

Volume 80, 1 June 2012

CONTENTS

REGULAR ARTICLES

- 1 A quantitative structure–property relationship analysis of soot–water partition coefficients for persistent organic pollutants**
Hui-Ying Xu, Jian-Wei Zou, Jian-Qing Min and Wei Wang
- 6 Subchronic exposure to atrazine induces biochemical and histopathological changes in the gills of a Neotropical freshwater fish, *Prochilodus lineatus***
M.G. Paulino, N.E.S. Souza and M.N. Fernandes
- 14 Protective effect of *Withania somnifera* against radiation-induced hepatotoxicity in rats**
Heba Hosny Mansour and Hafez Farouk Hafez
- 20 *Arundo donax* as a potential biomonitor of trace element contamination in water and sediment**
Giuseppe Bonanno
- 28 Brassinosteroids induce plant tolerance against phenanthrene by enhancing degradation and detoxification in *Solanum lycopersicum* L.**
Golam Jalal Ahammed, Chun-Juan Gao, Joshua Otieno Ogweno, Yan-Hong Zhou, Xiao-Jian Xia, Wei-Hua Mao, Kai Shi and Jing-Quan Yu
- 37 Structural changes in freshwater fish and chironomids exposed to bacterial exotoxins**
J.W. Lewis, N.J. Morley, M. Ahmad, G.L. Challis, R. Wright, R. Bicker and D. Morrirt
- 45 A multibiomarker approach in juvenile turbot, *Scophthalmus maximus*, exposed to contaminated sediments**
E. Kerambrun, F. Henry, A. Marechal, W. Sanchez, C. Minier, I. Filipuci and R. Amara
- 54 Toxic effects of PCDD/Fs mixtures on *Eisenia andrei* earthworms**
Hayet Belmeskine, Sami Haddad, Louise Vandelac, Sébastien Sauvé and Michel Fournier
- 60 Exogenous nitric oxide donor protects *Artemisia annua* from oxidative stress generated by boron and aluminium toxicity**
Tariq Aftab, M. Masroor A. Khan, M. Naeem, Mohd. Idrees, Moinuddin, Jaime A. Teixeira da Silva and M. Ram
- 69 Toxicity effects of olive-mill wastewater on growth, photosynthesis and pollen morphology of spinach plants**
Maria Asfi, Georgia Ouzounidou, Sampson Panajiotidis, Ioannis Therios and Michael Moustakas
- 76 Blood plasma clinical–chemical parameters as biomarker endpoints for organohalogen contaminant exposure in Norwegian raptor nestlings**
Christian Sonne, Jan O. Bustnes, Dorte Herzke, Veerle L.B. Jaspers, Adrian Covaci, Igor Eulaers, Duncan J. Halley, Truls Moum, Manuel Ballesteros, Marcel Eens, Rolf A. Ims, Sveinn A. Hanssen, Kjell E. Erikstad, Trond V. Johnsen, Frank F. Rigét, Asger L. Jensen and Mads Kjelgaard-Hansen
- 84 Ecological risk assessment of on-site soil washing with iron(III) chloride in cadmium-contaminated paddy field**
Takashi Nagai, Takeshi Horio, Atsushi Yokoyama, Takashi Kamiya, Hiroyuki Takano and Tomoyuki Makino
- 91 Acute toxicity of butachlor and atrazine to freshwater green alga *Scenedesmus obliquus* and cladoceran *Daphnia carinata***
Hongzhi He, Jing Yu, Guikui Chen, Wenyang Li, Jinbo He and Huashou Li
- 97 Automated high-throughput *Vibrio fischeri* assay for (eco)toxicity screening: Application to ionic liquids**
Paula C.A.G. Pinto, Susana P.F. Costa, José L.F.C. Lima and M. Lúcia M.F.S. Saraiva

