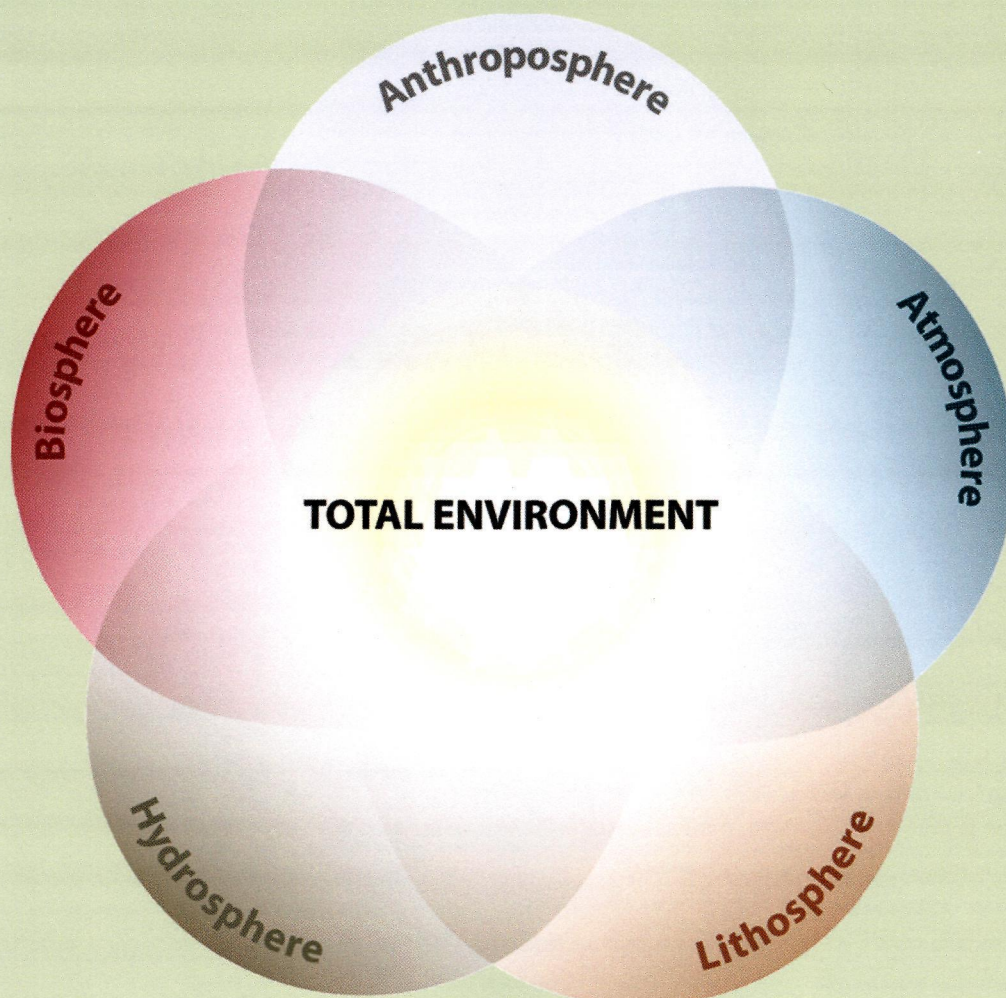
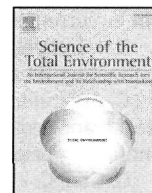


# Science of the Total Environment

An International Journal for Scientific Research into  
the Environment and its Relationship with Humankind





