

# Soil & Sediment Contamination

## Table of Contents

### Volume 24 • Issue 1 • 2015

Characterization of Heavy Metal Fractions in Agricultural Soils by Sequential Extraction Procedure: The Relationship Between Soil Properties and Heavy Metal Fractions <b>Ali Sungur, Mustafa Soylak, Erkan Yilmaz, Selehattin Yilmaz, and Hasan Ozcan</b> . . . . .	1
Metal Removal from Contaminated Soils Through Biobleaching with Oxidizing Bacteria and Rhamnolipid Biosurfactants <b>Mayri A. Diaz, Isora Urdaneta De Ranson, Blas Dorta, Ibrahim M. Banat, Maria L. Blazquez, Felisa Gonzalez, Jesús A. Muñoz, and Antonio Ballester</b> . . . . .	16
Application of Box-Behnken Design to Hybrid Electrokinetic-Adsorption Removal of Mercury from Contaminated Saline-Sodic Clay Soil <b>Mohammed H. Essa, Nuhu Dalhat Mu'azu, Salihu Lukman, and A. Bukhari</b> . . . . .	30
Assessment of Toxic Metal Contamination of Bottom Sediments in Water Bodies in Urban Areas <b>Martyna A. Rzetala</b> . . . . .	49
Specific Surface Area Effect on Adsorption of Chlorpyrifos and TCP by Soils and Modelling <b>Funda Cimen Tureli, Sonay Sozudogru Ok, and Sabine Goldberg</b> . . . . .	64
Pollution Assessment and Potential Sources of Heavy Metals in Agricultural Soils around Four Pb/Zn Mines of Shaoguan City, China <b>Mi Zhou, Bin Liao, Wensheng Shu, Bing Yang, and Chongyu Lan</b> . . . . .	76
Heavy Metal Speciation in Sediments and the Associated Ecological Risks in Rural Rivers in Southern Jiangsu Province, China <b>Luji Bo, Dejian Wang, Gang Zhang, and Can Wang</b> . . . . .	90

### Volume 24 • Issue 2 • 2015

Adsorption of PAHs on the Sediments from the Yellow River Delta as a Function of Particle Size and Salinity <b>Jianbing Wang, Can Wang, Qiuying Huang, Feng Ding, and Xuwen He</b> . . . . .	103
Copper Bioavailability to Beans ( <i>Phaseolus vulgaris</i> ) in Long-Term Cu-Contaminated Soils, Uncontaminated Soils, and Recently Cu-Spiked Soils <b>Y. H. Senkondo, E. Semu, and F. M. G. Tack</b> . . . . .	116
Use of Experimental Factorial Design for Optimization of Hexavalent Chromium Removal by a Bacterial Consortium: Soil Microcosm Bioremediation <b>Nezha Tahri Joutey, Wifak Bahafid, Hanane Sayel, Hajar Maatâoui, Faouzi Errachidi, and Naïma El Ghachtouli</b> . . . . .	129
Electrochemical Stimulation of PAH Biodegradation in Sediment <b>Fei Yan, Wu Chen, and Danny Reible</b> . . . . .	143
Remediation of Explosive-Contaminated Soils: Alkaline Hydrolysis and Subcritical Water Degradation <b>Seok-Young Oh and Dong-Sik Shin</b> . . . . .	157
Assessment of Heavy Metal Pollution in Water and Sediments from the Ghalechay River, Baychebagh Copper Mine Area, Iran <b>Fereydoun Ghazban, Abdolhossien Parizanganeh, Abbasali Zamani, and Behzad Taghilou</b> . . . . .	172

Effects of Soil Properties and Flooding on the Mobility and Transformation of Mercury in a Temperate Riparian Wetland Y. R. Zhang, R. Q. Wang, T. Xue, X. L. Ge, and J. Liu . . . . .	191
Genomic Analysis and Comparative Hexavalent Chromium Reduction Potential of Predominant <i>Bacillus</i> species Isolated from Chromite Mine Soil S. Das, S. Pandey, S. K. Pradhan, M. Sudarshan, A. Chakraborty, and H. N. Thatoi . . . . .	206

