocatalytic degradation of Rhodamine B
Jiao He, Guoli Zi, Zhiying Yan, Yongli Li, Jiao Xie, Deliang Duan, Yongjuan Chen, Jiaqiang Wang 1195
- Dyes adsorption using a synthetic carboxymethyl cellulose-acrylic acid adsorbent
Genlin Zhang, Lijuan Yi, Hui Deng, Ping Sun 1203

Serial parameter: CN 11-2629/X*1989*m*277*en*P*29*2014-5



Editorial Board of Journal of Environmental Sciences

Editor-in-Chief

Hongxiao Tang Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China

Associate Editors-in-Chief

Jiuhui Qu Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, China

Shu Tao Peking University, China

Nigel Bell Imperial College London, United Kingdom

Po-Keung Wong The Chinese University of Hong Kong, Hong Kong, China

Editorial Board

Aquatic environment

Baoyu Gao

Shandong University, China

Maohong Fan

University of Wyoming, USA

Chihpin Huang

National Chiao Tung University

Taiwan, China

Ng Wun Jern

Nanyang Environment &
Water Research Institute, Singapore

Clark C. K. Liu

University of Hawaii at Manoa, USA

Hokyong Shon

University of Technology, Sydney, Australia

Zijian Wang

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Zhiwu Wang

The Ohio State University, USA

Yuxiang Wang

Queen's University, Canada

Min Yang

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Zhifeng Yang

Beijing Normal University, China

Han-Qing Yu

University of Science & Technology of China

Terrestrial environment

Christopher Anderson

Massey University, New Zealand

Zucong Cai

Nanjing Normal University, China

Xinbin Feng

Institute of Geochemistry,
Chinese Academy of Sciences, China

Hongqing Hu

Huazhong Agricultural University, China

Kin-Che Lam

The Chinese University of Hong Kong

Hong Kong, China

Erwin Klumpp

Research Centre Juelich, Agrosphere Institute
Germany

Peijun Li

Institute of Applied Ecology,
Chinese Academy of Sciences, China

Michael Schloter

German Research Center for Environmental Health
Germany

Xuejun Wang

Peking University, China

Lizhong Zhu

Zhejiang University, China

Atmospheric environment

Jianmin Chen

Fudan University, China

Abdelwahid Mellouki

Centre National de la Recherche Scientifique
France

Yujing Mu

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Min Shao

Peking University, China

James Jay Schauer

University of Wisconsin-Madison, USA

Yuesi Wang

Institute of Atmospheric Physics,
Chinese Academy of Sciences, China

Xin Yang

University of Cambridge, UK

Environmental biology

Yong Cai

Florida International University, USA

Henner Hollert

RWTH Aachen University, Germany

Jaе-Seong Lee

Sungkyunkwan University, South Korea

Christopher Rensing

University of Copenhagen, Denmark

Bojan Sedmak

National Institute of Biology, Ljubljana

Lirong Song

Institute of Hydrobiology,
the Chinese Academy of Sciences, China

Chunxia Wang

National Natural Science Foundation of China

Gehong Wei

Northwest A & F University, China

Daqiang Yin

Tongji University, China

Zhongtang Yu

The Ohio State University, USA

Environmental toxicology and health

Jingwen Chen

Dalian University of Technology, China

Jiaying Hu

Peking University, China

Guibin Jiang

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Sijin Liu

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Tsuyoshi Nakanishi

Gifu Pharmaceutical University, Japan

Willie Peijnenburg

University of Leiden, The Netherlands

Bingsheng Zhou

Institute of Hydrobiology,
Chinese Academy of Sciences, China

Environmental catalysis and materials

Hong He

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Junhua Li

Tsinghua University, China

Wenfeng Shangguan

Shanghai Jiao Tong University, China

Yasutake Teraoka

Kyushu University, Japan

Ralph T. Yang

University of Michigan, USA

Environmental analysis and method

Zongwei Cai

Hong Kong Baptist University,
Hong Kong, China

Jiping Chen

Dalian Institute of Chemical Physics,
Chinese Academy of Sciences, China

Minghui Zheng

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Municipal solid waste and green chemistry

Pinjing He

Tongji University, China

Environmental ecology

Rusong Wang

Research Center for Eco-Environmental Sciences,
Chinese Academy of Sciences, China

Editorial office staff

Managing editor Qingcai Feng

Editors Zixuan Wang Suqin Liu Zhengang Mao

English editor Catherine Rice (USA)

JOURNAL OF ENVIRONMENTAL SCIENCES

环境科学学报(英文版)
(<http://www.jesc.ac.cn>)

Aims and scope

Journal of Environmental Sciences is an international academic journal supervised by Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences. The journal publishes original, peer-reviewed innovative research and valuable findings in environmental sciences. The types of articles published are research article, critical review, rapid communications, and special issues.

The scope of the journal embraces the treatment processes for natural groundwater, municipal, agricultural and industrial water and wastewaters; physical and chemical methods for limitation of pollutants emission into the atmospheric environment; chemical and biological and phytoremediation of contaminated soil; fate and transport of pollutants in environments; toxicological effects of terrorist chemical release on the natural environment and human health; development of environmental catalysts and materials.

For subscription to electronic edition

Elsevier is responsible for subscription of the journal. Please subscribe to the journal via <http://www.elsevier.com/locate/jes>.

For subscription to print edition

China: Please contact the customer service, Science Press, 16 Donghuangchenggen North Street, Beijing 100717, China. Tel: +86-10-64017032; E-mail: journal@mail.sciencep.com, or the local post office throughout China (domestic postcode: 2-580).

Outside China: Please order the journal from the Elsevier Customer Service Department at the Regional Sales Office nearest you.

Submission declaration

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere. The submission should be approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out. If the manuscript accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder.

Submission declaration

Submission of the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere. The publication should be approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out. If the manuscript accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder.

Editorial

Authors should submit manuscript online at <http://www.jesc.ac.cn>. In case of queries, please contact editorial office, Tel: +86-10-62920553, E-mail: jesc@263.net, jesc@rcees.ac.cn. Instruction to authors is available at <http://www.jesc.ac.cn>.

Journal of Environmental Sciences (Established in 1989)

Vol. 26 No. 5 2014

Supervised by	Chinese Academy of Sciences	Published by	Science Press, Beijing, China
Sponsored by	Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences	Distributed by	Elsevier Limited, The Netherlands
Edited by	Editorial Office of Journal of Environmental Sciences P. O. Box 2871, Beijing 100085, China Tel: 86-10-62920553; http://www.jesc.ac.cn E-mail: jesc@263.net , jesc@rcees.ac.cn	Domestic	Science Press, 16 Donghuangchenggen North Street, Beijing 100717, China Local Post Offices through China
Editor-in-chief	Hongxiao Tang	Foreign	Elsevier Limited http://www.elsevier.com/locate/jes
CN 11-2629/X	Domestic postcode: 2-580	Printed by	Beijing Beilin Printing House, 100083, China
		Domestic price per issue	RMB ¥ 110.00

ISSN 1001-0742