- 103 **Oxidative stress responses in different organs of carp (*Cyprinus carpio*) with exposure to ZnO nanoparticles**
Linhua Hao and Lei Chen
- 111 **Variation in effects of four OP insecticides on photosynthetic pigment fluorescence of *Chlorella vulgaris* Beij**
Sridevi Jena, S. Acharya and P.K. Mohapatra
- 118 **Altered quantities and *in vivo* activities of cholinesterase from *Daphnia magna* in sub-lethal exposure to organophosphorus insecticides**
Hongcui Liu, Bingqiang Yuan and Shaonan Li
- 126 **Genotoxic potential of arsenic at its reference dose**
V.P. Kesari, Amod Kumar and P.K. Khan
- 132 **The growth, photosynthesis and antioxidant defense responses of five vegetable crops to phenanthrene stress**
Golam Jalal Ahammed, Meng-Meng Wang, Yan-Hong Zhou, Xiao-Jian Xia, Wei-Hua Mao, Kai Shi and Jing-Quan Yu
- 140 **Cytotoxic and genotoxic effects of high-frequency electromagnetic fields (GSM 1800MHz) on immature and mature rats**
Vedat Şekeroğlu, Ayşegül Akar and Zülal Atlı Şekeroğlu
- 145 **Effect of water management, arsenic and phosphorus levels on rice in a high-arsenic soil–water system: II. Arsenic uptake**
A.S.M.H.M. Talukder, C.A. Meisner, M.A.R. Sarkar, M.S. Islam, K.D. Sayre, J.M. Duxbury and J.G. Lauren
- 152 **Linking embryo toxicity with genotoxic responses in the freshwater snail *Physa acuta*: Single exposure to benzo(a)pyrene, fluoxetine, bisphenol A, vinclozolin and exposure to binary mixtures with benzo(a)pyrene**
Paloma Sánchez-Argüello, Natalia Aparicio and Carlos Fernández
- 161 **Utility of bioassays (lettuce, red clover, red fescue, Microtox, MetSTICK, *Hyalella*, bait lamina) in ecological risk screening of acid metal (Zn) contaminated soil**
E. Emily V. Chapman, Stephanie Hedrei Helmer, Göran Dave and John D. Murimboh
- 172 **Antioxidant enzyme activities as biomarkers of Zn pollution in fluvial biofilms**
Berta Bonet, Natàlia Corcoll and Helena Guasch
- 179 **Associations between circulating levels of bisphenol A and phthalate metabolites and coronary risk in the elderly**
Lena Olsén, Lars Lind and P. Monica Lind
- 184 **Thallium in fractions of sediments formed during the 2004 tsunami in Thailand**
Zenon Lukaszewski, Bozena Karbowska, Włodzimierz Zembrzuski and Marcin Siepak
- 190 **Defining reference values of trace elements in the tear film: Diagnostic methods and possible applications**
F. Semeraro, C. Costagliola, A. Cancarini, E. Gilberti, E. Tosco and P. Apostoli
- 195 **Growth inhibition and stimulation of *Shewanella oneidensis* MR-1 by surfactants and calcium polysulfide**
Kathryn L. Bailey, Fred Tilton, Danielle P. Jansik, Sarina J. Ergas, Matthew J. Marshall, Ann L. Miracle and Dawn M. Wellman
- 203 **Acute exposure to the insecticide *O,S*-dimethyl phosphoramidothioate (methamidophos) leads to impairment of cardiovascular reflexes in rats**
Gabriella Xavier Maretto, Cristina Paula do Nascimento, Luciana Mesquita Passamani, Luiz Carlos Schenberg, Tadeu Uggere de Andrade, Suely Gomes Figueiredo, Hélder Mauad and Karla Nívea Sampaio
- 208 **Occurrence and risks of antibiotics in the Laizhou Bay, China: Impacts of river discharge**
Ruijie Zhang, Gan Zhang, Qian Zheng, Jianhui Tang, Yingjun Chen, Weihai Xu, Yongde Zou and Xiaoxiang Chen
- 216 **Nano-silver induces dose-response effects on the nematode *Caenorhabditis elegans***
Lea Ellegaard-Jensen, Keld Alstrup Jensen and Anders Johansen
- 224 **The combined effects of UV-B radiation and herbicides on photosynthesis, antioxidant enzymes and DNA damage in two bloom-forming cyanobacteria**
Lanzhou Chen, Mu Xie, Yonghong Bi, Gaohong Wang, Songqiang Deng and Yongding Liu
- 231 **Nickel induces hyperglycemia and glycogenolysis and affects the antioxidant system in liver and white muscle of goldfish *Carassius auratus* L.**
Olga I. Kubrak, Bohdana M. Rovenko, Viktor V. Husak, Janet M. Storey, Kenneth B. Storey and Volodymyr I. Lushchak

