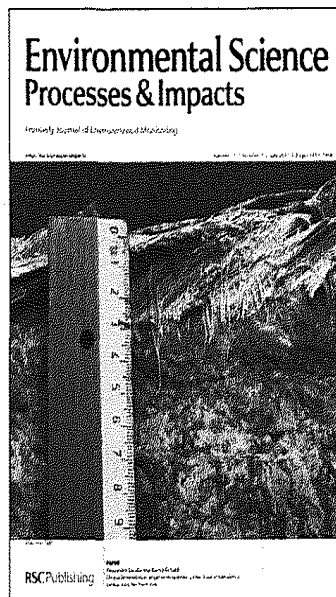


Cover
See Li Li *et al.*, pp. 1332-1340.
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Impacts*, 2013, **15**, 1332.



Inside cover
See Alessandro Cavallo and Bianca
Rimoldi, pp. 1341-1350.
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Environ. Sci.: Processes Impacts,
2013, **15**, 1341.

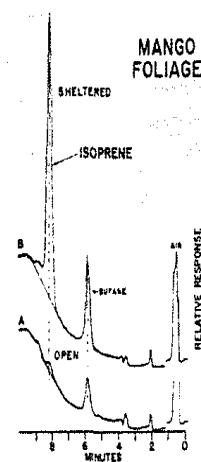
CRITICAL REVIEW

1301

Quantitative and qualitative sensing techniques for biogenic volatile organic compounds and their oxidation products

Saewung Kim,* Alex Guenther and Eric Apel

The physiological production mechanisms of some of the organics in plants, commonly known as biogenic volatile organic compounds (BVOCs), have been known for more than a century.



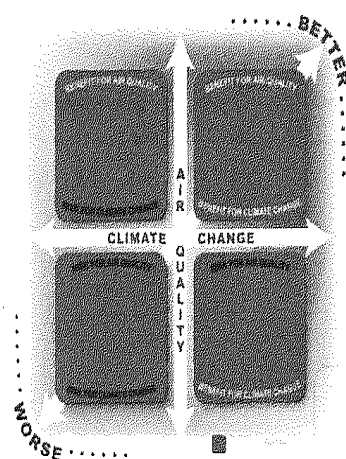
FRONTIERS

1315

Air quality and climate – synergies and trade-offs

Erika von Schneidemesser* and Paul S. Monks*

Although traditionally viewed as two separate arenas for science and regulation, focus has shifted to consider the feedbacks, possible co-benefits or disadvantages from the interrelated spheres of air pollution and climate change.



1326

Environmental contamination and human exposure to dioxin-related compounds in e-waste recycling sites of developing countries

Nguyen Minh Tue, Shin Takahashi, Annamalai Subramanian, Shinichi Sakai and Shinsuke Tanabe*

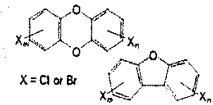
Current knowledge on the emission of various dioxin-related compounds from informal e-waste recycling and perspectives for comprehensive risk assessment.

Informal E-waste Recycling



Open e-waste burning

Dioxin-Related Compounds



- PCDD/Fs
- DL-PCBs

Routinely monitored, known toxic potencies

- PBDD/Fs, PXDD/Fs
- Unknown

Limited data on contamination levels and toxic potencies

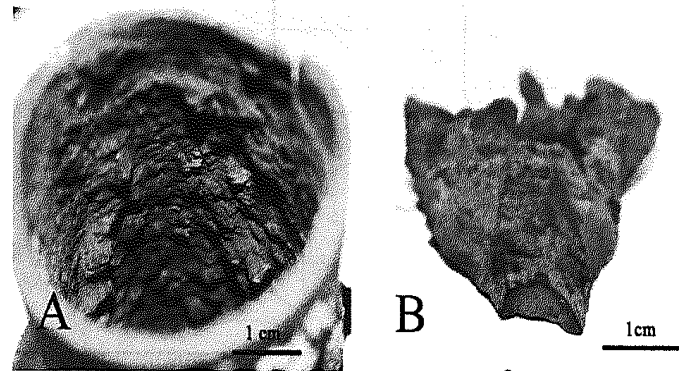
PAPERS

1332

Bacterial community of iron tubercles from a drinking water distribution system and its occurrence in stagnant tap water

Lu Chen, Rui-Bao Jia and Li Li*

Bacterial communities in stagnant tap water and iron pipes tubercles correlate, and the main bacterial members are identical.



