

NEWS

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Environmental digest

Read the latest environmental news including:

Recent legislation

Environmental quality

Chemical hazards

Public and occupational health

Research activity

FOCUS

2551

Comprehensive environmental review following the pork PCB/dioxin contamination incident in Ireland

Ian Marnane*

A comprehensive review of the 2008 pork contamination incident in Ireland including the investigations, causes and lessons learned.

2557

An economic appraisal of using source separation of human urine to contain and treat endocrine disrupters in the USA

Krishna Lamichhane and Roger Babcock Jr.*

Energy requirements for various methods for human estrogen removal from wastewater to achieve 99% estrogenicity elimination were calculated and compared.

PAPERS

2566

Processing of atmospheric polycyclic aromatic hydrocarbons by fog in an urban environment

Franz S. Ehrenhauser, Kalindi Khadapkar, Youliang Wang, James W. Hutchings, Olivier Delhomme, Raghava R. Kommalapati, Pierre Herckes, Mary J. Wornat and Kalliat T. Valsaraj*

Fog processing of polycyclic aromatic hydrocarbons (PAH) schematically—Reactive transformation of PAH and the subsequent dissolution of the oxidised products are the main trajectories during a fog event.

2580

Using passive air samplers to assess local sources *versus* long range atmospheric transport of POPs

Anne Karine Halse, Martin Schlabach, Andy Sweetman, Kevin C. Jones and Knut Breivik*

Passive air samplers are used to screen for possible influence of local sources of persistent organic pollutants (POPs), using a simple nested monitoring approach.

2591

Levels and distribution of hexabromocyclododecane (HBCD) in environmental samples near manufacturing facilities in Laizhou Bay area, East China

Honghua Li, Qinghua Zhang,* Pu Wang, Yingming Li, Jianxia Lv, Weihai Chen, Dawei Geng, Yawei Wang, Thanh Wang and Guibin Jiang

The levels and distribution of hexabromocyclododecane were investigated in various environmental samples near manufacturing facilities in Laizhou Bay, East China.

2598

Assessment of environmental mercury discharge at a four-year-old artisanal gold mining area on Lombok Island, Indonesia

Baiq Dewi Krisnayanti, Christopher W. N. Anderson,*
Wani Hadi Utomo, Xinbin Feng, Eko Handayanto,
Nurul Mudarisna, Hadiman Ikram and Khususiah

Environmental assessment has established that ASGM on Lombok is releasing mercury into the environment through the uncontrolled discharge of waste.

2608

The application of biochemical responses to assess environmental quality of tropical estuaries: field surveys

Luciane Alves Maranhão,* Camilo Dias Seabra Pereira,
Rodrigo Brasil Choueri, Augusto Cesar,
Paloma Kachel Gusso-Choueri, Ronaldo José Torres,
Denis Moledo de Souza Abessa, Rodofley Davino Morais,
Antônio Aparecido Mozeto, Tomás Angel DelValls
and María Laura Martín-Díaz

Multi-biomarker responses of *Crassostrea rhizophorae* under field conditions could be incorporated as a descriptor of the health status in tropical estuarine systems.

2616

Monitoring of volatile organic compounds using a single tin dioxide sensor

Florin Caldararu,* Cosmin Vatra and Mira Caldararu

We present a new method of detecting the level of pollution given by a mixture of VOC, based on the high sensitivity but low selectivity of the Taguchi sensor. The method was applied to design and manufacture a real time monitoring system, including a single tin dioxide sensor, a thermistor, their conditioning circuits and two microcontrollers for data acquisition system and graphical interface.

2624

Characteristics of nitrate in major rivers and aquifers of the Sanjiang Plain, China

Yingjie Cao, Changyuan Tang,* Xianfang Song,
Changming Liu and Yinghua Zhang

The characteristics of nitrate (NO_3^-) in major rivers and aquifers of the Sanjiang Plain, China were investigated by hydrogeochemical conditions, nitrogen isotope technique and CFCs trace.

