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Fly ash was more effective in adsorbing hydrophilic fraction of secondary-effluent related DOM than acidic fractions, and hydrophobic fraction showed a rapider adsorption than hydrophilic fraction.

**Removal of antimony from antimony mine flotation wastewater by electrocoagulation with aluminum electrodes**

Jing Zhu, Fengchang Wu, Xiangliang Pan, Jianyang Guo, Dongsheng Wen ..... 1066

Electrocoagulation with aluminum electrodes was effectively used to treat antimony-polluted flotation wastewater. The mechanism of removing antimony was also investigated.

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David G. Kelly, Ron D. Weir, Steven D. White ..... 1072

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Wendong Wang, Hua Li, Zhenzhen Ding, Xiaochang Wang ..... 1079

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**Nutrient distribution within and release from the contaminated sediment of Haihe River**

Min Wu, Suiliang Huang, Wei Wen, Xueming Sun, Xianqiang Tang, Miklas Scholz ..... 1086

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**Evaluation of adsorption capacities of humic acids extracted from Algerian soil on polyaniline for application to remove pollutants such as Cd(II), Zn(II) and Ni(II) and characterization with cavity microelectrode**

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**Biosorption of cesium(I) from aqueous solution by a novel exopolymers secreted from *Pseudomonas fluorescens* C-2: Equilibrium and kinetic studies**

Yanli Mao, Hongwei Hu, Yongsheng Yan ..... 1104

The biosorption characteristics of Cs(I) from aqueous solution using exopolymers were investigated. The developed method was successfully utilized for the removal of Cs(I) from wastewater.

**Modification of nitrifying biofilm into nitritating one by combination of increased free ammonia concentrations, lowered HRT and dissolved oxygen concentration**

Ivar Zekker, Ergo Rikmann, Toomas Tenno, Anne Menert, Vallo Lemmiksoo, Alar Saluste, Taavo Tenno, Martin Tomingas ..... 1113

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Xiaoxia Niu, Xili Li, Jihong Zhao, Yigang Ren, Yanqin Yang ..... 1122

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S. Veerasingam, R. Venkatachalapathy, S. Sudhakar, P. Raja, V. Rajeswari ..... 1129

The distribution of petroleum hydrocarbons in sediments and mollusc species was studied along Tamilnadu coast, and the anthropogenic activities affected the petroleum hydrocarbon levels in Uppanar estuarine sediments.

**Catalyzed degradation of disperse dyes by calcium alginate-pectin entrapped bitter melon (*Momordica charantia*) peroxidase**

Rukhsana Satar, Qayyum Husain ..... 1135

Calcium-alginate pectin entrapped bitter melon peroxidase was employed in the treatment of disperse dyes, with the addition of redox mediator and violuric acid, the entrapped peroxidase was found to be effective in the decolorization of the dyes.

**Developing chemical signatures of particulate air pollution in the Pearl River Delta region, China**

Mei Zheng, Yuan Cheng, Limin Zeng, Yuanhang Zhang ..... 1143

New organic tracer signatures to distinguish local emissions from regional impacts in Hong Kong aerosol was developed.

## Atmospheric environment

**Ozone sensitivity analysis with the MM5-CMAQ modeling system for Shanghai**

Li Li, Changhong Chen, Cheng Huang, Haiying Huang, Gangfeng Zhang, Yangjun Wang, Minghua Chen, Hongli Wang, Yiran Chen, D. G. Streets, Jiamo Fu ..... 1150

Indicators  $O_3/(NO_y-NO_x)$  and  $H_2O_2/HNO_3$  were applied to study ozone sensitivity in Shanghai, the results showed ozone is sensitive to VOCs in urban areas and sensitive to  $NO_x$  sensitive in rural areas.

## Terrestrial environment

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Jinfei Feng, Yinxi Wang, Jian Zhao, Liqun Zhu, Xinmin Bian, Weijian Zhang ..... 1158

Considerable amount of Pb, Cd and Zn in rice plants along highway were attributed to the foliar uptake, while Cr and Cu were mainly derived from the root uptake.