1341

Chrysotile asbestos in serpentinite quarries: a case study in Valmalenco, Central Alps, Northern Italy

Alessandro Cavallo* and Bianca Rimoldi

From 2004 to 2011, extensive sampling and monitoring of quarry fronts, asbestos veins, commercial stones and airborne asbestos was carried out.

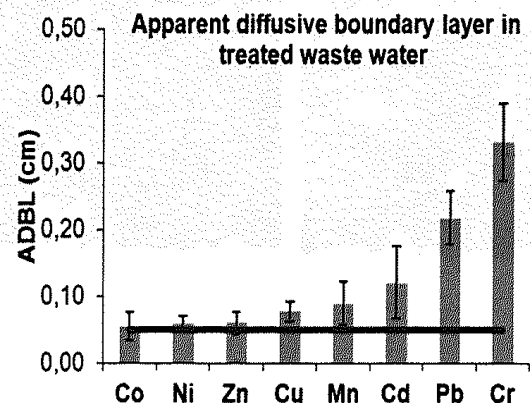


1351

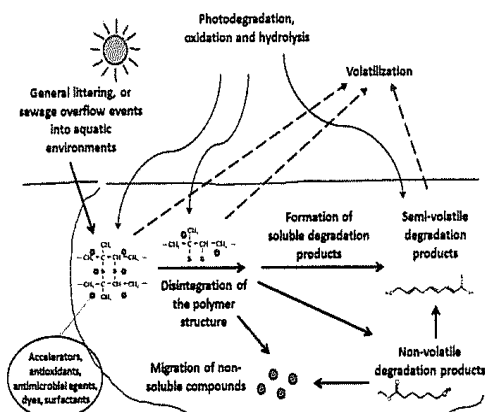
DGT measurement in low flow conditions: diffusive boundary layer and lability considerations

Emmanuelle Uher,* Marie-Hélène Tusseau-Vuillemin and Catherine Gourlay-France

The impact of extreme low flow conditions on the measurement of metals by DGT is assessed in the laboratory and in wastewater.



1359

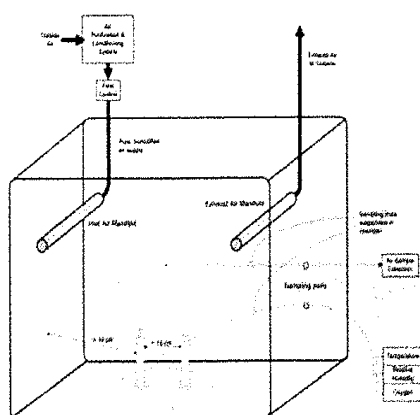


Environmental fate of processed natural rubber latex

Scott Lambert,* Chris J. Sinclair, Emma L. Bradley and Alistair B. A. Boxall

The environmental fate of polymer-based materials produces a complex mixture of the parent material and degradation products that are continuously undergoing processes of degradation and transformation.

1369

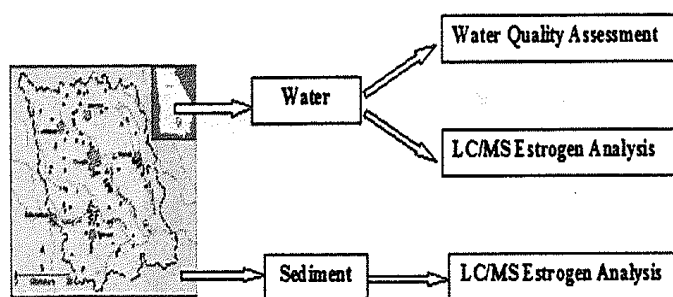


A standard method for measuring benzene and formaldehyde emissions from candles in emission test chambers for human health risk assessment purposes

Thomas Petry,* Elodie Cazelle, Paul Lloyd, Reuben Mascarenhas and Gerard Stijntjes

Burning candles release a number of volatile or semi-volatile organic compounds (VOC; SVOC) and particulate matters into indoor air.

1383

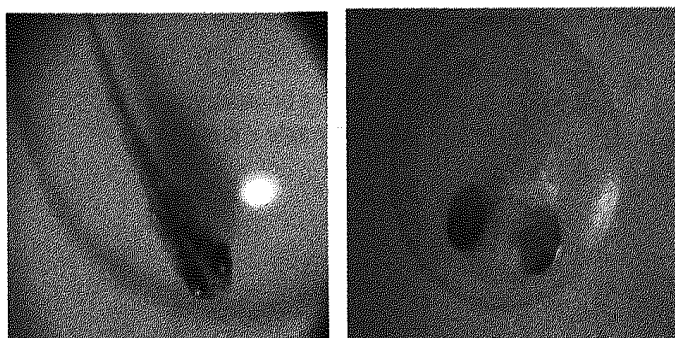


Influence of poultry litter land application on the concentrations of estrogens in water and sediment within a watershed

Qi Luo, Paige Adams, Junhe Lu, Miguel Cabrera and Qingguo Huang*

The occurrence of estrogens in a watershed impacted by poultry litter land application and discharge from a sewage treatment plant receiving poultry wastes was studied.

