

Volume 93, 1 July 2013

## CONTENTS

### **ECOTOXICOLOGY**

#### *Regular Articles*

- 1** **Effects of periplocoside X on midgut cells and digestive enzymes activity of the soldiers of red imported fire ant**  
Yan Li and Xin-Nian Zeng
- 7** **Effects of atrazine and chlorpyrifos on the production of nitric oxide and expression of inducible nitric oxide synthase in the brain of common carp (*Cyprinus carpio* L.)**  
Liang-Liang Wang, Tao Liu, Chao Wang, Fu-Qing Zhao, Zi-Wei Zhang, Hai-Dong Yao, Hou-Juan Xing and Shi-Wen Xu
- 13** **Effects of the herbicide atrazine in neotropical catfish (*Rhamdia quelen*)**  
M. Mela, I.C. Guiloski, H.B. Doria, M.A.F. Randi, C.A. de Oliveira Ribeiro, L. Pereira, A.C. Maraschi, V. Prodocimo, C.A. Freire and H.C. Silva de Assis
- 22** **Assessment of the toxicity of organochlorine pesticide endosulfan in clams *Ruditapes philippinarum***  
Yanxia Tao, Luqing Pan, Hui Zhang and Shuangmei Tian
- 31** **Secondary vitellogenesis persists despite disrupted fecundity in amphipods maintained on metal-contaminated sediment: X-ray fluorescence assessment of oocyte metal content**  
Ross V. Hyne, Reinier M. Mann, Carolyn T. Dillon, Martin D. de Jonge, David Paterson and Daryl L. Howard
- 39** **Oxidative stress and immune related gene expression following exposure to di-n-butyl phthalate and diethyl phthalate in zebrafish embryos**  
Hai Xu, Xiaoling Shao, Zhen Zhang, Yanmin Zou, Xiangyang Wu and Liuqing Yang
- 45** **Assessment of heavy metals in tilapia fish (*Oreochromis niloticus*) from the Langat river and Engineering lake in Bangi, Malaysia, and evaluation of health risk from tilapia consumption**  
Abdulali Taweel, M. Shuhaimi-Othman and A.K. Ahmad
- 52** **New microbioassays based on biomarkers are more sensitive to fluvial water micropollution than standard testing methods**  
S. Esteban, J. Fernández Rodríguez, G. Díaz López, M. Nuñez, Y. Valcárcel and M. Catalá
- 60** **Functional analyses of nanoparticle toxicity: A comparative study of the effects of TiO<sub>2</sub> and Ag on tomatoes (*Lycopersicon esculentum*)**  
Uhran Song, Heeju Jun, Bruce Waldman, Jinkyu Roh, Younghun Kim, Jongheop Yi and Eun Ju Lee
- 68** **Methylmercury egg injections: Part 1-Tissue distribution of mercury in the avian embryo and hatchling**  
Jennifer Rutkiewicz and Niladri Basu
- 77** **Methylmercury egg injections: Part 2—Pathology, neurochemistry, and behavior in the avian embryo and hatchling**  
Jennifer Rutkiewicz, Mark Bradley, Kritika Mittal and Niladri Basu
- 87** **Microbial degradation of fipronil by *Bacillus thuringiensis***  
Kousik Mandal, Balwinder Singh, Monu Jariyal and V.K. Gupta
- 93** **Effects of low-dosed imidacloprid pulses on the functional role of the caged amphipod *Gammarus roeseli* in stream mesocosms**  
R. Böttger, M. Feibicke, J. Schaller and G. Dudel

- 101 **Dietary intake and health risk assessment of lead and cadmium via consumption of cow meat for an urban population in Enugu State, Nigeria**  
J.N. Ihedioha and C.O.B. Okoye

### ***ENVIRONMENTAL CHEMISTRY***

#### *Regular Article*

- 107 **Time-dependent movement and distribution of chlorothalonil and chlorpyrifos in tomatoes**  
Zhi-Wei Wang, Jiexun Huang, Jin-Yuan Chen and Fei-Li Li

