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## Review or Communications

**Treatment of taste and odor causing compounds 2-methyl isoborneol and geosmin in drinking water: A critical review**

Rangesh Srinivasan, George A. Sorial..... 1

A critical review on the treatment of taste and odor compounds caused by Cyanobacterial gloom is presented in this article.

## Aquatic environment

**Methylmercury and sulfate-reducing bacteria in mangrove sediments from Jiulong River Estuary, China**

Hao Wu, Zhenhua Ding, Yang Liu, Jinling Liu, Haiyu Yan, Jiayong Pan, Liuqiang Li, Huina Lin, Guanghui Lin, Haoliang Lu.....14

Sulfate-reducing bacteria (SRB) only constitute a very small fraction in total bacteria in sediments; other microbes, rather than SRB, may also act as main Hg methylators in mangrove sediments.

**Optimization of phenol degradation by *Candida tropicalis* Z-04 using Plackett-Burman design and response surface methodology**

Jiangya Zhou, Xiaojuan Yu, Cong Ding, Zhiping Wang, Qianqian Zhou, Hao Pao, Weimin Cai .....22

Statistical experimental designs were firstly applied to optimize phenol degradation by *C. tropicalis* Z-04.

**Degradation of bisphenol-A using ultrasonic irradiation assisted by low-concentration hydrogen peroxide**

Kejia Zhang, Naiyun Gao, Yang Deng, Tsair Fuh Lin, Yan Ma, Lei Li, Minghao Sui .....31

This study provides a proof-in-concept demonstration of using ultrasonic irradiation as a promising manner for bisphenol-A treatment in water under the optimized operational conditions.

**Performance of dithiocarbamate-type flocculant in treating simulated polymer flooding produced water**

Baoyu Gao, Yuyan Jia, Yongqiang Zhang, Qian Li, Qinyan Yue .....37

The dithiocarbamate flocculant, DTC (T403), was prepared by the amine-terminated polyoxypropylene-ether compound, and the DTC agent chelating with Fe<sup>2+</sup> produced a network polymer matrix, which could capture and remove oil droplets efficiently.

**Application of magnetic particles modified with amino groups to adsorb copper ions in aqueous solution**

Yafen Lin, Huawei Chen, Kaelong Lin, Boryann Chen, Chyowsan Chiou .....44

The synthesized amine-functionalized silica magnetite was used to adsorb copper ions in an aqueous solution in a batch system, and the maximum adsorption was found to occur at pH 5.5.

## Atmospheric environment

**Potential particulate pollution derived from UV-induced degradation of odorous dimethyl sulfide**

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Suspended particles were detected to be substantially formed in the UV-induced degradation of odorous dimethyl sulfide, which implies another source of particulate pollutants in the atmosphere.

**Estimation and comparison of night-time OH levels in the UK urban atmosphere using two different analysis methods**

M. Anwar H. Khan, M. M. Nazmul Hoque, S. Shamsul Alam, M. J. Ashfold, Graham Nickless, Dudley E. Shallcross .....60

Measurement data of O<sub>3</sub>, NO<sub>x</sub>, CO, and VOCs taken from the UK NETCEN have been used to infer year round OH night-time levels in four different urban sites of the UK using the decay and steady state approximation methods.

**Experimental studies on ozonation of ethylenethiourea**

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## Terrestrial environment

**Predicting As, Cd and Pb uptake by rice and vegetables using field data from China**

Hongzhen Zhang, Yongming Luo, Jing Song, Haibo Zhang, Jiaqi Xia, Qiguo Zhao .....70

Based on paired data collection of As, Cd, and Pb concentrations in soil and crop in China, empirical models were developed and selected to establish paddy soil benchmark for Cd.

**Soil temperature and moisture sensitivities of soil CO<sub>2</sub> efflux before and after tillage in a wheat field of Loess Plateau, China**

Hongxing Zhang, Xiaoke Wang, Zongwei Feng, Junzhu Pang, Fei Lu, Zhiyun Ouyang, Hua Zheng, Wenzhao Liu, Dafeng Hui.....79

Soil CO<sub>2</sub> efflux was continuously measured *in situ* before and after the conventional tillage, it was found that the soil temperature and moisture sensitivity increased by 36.1%–37.5% and 140%–166% after tillage, respectively.

**Organic carbon accumulation capability of two typical tidal wetland soils in Chongming Dongtan, China**

Shiping Zhang, Lei Wang, Jiajun Hu, Wenquan Zhang, Xiaohua Fu, Yiquan Le, Fangming Jin .....87

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**Environmental biology**

***Bacillus* sp. CDB3 isolated from cattle dip-sites possesses two *ars* gene clusters**

Somanath Bhat, Xi Luo, Zhiqiang Xu, Lixia Liu, Ren Zhang .....95

This study reports the character of two chromosome-encoded arsenic resistant (*arc*) gene clusters cloned from *Bacillus* sp.

**First report of microcystin production in *Microcystis smithii* Komárek and *Anagnostidis* (Cyanobacteria) from a water bloom in Eastern China**

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The present investigation, for the first time, reported the isolated strains of *M. smithii* and microcystin production from *M. smithii*.

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**Resistance and biosorption mechanism of silver ions by *Bacillus cereus* biomass**

Li Li, Qing Hu, Jinghai Zeng, Hongyan Qi, Guoqiang Zhuang ..... 108

Kinetics and isotherms, and molecular genetics basis of biosorption of silver ions onto *Bacillus cereus* biomass were studied.

**Effects of metal cations on sorption-desorption of *p*-nitrophenol onto wheat ash**

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**Enhanced hepatotoxicity induced by repeated exposure to polychlorinated biphenyls and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in combination in male rats**

Yimei Wang, Chunfeng Lu, Zhiguo Sheng, Gang Liu, Ze Fu, Benzhan Zhu, Shuangqing Peng ..... 119

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**Screening of agonistic activities against four nuclear receptors in wastewater treatment plants in Japan using a yeast two-hybrid assay**

Daisuke Inoue, Koki Nakama, Kazuko Sawada, Taro Watanabe, Hisae Matsui, Kazunari Sei, Tsuyoshi Nakanishi, Michihiko Ike ..... 125

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Xiaofei Qin, Zhanfen Qin, Yan Li, Yaxian Zhao, Xijuan Xia, Shishuai Yan, Mi Tian, Xingru Zhao, Xiaobai Xu, Yongjian Yang ..... 133

Levels and tissue distributions of PBDEs in chicken from an e-waste recycling area in southeast China were investigated; furthermore, human dietary intake of PBDEs was estimated.

**Environmental catalysis and materials**

**Performance tests of newly developed adsorption/plasma combined system for decomposition of volatile organic compounds under continuous flow condition**

Koji Inoue, Hiroshi Okano, Yukihiko Yamagata, Katsunori Muraoka, Yasutake Teraoka ..... 139

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Duan Weng, Jia Li, Xiaodong Wu, Zhichun Si ..... 145

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**Fabrication and photoelectrocatalytic properties of nanocrystalline monoclinic BiVO<sub>4</sub> thin-film electrode**

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**Complete catalytic oxidation of *o*-xylene over CeO<sub>2</sub> nanocubes**

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