

# Soil & Sediment Contamination

## Table of Contents

### Volume 22 • Issue 1 • 2013

Spatial Distribution of Heavy Metals in Soil and Flora Associated with the Glass Industry in North Central India: Implications for Phytoremediation <b>Rohan D'Souza, Mayank Varun, João Pratas, and M. S. Paul</b> . . . . .	1
Phosphorus Movement and Retention by Two Calcareous Soils <b>Zahra Kolahchi and Mohsen Jalali</b> . . . . .	21
Effects of Soil Components and Liming Effect of CCA-Wood Ash upon Leaching of Cu, Cr, and As from CCA-Wood Ash in Ultisol Soil <b>John D. Harden and Robert E. Pitt</b> . . . . .	39
Kinetic Extractions of Nickel and Lead from Some Contaminated Calcareous Soils <b>Mohsen Jalali and Samaneh Sajadi Tabar</b> . . . . .	56
Complex Interaction and Adsorption of Glyphosate and Lead in Soil <b>You-Bin Si, Yan Xiang, Chao Tian, Xiong-Yuan Si, Jing Zhou, and Dong-Mei Zhou</b> . . . . .	72
Cometabolic Degradation of Trichloroethylene by Single- and Two-Phase Systems <b>Tareq Abu Hamed, Emine Bayraktar, Tanju Mehmetoglu, and Ülkü Mehmetoglu</b> . . . . .	85
Mercury Uptake by Modified Mackinawite <b>Marcia R. M. Chaves, Kalliat T. Valsaraj, Robert P. Gambrell, Ronald D. Delaune, and Pedro M. Buchler</b> . . . . .	95
Distribution of Arsenic, Antimony, and Thallium in Soil in Kavadarci and its Surroundings, Republic of Macedonia <b>Trajče Stafilov, Robert Šajin, and Jasminka Alijagić</b> . . . . .	105

### Volume 22 • Issue 2 • 2013

Distribution of Phthalate Esters in Sediments of Kaohsiung Harbor, Taiwan <b>Chiu-Wen Chen, Chih-Feng Chen, and Cheng-Di Dong</b> . . . . .	119
Using Lanthanum, Neodymium, and Thorium as Conservative Indexing Elements to Indicate Soil Lead Deposition <b>Michael Aide, Donn Beighley, Indi Braden, David Mauk, Wesley Mueller, Sven Svenson, and Julie Weathers</b> . . . . .	132
Organochlorine, Organophosphoric and Organotin Contaminants, Aromatic and Aliphatic Hydrocarbons and Heavy Metals in Sediments of the Ports from the Polish Part of the Vistula Lagoon (Baltic Sea) <b>Marta Staniszevska, Helena Boniecka, and Anna Gajecka</b> . . . . .	151
Soil Microbial Community Response to Nitrobenzene Exposure for a <i>Spartina</i> Wetland <b>Aihui Chen, Bo Xiao, Huixing Liang, Cheng Ding, and Guofang Jiang</b> . . . . .	174
Modification of PAHs Biodegradation with Humic Compounds <b>Roshanak Rezaei Kalantary, Ahmad Badkoubi, Anoushiravan Mohseni-Bandpi, Ali Esrafil, Sahand Jorfi, Emad Dehghanifard, and Mohammad Mehdi Baneshi</b> . . . . .	185

Improving the Electrokinetic Remediation of Nickel-, Cadmium-, and Lead-contaminated Sediment <b>Ljiljana Rajić, Božo Dalmacija, Svetlana Ugarčina Perović, Vesna Pešić, Milena Dalmacija, Mile Klačnja, Milena Bečelić Tomin, and Malcolm Watson</b> . . . . .	199
Lead Retention by Soils at Field Moisture Contents <b>Sudhakar M. Rao, Kumar Gaurave, and Ayyavoo Sarvanan</b> . . . . .	208
Effect of Soil Fabric on Transport of a LNAPL through Unsaturated Fine-Grained Soils: A Centrifugal Model Study <b>Amin Yousefnia Pasha, Esmail Aflaki, Liming Hu, and Jay N. Meegoda</b> . . . . .	223