## Environmental biology

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Hai Yan, Xiaojing Yang, Jian Chen, Chunhua Yin, Chengbin Xiao, Hao Chen ..... 1165

Efficient reaction between aniline and enzymes of *Delftia* sp. XYJ6 on the surface of carbon nanotubes played a key role in the rapid enzymatic biodegradation of aniline.

**Assessment of air pollution genotoxicity by RAPD in *Evernia prunastri* L. Ach. from around iron-steel factory in Karabük, Turkey**

Demet Cansaran-Duman, Orhan Atakol, Sümer Aras ..... 1171

The level of air pollution with lichens in iron-steel factory was biomonitoring, and the potential genotoxic agents around this pollution source was studied.

## Environmental health and toxicology

**Estrogenic effects of water from the Yangtze River (Nanjing section) on goldfish (*Carassius auratus*) after an early life stage exposure**

Wenting Song, Guanghua Lu, Pengde Qi, Chao Wang ..... 1179

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**Characterization of arsenate transformation and identification of arsenate reductase in a green alga *Chlamydomonas reinhardtii***

Xixiang Yin, Lihong Wang, Guilan Duan, Guoxin Sun ..... 1186

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**A fate model of pathogenic viruses in a composting toilet based on coliphage inactivation**

Shinobu Kazama, Narue Tameike, Naoko Nakagawa, Masahiro Otaki ..... 1194

Four species of DNA and RNA coliphages were used as model viruses to estimate the infection risk posed by viruses.

**Polybrominated diphenyl ether (PBDE) in blood from children (age 9–12) in Taizhou, China**

Xiaoyou Zhang, Xianli Ruan, Minchan Yan, Yaxian Zhao, Wuji Wei, Zhanfen Qin, Yongjian Yang, Haiming Xu, Yan Li ..... 1199

The levels and congener profiles of PBDEs in blood samples from children in Taizhou countryside were investigated, it was found that the PBDEs levels were lower than that of children in USA, but close to European and Asia general population levels.

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## Environmental catalysis and materials

### Preparation methods and thermal stability of Ba-Mn-Ce oxide catalyst for NO<sub>x</sub>-assisted soot oxidation

Xiaodong Wu, Fan Lin, Lei Wang, Duan Weng, Zhou Zhou ..... 1205

Barium addition does not prevent the separation of MnO<sub>x</sub>-CeO<sub>2</sub> solid solutions but inhibits the sintering of oxide crystallites, ensuring a high NO<sub>x</sub>-assisted soot oxidation activity of the aged catalyst.

### Stabilization of Fe<sup>0</sup> nanoparticles with silica fume for enhanced transport and remediation of hexavalent chromium in water and soil

Yongchao Li, Tielong Li, Zhaohui Jin ..... 1211

Silica fume-supported Fe<sup>0</sup> nanoparticles prepared using borohydride reduction of an aqueous iron salt in the presence of a support material had a high Cr (VI) removal and transport ability in soils.

### Preparation of InYO<sub>3</sub> catalyst and its application in photodegradation of molasses fermentation wastewater

Zuzeng Qin, Yi Liang, Zili Liu, Weiqing Jiang ..... 1219

InYO<sub>3</sub> photocatalyst was prepared by precipitation method and applied in degradation of molasses fermentation wastewater.

## Municipal solid waste and green chemistry

### Effects of calcined aluminum salts on the advanced dewatering and solidification/stabilization of sewage sludge

Guangyin Zhen, Xiaofei Yan, Haiyan Zhou, Hua Chen, Tiantao Zhao, Youcai Zhao ..... 1225

A novel solidifier of aluminate salts owing to the outstanding pozzolanic activity, prepared in this study, could rapidly dewater and solidify/stabilize sewage sludge making the landfill operation possible.

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