## Contents

Identification of organic xenobiotics in urban aquatic environments using time-of-flight mass spectrometry J. Jernberg, J. Pellinen and A.-L. Rantalainen (Finland) . . . . .	1
Modulation of aryl hydrocarbon receptor target genes in circulating lymphocytes from dairy cows bred in a dioxin-like PCB contaminated area F. Girolami, V. Spalenza, M. Carletti, P. Sacchi, R. Rasero and C. Nebbia (Italy) . . . . .	7
Identification of hydrocarbon sources in contaminated soils of three industrial areas C. Riccardi, P. Di Filippo, D. Pomata, M. Di Basilio, S. Spicaglia and F. Buiarelli (Italy) . . . . .	13
A methodology for elemental and organic carbon emission inventory and results for Lombardy region, Italy S. Caserini, S. Galante, S. Ozgen, S. Cucco, K. de Gregorio and M. Moretti (Italy) . . . . .	22
A really quick easy cheap effective rugged and safe (QuEChERS) extraction procedure for the analysis of particle-bound PAHs in ambient air and emission samples A. Albinet, S. Tomaz and F. Lestremau (France) . . . . .	31
<i>Dictyostelium discoideum</i> developmental cycle (DDDC) assay: A tool for Hg toxicity assessment and soil health screening A. Rodríguez-Ruiz, I. Marigómez, L. Boatti and A. Viarengo (Spain, Italy) . . . . .	39
A polyphasic approach for assessing the suitability of bioremediation for the treatment of hydrocarbon-impacted soil E.M. Adetutu, R.J. Smith, J. Weber, S. Aleer, J.G. Mitchell, A.S. Ball and A.L. Juhasz (Australia) . . . . .	51
Global mercury and selenium concentrations in skin from free-ranging sperm whales ( <i>Physeter macrocephalus</i> ) L.C. Savery, D.C. Evers, S.S. Wise, C. Falank, J. Wise, C. Gianios Jr., I. Kerr, R. Payne, W.D. Thompson, C. Perkins, T. Zheng, C. Zhu, L. Benedict and J.P. Wise Sr. (USA) . . . . .	59
Assessment of climate change impacts on hydrology and water quality with a watershed modeling approach Y. Luo, D.L. Ficklin, X. Liu and M. Zhang (USA, China) . . . . .	72
Uptake of organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) by river water fish: The case of River Chenab S.A.-M. Eqani, R.N. Malik, A. Cincinelli, G. Zhang, A. Mohammad, A. Qadir, A. Rashid, H. Bokhari, K.C. Jones and A. Katsoyiannis (Pakistan, Italy, China, UK, Norway) . . . . .	83
Natural and human influences on nutrient transport through a small subtropical Chinese estuary D. Kaiser, D. Unger, G. Qiu, H. Zhou and H. Gan (Germany, China) . . . . .	92
Spatial multi-scale variability of soil nutrients in relation to environmental factors in a typical agricultural region, Eastern China Y. Liu, J. Lv, B. Zhang and J. Bi (China) . . . . .	108
Toxicity assessment of silica nanoparticles, functionalised silica nanoparticles, and HASE-grafted silica nanoparticles L. Clément, A. Zenerino, C. Hurel, S. Amigoni, E. Taffin de Givenchy, F. Guittard and N. Marmier (France) . . . . .	120
Long-term soil nutrient dynamics comparison under smallholding land and farmland policy in northeast of China W. Ouyang, X. Wei and F. Hao (China) . . . . .	129
Thallium at the interface of soil and green cabbage ( <i>Brassica oleracea</i> L. var. <i>capitata</i> L.): Soil-plant transfer and influencing factors Y. Jia, T. Xiao, G. Zhou and Z. Ning (China) . . . . .	140
Susceptibility of <i>Pseudomonas aeruginosa</i> isolates collected from river water in Japan to antipseudomonal agents Y. Suzuki, S. Kajii, M. Nishiyama and A. Iguchi (Japan) . . . . .	148
Vancomycin resistant enterococci: From the hospital effluent to the urban wastewater treatment plant A.R. Varela, G. Ferro, J. Vredenburg, M. Yanık, L. Vieira, L. Rizzo, C. Lameiras and C.M. Manaia (Portugal, Italy) . . . . .	155
Spatial and seasonal variations of occurrences and concentrations of endocrine disrupting chemicals in unconfined and confined aquifers recharged by reclaimed water: A field study along the Chaobai River, Beijing J. Li, J. Fu, H. Zhang, Z. Li, Y. Ma, M. Wu and X. Liu (China) . . . . .	162
Responses of phytoplankton functional groups to the hydrologic regime in the Daning River, a tributary of Three Gorges Reservoir, China K. Zhu, Y. Bi and Z. Hu (China) . . . . .	169
Ship-plume sulfur chemistry: ITCT 2K2 case study H.S. Kim, Y.H. Kim and C.H. Song (Republic of Korea) . . . . .	178
<i>Atriplex atacamensis</i> and <i>Atriplex halimus</i> resist As contamination in Pre-Andean soils (northern Chile) Y. Tapia, O. Diaz, C. Pizarro, R. Segura, M. Vines, G. Zúñiga and E. Moreno-Jiménez (Chile, Spain) . . . . .	188
Occurrence and risks of antibiotics in the coastal aquatic environment of the Yellow Sea, North China R. Zhang, J. Tang, J. Li, Z. Cheng, C. Chaemfa, D. Liu, Q. Zheng, M. Song, C. Luo and G. Zhang (China) . . . . .	197