### Volume 22 • Issue 3 • 2013

Bioaccumulation and Physiological Response of Five Willows to Toxic Levels of Cadmium and Zinc <b>Sim-Hee Han, Du-Hyun Kim, and Soo-Jeong Shin</b> . . . . .	241
Geochemical Evidence of Anthropogenic Impacts in Sediment Cores from Mudflats of a Tropical Estuary, Central West Coast of India <b>K. Tomchou Singh, G. N. Nayak, and Lina L. Fernandes</b> . . . . .	256
Aerobic Cr(VI) Reduction by Bacteria in Culture and Soil Conditions <b>Maria Chrysochoou, Xiaolong Zhang, and José A. Amador</b> . . . . .	273
Assessment of the Genotoxic Potential of Sediments Contaminated with POPs and Agricultural Soils Using <i>Vicia faba</i> Micronucleus Assay <b>Libertad Juárez-Santacruz, Edelmira García-Nieto, Rogelio Costilla-Salazar, Elizabeth García-Gallegos, Claudia Coronel-Olivares, Madaf Gómez-Camarillo, and Juan Gaytán-Oyarzún</b> . . . . .	288
Evaluation of Sediment Toxicity in Kaohsiung Harbor, Taiwan <b>Chih Feng Chen, Cheng Di Dong, and Chiu Wen Chen</b> . . . . .	301
Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Sediments of Lake Manzala, Egypt <b>Assem O. Barakat, Alaa Mostafa, Nadia B. El-Sayed, Terry L. Wade, and Stephen T. Sweet</b> . . . . .	315
Determination of Glyphosate and AMPA in Three Representative Agricultural Austrian Soils with a HPLC-MS/MS Method <b>Gorana Rampazzo Todorovic, Axel Mentler, Maximilian Popp, Stefan Hann, Gunda Köllensperger, Nicola Rampazzo, and Winfried E.H. Blum</b> . . . . .	332
Application of Semipermeable Membrane Devices (SPMDs) and Benthic Mussels to Evaluate the Bioavailability of Sediment-associated DDTs <b>Zhonghua Zhao, Lu Zhang, Jinglu Wu, and Chengxin Fan</b> . . . . .	351

### Volume 22 • Issue 4 • 2013

Metabolism of Atrazine in Liquid Cultures and Soil Microcosms by <i>Nocardioides</i> Strains Isolated from a Contaminated Nigerian Agricultural Soil <b>Ayodele E. Omotayo, Matthew O. Ilori, Mark Radosevich, and Olukayode O. Amund</b> . . . . .	365
--	-----

Use of <i>Cordia Africana</i> in the Phytostabilization of Substrates from Excavations of the Ore Courtyard at the Port of Itaguai, Brazil <b>Ana Carolina Callegario Pereira, Nelson Moura Brasil do Amaral Sobrinho, Alfredo Tolón-Becerra, Marcio Osvaldo Lima Magalhães, Nelson Mazur, and Xavier Lastra-Bravo</b> . . . . .	376
Soil Heavy Metal Pollution Assessment Near the Largest Landfill of China <b>Chang Liu, Jun Cui, Guofu Jiang, Xiaofeng Chen, Li Wang, and Changming Fang</b> . . . . .	390
Tebuconazole Sorption in Contrasting Soil Types <b>Eva Čadková, Michael Komárek, Regina Kaliszová, Aleš Vaněk, and Miluše Balíková</b> . . . . .	404
Assessment on Pollution by Heavy Metals and Arsenic Based on Surficial and Core Sediments in the Cam River Mouth, Haiphong Province, Vietnam <b>Huu Hieu Ho, Rudy Swennen, Valérie Cappuyns, Elvira Vassilieva, Gerda Neyens, Mustafa Rajabali, and Tan Van Tran</b> . . . . .	415
Lab-Scale Treatability Tests for the Thermal Desorption of Hydrocarbon-Contaminated Soils <b>Fabio Tatàno, Filippo Felici, and Filippo Mangani</b> . . . . .	433
Effect of Drying Process on Heavy Metals Fractionation of Contaminated Sludge for Land Application <b>Dominica D. Dacera and Sandhya Babel</b> . . . . .	457
Influence of the Interactions Between Black Carbon and Soil Constituents on the Sorption of Pyrene <b>Wen Zhang, Hongwen Sun, and Lei Wang</b> . . . . .	469