2634

Occurrence and risk assessment of polycyclic aromatic hydrocarbons in soil from the Tiefa coal mine district, Liaoning, China

Jingjing Liu, Guijian Liu, * Jiamei Zhang, Hao Yin and Ruwei Wang

An investigation into the environmental distribution of soil-associated polyaromatic hydrocarbons surrounding a coal mine in China.

2643

Variability in spectral absorbance metrics across boreal lake waters

Martin Erlandsson, * Martyn N. Futter, Dolly N. Kothawala and Stephan J. Köhler

Ultraviolet/visible absorbance spectra from more than 900 Swedish lakes were studied and related to landscape variability.

2653

Sorption of a branched nonylphenol and perfluorooctanoic acid on Yangtze River sediments and their model components

Chengliang Li, Rong Ji, * Andreas Schäffer, Jean-Marie Sequaris, Wulf Amelung, Harry Vereecken and Erwin Klumpp*

Nonylphenol sorption is strongly affected by the C_{org} content while PFOA sorption correlates with the black carbon and iron oxide contents of the sediments.

2659

2-Butoxyethanol from cleaning products responsible for complaints in workplaces: a case study

R. Rella, * A. Sturaro and A. Vianello

Weekly passive sampling by Radiello has proven to be the most useful method for the IAQ analysis.

2663

Distribution of trace element contamination in sediments and riverine agricultural soils of the Zhongxin River, South China, and evaluation of local plants for biomonitoring

Jinfeng Chen, Jiangang Yuan, Shanshan Wu, Biyun Lin and Zhongyi Yang*

Mining and daily life activities have brought trace metal pollution to the Zhongxin River. Native plants along the river are useful as biomonitors of the metal pollution in the river.

2673

Estimation of methane and nitrous oxide emissions from Indian livestock

Amlan K. Patra*

Greenhouse gas (GHG; methane and nitrous oxide) emissions from enteric fermentation and manure management of Indian livestock were estimated from the last two Indian livestock census datasets (2003 and 2007) using IPCC Tier 2 (2006) guidelines.

2685

Sedimentary loadings and ecological significance of polycyclic aromatic hydrocarbons in a typical mariculture zone of South China

Huan-Yun Yu, Lian-Jun Bao, Charles S. Wong, Yuanan Hu* and Eddy Y. Zeng

Two sediment cores were collected from Hailing Bay located in a typical mariculture zone of Guangdong Province, South China, and analyzed for polycyclic aromatic hydrocarbons.

2692

Airborne fungi and bacteria in child daycare centers and the effectiveness of weak acid hypochlorous water on controlling microbes

Nai-Tzu Chen, Yu-Min Su, Nai-Yun Hsu, Pei-Chih Wu and Huey-Jen Su*

The indoor airborne bio-contamination in the CDCCs, which varied both interdiurnally and diurnally, can be effectively reduced with WAHW intervention.

2698

Trace element mobility and transfer to vegetation within the Ethiopian Rift Valley lake areas

Yetneberk A. Kassaye,* Lindis Skipperud, Sondre Meland, Elias Dadebo, John Einset and Brit Salbu

Relationships between human activities, lakes and the surrounding soil, and the subsequent transfer of trace elements from soil to the surrounding terrestrial vegetation in Ethiopian Rift Valley lakes (pictures taken around Lakes Koka and Ziway).

2710

Bioremediation of polluted soil through the combined application of plants, earthworms and organic matter

Cristina Macci,* Serena Doni, Eleonora Peruzzi, Brunello Ceccanti and Grazia Masciandaro

Two plant species (*Paulownia tomentosa* and *Cytisus scoparius*), earthworms (*Eisenia fetida*), and organic matter (horse manure) were used as an ecological approach to bioremediate a soil historically contaminated by heavy metals and hydrocarbons.

2718

Within-city contrasts in PM composition and sources and their relationship with nitrogen oxides

M. C. Minguillón,* I. Rivas, I. Aguilera, A. Alastuey, T. Moreno, F. Amato, J. Sunyer and X. Querol

PM composition varies within the same city depending on traffic influence, among others.