1391



Biotoxicity evaluation of coking wastewater treated with different technologies using Japanese medaka (*Oryzias latipes*)

Xiaobiao Zhu, Lujun Chen,* Rui Liu, Cong Liu and Zhengdao Pan

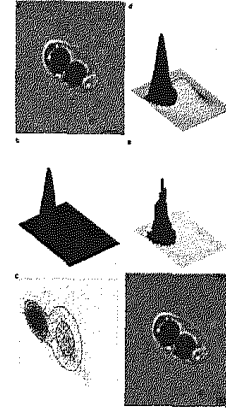
The effluent of coking wastewater treated using different technologies exhibited different levels of biotoxicity to Japanese medaka (*Oryzias latipes*) during its early life stage.

1397

Automatic and real time recognition of microalgae by means of pigment signature and shape

Primo Coltelli, Laura Barsanti, Valtere Evangelista, Anna Maria Frassanito, Vincenzo Passarelli and Paolo Gualtieri*

This paper presents an innovative software methodology, providing a reliable, real time recognition of multialgal samples for environmental monitoring purposes.

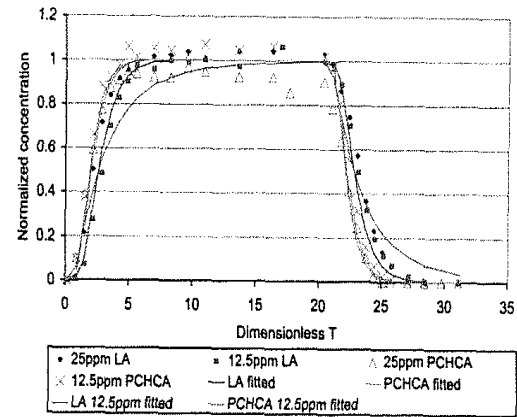


1411

Determination of thermodynamic and transport parameters of naphthenic acids and organic process chemicals in oil sand tailings pond water

Xiaomeng Wang, Lisa Robinson, Qing Wen and Kim L. Kasperski*

The underground transport behavior of naphthenic acids and process chemicals in oil sand process water is related to molecular structures.

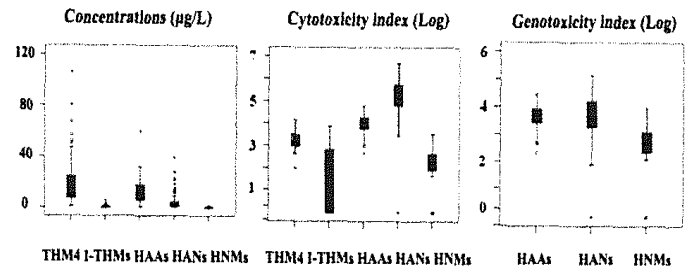


1424

Occurrence, profiling and prioritization of halogenated disinfection by-products in drinking water of China

Huanhuan Ding, Liping Meng, Haifeng Zhang, Jianwei Yu, Wei An, Jianying Hu and Min Yang*

Among 5 groups of halogenated DBPs, HANs exhibited the highest cytotoxicity and genotoxicity in the drinking water of 70 plants across China.