The occurrence of second generation anticoagulant rodenticides in non-target raptor species in Norway K.H. Langford, M. Reid and K.V. Thomas (Norway) . . . . .	205
Estimating future burned areas under changing climate in the EU-Mediterranean countries G. Amatulli, A. Camia and J. San-Miguel-Ayanz (Italy) . . . . .	209
Health and ecological risk-based characterization of soil and sediment contamination in shipyard with long-term use of DDT-containing antifouling paint G. Guo, C. Zhang, G. Wu, Q. Ding, S. Wang and F. Li (China) . . . . .	223
Benzo(a)pyrene inhibits the role of the bioturbator <i>Tubifex tubifex</i> in river sediment biogeochemistry F. Mermillod-Blondin, A. Foulquier, F. Gilbert, S. Navel, B. Montuelle, F. Bellvert, G. Comte, V. Grossi, F. Fourel, C. Lecuyer and L. Simon (France) . . . . .	230
Potential trends in Attention Deficit Hyperactivity Disorder (ADHD) drug use on a college campus: Wastewater analysis of amphetamine and ritalinic acid D.A. Burgard, R. Fuller, B. Becker, R. Ferrell and M.J. Dinglasan-Panlilio (USA) . . . . .	242
Air pollutant emissions from vehicles in China under various energy scenarios Q. Zhang, G. Sun, S. Fang, W. Tian, X. Li and H. Wang (China) . . . . .	250
Seasonal variation in the acute effect of particulate air pollution on mortality in the China Air Pollution and Health Effects Study (CAPES) R. Chen, R.D. Peng, X. Meng, Z. Zhou, B. Chen and H. Kan (China, USA) . . . . .	259
Determination of low urinary 8-hydroxy-2'-deoxyguanosine excretion with capillary electrophoresis and molecularly imprinted monolith solid phase microextraction S. Zhang, X. Song, W. Zhang, N. Luo and L. Cai (PR China, USA) . . . . .	266
How suitable are peat cores to study historical deposition of PAHs? S. Thuens, C. Blodau and M. Radke (Germany, Sweden) . . . . .	271
Sedimentary records of PAHs in a sediment core from tidal flat of Haizhou Bay, China R. Zhang, F. Zhang and T.-C. Zhang (China) . . . . .	280
Multivariate methods and artificial neural networks in the assessment of the response of infaunal assemblages to sediment metal contamination and organic enrichment M.D. Subida, A. Berihuete, P. Drake and J. Blasco (Spain) . . . . .	289
Accumulation of trace metals in the embryos and hatchlings of <i>Chelonia mydas</i> from Peninsular Malaysia incubated at different temperatures M.P. Ikonopoulou, H. Olszowy, R. Francis, K. Ibrahim and J. Whittier (Australia, Malaysia) . . . . .	301
Air pollution and health risks due to vehicle traffic K. Zhang and S. Batterman (USA) . . . . .	307
Utilisation of Rep-PCR to track microbes in aerosols collected adjacent to their source, a saline lake in Victoria, Australia C.I. Munday, T. O'Loingsigh, N.J. Tapper, P. De Deckker and G.E. Allison (Australia) . . . . .	317
Histopathology of liver and kidneys of wild living Mallards <i>Anas platyrhynchos</i> and Coots <i>Fulica atra</i> with considerable concentrations of lead and cadmium Ł.J. Binkowski, K. Sawicka-Kapusta, J. Szarek, E. Strzyżewska and M. Felsmann (Poland) . . . . .	326
Japanese quail acute exposure to methamidophos: Experimental design, lethal, sub-lethal effects and cholinesterase biochemical and histochemical expression M. Foudoulakis, C. Balaskas, A. Csato, C. Szentes and G. Arapis (Greece, Hungary) . . . . .	334
Residues of organochlorine pesticides and polycyclic aromatic hydrocarbons in farm-raised livestock feeds and manures in Jiangsu, China L. Zhao, Y.-H. Dong and H. Wang (China) . . . . .	348
Chronic ecotoxic effects to <i>Pseudomonas putida</i> and <i>Vibrio fischeri</i> , and cytostatic and genotoxic effects to the hepatoma cell line (HepG2) of ofloxacin photo(cata)lytically treated solutions M.I. Vasquez, M. Garcia-Käuffer, E. Hapeshi, J. Menz, K. Kostarelos, D. Fatta-Kassinou and K. Kümmerer (Cyprus, Germany) . . . . .	356
Comments on "Mortality by neoplasia and cellular telephone base stations in the Belo Horizonte municipality, Minas Gerais state, Brazil" K.R. Foster and L. Trottier (USA, Canada) . . . . .	366
Letter to the editor (Wright-Walters et al., 2011) S. Hentges, N. Caspers, G.M. Klecka, E.M. Mihaich, L. Ortego and C.A. Staples (DC, Germany, MI, NC, VA) . . . . .	369
Discussion on paper entitled "Migration behaviour, of landfill leachate contaminants through alternative composite liners" N. Touze-Foltz (France) . . . . .	372
Reducing the inhalation dose from radon decay products L.S. Larsson and D. Kladder (United States) . . . . .	374