### Volume 24 • Issue 3 • 2015

Mobility and Translocation of Heavy Metals from Mine Tailings in Three Plant Species after Amendment with Compost and Biosurfactant Martha Barajas-Aceves, Dante Camarillo-Ravelo, and Refugio Rodríguez-Vázquez . . . . .	223
Short-Term Response of Soil Enzyme Activity and Soil Respiration to Repeated Carbon Nanotubes Exposure Fei He, Hui Wang, Qinglin Chen, Baoshan Yang, Yongchao Gao, and Lihong Wang . . . . .	250
Assessment of Heavy Metal Enrichment, Bioavailability, and Controlling Factors in Sediments of Taihu Lake, China Ying Liu, Yuke Peng, Dongmei Yue, Qian Yin, and Lin Xiao . . . . .	262
Adsorption Behavior of Tween 80 on Soil in the Presence of CdCl <sub>2</sub> and DDT Lian Ming, Weiyun Lin, Baiyu Zhang, Yueming Li, Guanzhu Wang, and Ping Guo . . . . .	276
Metal Pollution Assessment in Sediments of the Southeastern Black Sea Coast of Turkey Nigar Alkan, Ali Alkan, Ufuk Akbaş, and Andrew Fisher . . . . .	290
Assessing the Mutagenic Potential of Surface Sediments from Beijing Guanting Reservoir to <i>Salmonella typhimurium</i> Wenjun Fu, Xinhui Liu, Wenwen Gong, and Jing Hou . . . . .	306
The Contents of Selected Risk Elements and Organic Pollutants in Soil and Vegetation within a Former Military Area Aneta Sládková, Jiřina Száková, Martina Havelcová, Jana Najmanová, and Pavel Tlustoš . . . . .	325
Polycyclic Aromatic Hydrocarbons (PAHs) Pollution in Agricultural Soil in Tianjin, China Xiaolong Shao, Yaping Xu, Wen Zhang, and Jungang Lv . . . . .	343

### Volume 24 • Issue 4 • 2015

Effects of EDTA and EDDS on Heavy Metal Activation and Accumulation of Metals by Soybean in Alkaline Soil Ye Zhao, Ge Mao, Hu Hongxia, and Li Gao . . . . .	353
Metal Contamination in Sediment of One of the Upper Reaches of the Yangtze River: Mianyuan River in Longmenshan Region, Southwest of China Zeming Shi, Xinyu Wang, and Shijun Ni . . . . .	368
TOPSIS-Based Screening Method of Soil Remediation Technology for Contaminated Sites and its Application Liping Bai, Yun Luo, Dengrong Shi, Xuefeng Xie, Li Liu, Youya Zhou, Zengguang Yan, and Fasheng Li . . . . .	386

Degradation of Metolachlor in Tobacco Field Soil Xiaomao Wu, Youhua Long, Jiaohong Li, Rongyu Li, Renxiang Liu, and Ming Li . . . . .	398
Biochemical and RAPD Analysis of <i>Hibiscus rosa sinensis</i> Induced by Heavy Metals A. M. Bhaduri, and M. H. Fulekar . . . . .	411
Chemical Extraction of Arsenic and Heavy Metals from Contaminated Soils Under High Temperature and Pressure Conditions in Abandoned Mines in South Korea Seok-Young Oh, and Myong-Keun Yoon . . . . .	423
Sources and Ecological Risk Assessment of Heavy Metal(loid)s in Agricultural Soils of Huzhou, China Chen Jiang, Zheng Jun, and Lihong Gao . . . . .	437
Single and Joint Toxicity of Sulfamonomethoxine and Cadmium on Three Agricultural Crops Caixia Jin, Jing Fan, Rui Liu, and Ruilian Sun . . . . .	454