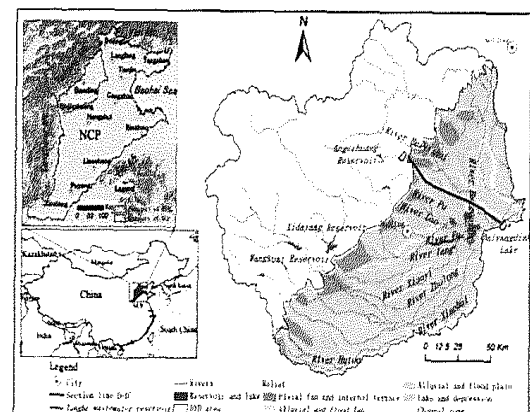


1430

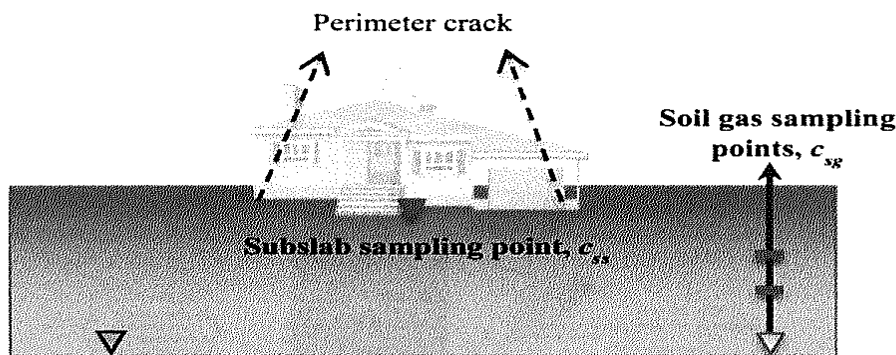
Using major ions and $\delta^{15}\text{N-NO}_3^-$ to identify nitrate sources and fate in an alluvial aquifer of the Baiyangdian lake watershed, North China Plain

Shiqin Wang, Changyuan Tang,* Xianfang Song, Ruiqiang Yuan, Qinxue Wang and Yinghua Zhang

The organic-rich frontier and depression regions of alluvial fan in the Baiyangdian lake watershed provide suitable conditions for denitrification resulting in decreased nitrate concentration in groundwater.



1444

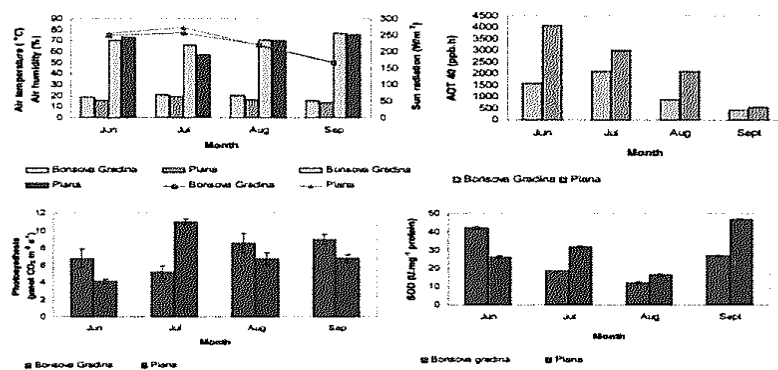


Modeling quantification of the influence of soil moisture on subslab vapor concentration

Rui Shen, * Yijun Yao, Kelly G. Pennell and Eric M. Suuberg

The manuscript deals with the vapor intrusion problem and analyzes subslab vapor concentrations, considering the influence of soil moisture and particularly the capillary zone on the subsurface concentration profile.

1452

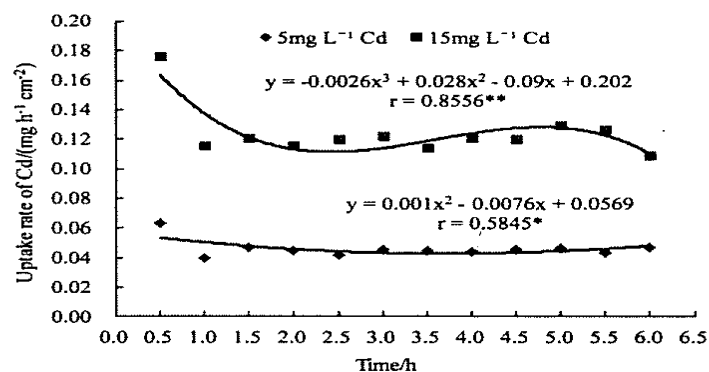


Responses of *Fraxinus excelsior* L. seedlings to ambient ozone exposure in urban and mountain areas based on physiological characteristics and antioxidant activity

Petya Parvanova, * Nikolina Tzvetkova, Svetla Bratanova-Doncheva, * Nesho Chipev, Radka Fikova and Evgeni Donev

An examination of the dynamics of photosynthesis, transpiration, stomatal conductance and the activity of superoxide dismutase and catalase in the leaves of ash seedling exposed to ambient air.

1459



Cadmium uptake, chemical forms, subcellular distribution, and accumulation in *Echinodorus osiris* Rataj

Chaolan Zhang, * Peng Zhang, Chuangrong Mo, Weiwei Yang, Qinfeng Li, Liping Pan and D. K. Lee

Phytoremediation is a technology for extracting or inactivating pollutants in soil.