- 238 **Do interspecies correlation estimations increase the reliability of toxicity estimates for wildlife?**
Laura Golsteijn, Harrie W.M. Hendriks, Rosalie van Zelm, Ad M.J. Ragas and Mark A.J. Huijbregts
- 244 **Accumulation of 20 elements in great cormorant (*Phalacrocorax carbo*) and its main prey, common carp (*Cyprinus carpio*) and Prussian carp (*Carassius gibelio*)**
Stefan Skoric, Zeljka Visnjić-Jeftic, Ivan Jaric, Vesna Djikanovic, Branislav Mickovic, Miroslav Nikcevic and Mirjana Lenhardt
- 252 **Dissipation of pyraclostrobin and its metabolite BF-500-3 in maize under field conditions**
Xiangwei you, Congyun liu, Fengmao liu, Yanping liu and Jiannan dong
- 258 **The toxicity of cadmium (Cd²⁺) towards embryos and pro-larva of soldatov's catfish (*Silurus soldatovi*)**
Hui Zhang, Hongbin Cao, Yaobin Meng, Guanghai Jin and Meilin Zhu
- 266 **Are antioxidant and transcriptional responses useful for discriminating between chemo- and radiotoxicity of uranium in the crayfish *Procambarus clarkii*?**
Simone Al Kaddissi, Sandrine Frelon, Antonia-Concetta Elia, Alexia Legeay, Patrice Gonzalez, Frédéric Coppin, Daniel Orjollet, Virginie Camilleri, Karine Beaugelin-Seiller, Rodolphe Gilbin and Olivier Simon
- 273 **Docking and QSAR study on the binding interactions between polycyclic aromatic hydrocarbons and estrogen receptor**
Fei Li, Hui Feng Wu, Lianzhen Li, Xuehua Li, Jianmin Zhao and Willie J.G.M. Peijnenburg
- 280 **Environmental exposure to organophosphate pesticides: Assessment of endocrine disruption and hepatotoxicity in pregnant women**
A. Cecchi, M.G. Rovedatti, G. Sabino and G.G. Magnarelli
- 288 **Report of toxic shock syndrome toxin 1 (TSST-1) from *Staphylococcus aureus* isolated in food handlers and surfaces from foodservice establishments**
I. Sospedra, J. Mañes and J.M. Soriano
- 291 **Phytoremediation potential of duckweed (*Lemna minor* L.) in degradation of C.I. Acid Blue 92: Artificial neural network modeling**
A.R. Khataee, A. Movafeghi, S. Torbati, S.Y. Salehi Lisar and M. Zarei
- 299 **Assessment of metal bioavailability in smelter-contaminated soil before and after lime amendment**
Rabindra Bade, Sanghwa Oh and Won Sik Shin
- 308 **Predicting multiple ecotoxicological profiles in agrochemical fungicides: A multi-species chemoinformatic approach**
Alejandro Speck-Planche, Valeria V. Kleandrova, Feng Luan and M. Natália D.S. Cordeiro
- 314 **Age differential response of *Hyalella curvispina* to a cadmium pulse: Influence of sediment particle size**
García M.E., Rodríguez Capítulo A. and Ferrari L.
- 321 **Influence of activated carbon and biochar on phytotoxicity of air-dried sewage sludges to *Lepidium sativum***
Ptryk Oleszczuk, Marcin Rycaj, Johannes Lehmann and Gerard Cornelissen
- 327 **Estrogenic potential of benzotriazole on marine medaka (*Oryzias melastigma*)**
He Tangtian, Liang Bo, Liu Wenhua, Paul K.S. Shin and Rudolf S.S. Wu
- 333 **Metal and metalloid levels and bio-accumulation characteristics in soil, sediment, land plants and hippopotami (*Hippopotamus amphibius* L) from the South Luangwa National Park, Zambia**
Shouta M.M. Nakayama, Yoshinori Ikenaka, Kaampwe Muzandu, Kennedy Choongo, Ethel M'kandawire, Jun Yasuda and Mayumi Ishizuka
- 339 **Biomarker measurements in *Trifolium repens* and *Eisenia fetida* to assess the toxicity of soil contaminated with landfill leachate: A microcosm study**
N. Manier, F. Brulle, F. Le Curieux, F. Vandenbulcke and A. Deram
- 349 **Metal contents in *Centaureum erythraea* and its biometry at various levels of environmental pollution**
Anna Brudzińska-Kosior, Grzegorz Kosior, Aleksandra Samecka-Cymerman, Krzysztof Kolon, Lucyna Mróz and Alexander J. Kempers
- 355 **Cumulative ecological impacts of two successive annual treatments of imidacloprid and fipronil on aquatic communities of paddy mesocosms**
D. Hayasaka, T. Korenaga, K. Suzuki, F. Saito, F. Sánchez-Bayo and K. Goka

- 363 Development of a harpacticoid copepod bioassay: Selection of species and relative sensitivity to zinc, atrazine and phenanthrene**
Tristan J. Stringer, Chris N. Glover, Vaughan Keesing, Grant L. Northcott and Louis A. Tremblay
- 372 Effects of herbicides and the chytrid fungus *Batrachochytrium dendrobatidis* on the health of post-metamorphic northern leopard frogs (*Lithobates pipiens*)**
Linda J. Paetow, J. Daniel McLaughlin, Roger I. Cue, Bruce D. Pauli and David J. Marcogliese
- 381 The protective role of vitamin E on the fatty acid composition of phospholipid structure in gill and liver tissues of *Oreochromis niloticus* exposed to deltamethrin**
Elif Ipek Cengiz, Yeter Kan, Veysi Kizmaz, Mehmet Başhan and Mahmut Yanar
- 386 Effects of lime and compost on earthworm (*Eisenia fetida*) reproduction in copper and arsenic contaminated soils from the Puchuncaví Valley, Chile**
Alexander Neaman, Soledad Huerta and Sébastien Sauvé
- 393 Model evaluation of plant metal content and biomass yield for the phytoextraction of heavy metals by switchgrass**
Bo-Ching Chen, Hung-Yu Lai and Kai-Wei Juang
- CORRIGENDUM***
- 401 Corrigendum to “Early life developmental effects of marine persistent organic pollutants on the sea urchin *Psammechinus miliaris*” [Ecotoxicol. Environ. Saf. 74 (2011) 2182–2192]**
Henrique M.R. Anselmo, Lina Koerting, Sarah Devito, Johannes H.J. van den Berg, Marco Dubbeldam, Christiaan Kwadijk and Albertinka J. Murk