### ***ENVIRONMENTAL SAFETY***

#### *Review*

- 112 **Historical contamination and ecological risk of organochlorine pesticides in sediment core in northeastern Chinese river**

Luo Wang, Hongliang Jia, Xianjie Liu, Yeqing Sun, Meng Yang, Wenjun Hong, Hong Qi and Yi-Fan Li

#### *Regular Articles*

- 121 **Determination of viable *Salmonellae* from potable and source water through PMA assisted qPCR**  
Gulshan Singh, Poornima Vajpayee, Saurabh Bhatti, Nirmala Ronnie, Nimish Shah, Peter McClure and Rishi Shanker

- 128 **Potential of *Hydrocotyle vulgaris* for phytoremediation of a textile dye: Inducing antioxidant response in roots and leaves**

F. Vafaei, A. Movafeghi, A.R. Khataee, M. Zarei and S.Y. Salehi Lisar

- 135 **Distribution characteristics and potential ecological risk assessment of heavy metals (Cu, Pb, Zn, Cd) in water and sediments from Lake Dalinouer, China**

Dekun Hou, Jiang He, Changwei Lü, Limin Ren, Qingyun Fan, Jinghua Wang and Zhilei Xie

- 145 **Triggered antioxidant defense mechanism in maize grown in soil with accumulation of Cu and Zn due to intensive application of pig slurry**

Eduardo Giroto, Carlos A. Ceretta, Liana V. Rossato, Julia G. Farias, Tadeu L. Tiecher, Lessandro De Conti, Roberta Schmatz, Gustavo Brunetto, Maria R.C. Schetinger and Fernando T. Nicoloso

- 156 **Selenium and mercury in widely consumed seafood from South Atlantic Ocean**

Helena A. Kehrig, Tércia G. Seixas, Ana Paula M. Di Benedetto and Olaf Malm

- 163 **Distribution and sources of organochlorine pesticides in agricultural soils from central China**

Qun Zhou, Jingjing Wang, Beidi Meng, Junqi Cheng, Guoping Lin, Jiachun Chen, Dan Zheng and Yanhong Yu

- 171 **Health risk implications from simultaneous exposure to multiple environmental contaminants**

B. Genthe, W.J. Le Roux, K. Schachtschneider, P.J. Oberholster, N.H. Aneck-Hahn and J. Chamier

- 180 **Major controlling factors and predictions for cadmium transfer from the soil into spinach plants**

Zhenfei Liang, Qiong Ding, Dongpu Wei, Jumei Li, Shibao Chen and Yibing Ma

- 186 **Hair analysis, a reliable and non-invasive method to evaluate the contamination by clenbuterol**

Jing-Ying Jia, Lu-Nan Zhang, You-Li Lu, Meng-Qi Zhang, Gang-Yi Liu, Yan-Mei Liu, Chuan Lu, Shui-Jun Li, Yi Lu, Rui-Wen Zhang and Chen Yu

- 191 **Screening of *in vitro* cytotoxicity, antioxidant potential and bioactivity of nano- and micro-ZrO<sub>2</sub> and -TiO<sub>2</sub> particles**

Gopalu Karunakaran, Rangaraj Suriyaprabha, Palanisamy Manivasakan, Rathinam Yuvakkumar, Venkatachalam Rajendran and Narayanasamy Kannan

### ***LETTERS TO THE EDITOR***

- 198 **Comment on “Acute toxicity and *n*-octanol/water partition coefficients of substituted thiophenols: Determination and QSAR analysis [Shi et al., *Ecotoxicol. Environ. Saf.* 78 (2012) 134–141]”**

Sierra Rayne

- 199 **Reply to comment on “Acute toxicity and *n*-octanol/water partition coefficients of substituted thiophenols: Determination and QSAR analysis”**

J.-Q. Shi and X. Yang