2729

Using Py-GC/MS to fingerprint additives associated with paper mill effluent toxicity episodes

B. Bruce Sithole,* Jorge Pimentel, Sharon Gibbons and Chu Watanabe

Understanding the cause of effluent toxicity is an important requirement for its prevention, remediation and return to compliance.

2739

Portable automatic bioaerosol sampling system for rapid on-site detection of targeted airborne microorganisms

Evgeny V. Usachev, Anna V. Pankova, Elina A. Rafailova, Oleg V. Pyankov and Igor E. Agranovski*

Bioaerosols could cause various severe human and animal diseases and their opportune and qualitative precise detection and control is becoming a significant scientific and technological topic for consideration.

2746

Temporal and spatial distribution of waterborne mercury in a gold miner's river

Francisco Picado and Göran Bengtsson*

The daily flux of suspended Hg varied by a factor of 20–40 in a river exposed to gold mining. Accurate prediction of the fate of Hg in a river requires high resolution sampling.

2755

Fecal coliform population dynamics associated with the thermophilic stabilization of treated sewage sludge

Chris Ziemba and Jordan Peccia*

The inactivation of fecal coliforms in anaerobic batch reactors has been investigated at the thermophilic temperatures of 50, 55 and 60 °C.

2762

Geochemistry and environmental assessment of major and trace elements in the surface sediments of the Wei River, China

Y. M. Han,* J. J. Cao, F. Wu, B. C. Zhang, C. L. Zhan, C. Wei and Z. Z. Zhao

Despite relatively low concentrations of potentially hazardous elements in the Wei River, contamination and potentially adverse biological effect are observed.

2772

Size dependent aqueous dispersibility of carboxylated multiwall carbon nanotubes

Susana Addo Ntim, Ornthida Sae-Khow, Chintal Desai, Frank A. Witzmann and Somenath Mitra*

The influence of the dimensions of MWCNTs on their aggregation behavior under solution chemistries typical of aquatic environments is presented.

2780

Gold mining impact on riverine heavy metal transport in a sparsely monitored region: the upper Lake Baikal Basin case

Josefin Thorslund,* Jerker Jarsjö, Sergey R. Chalov and Ekaterina V. Belozeroва

Transport and distribution of heavy metals from a gold mining source zone in Mongolia were investigated under limited monitoring conditions, to quantify impacts on local and regional scales.

2793

Apparatus for *in situ* monitoring of copper in coastal waters

Conrad S. Chapman, Richard D. Cooke, Pascal Salaün and Constant M. G. van den Berg*

Buoy with monitoring apparatus in Liverpool Bay.

2803

Lifetime of combustion-generated environmentally persistent free radicals on Zn(II)O and other transition metal oxides

Eric Vejerano, Slawo Lomnicki* and Barry Dellinger

Environmentally Persistent Free Radicals (EPFRs) formed in the post-flame, cool zone of combustion are long lived, with their lifetime depending on the associated metal center.

2807

Calcium- and ammonium ion-modification of zeolite amendments affects the metal-uptake of *Hieracium piloselloides* in a dose-dependent way

Anca Peter,* Leonard Mihaly-Cozmuta, Anca Mihaly-Cozmuta, Camelia Nicula, Emil Indrea and Hlanganani Tutu

Natural and activated zeolites as amendments in the soil reduce the accumulation of heavy metal ions in *Hieracium piloselloides*.

LETTERS

2815

Comments on “Assessment of prenatal mercury exposure in a predominantly Caribbean immigrant community in Brooklyn, NY”

Arnold Wendroff*

This letter finds the study wanting both in its assessment of risk from second-hand exposure to mercury vapor from prior magico-religious use, and in communicating that risk to the Caribbean community and their health care providers.

2817

Response to comments on ‘Assessment of prenatal mercury exposure in a predominately Caribbean immigrant community in Brooklyn, NY’

Laura A. Geer,* Malini Devi Persad, Christopher D. Palmer, Amy J. Steuerwald, Mudar Dalloul, Ovadia Abulafia and Patrick J. Parsons

Prenatal mercury levels measured in a predominantly Caribbean community were associated with frequency of maternal fish consumption and foreign birth of the mother.