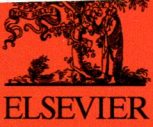


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ENVIRONMENTAL POLLUTION

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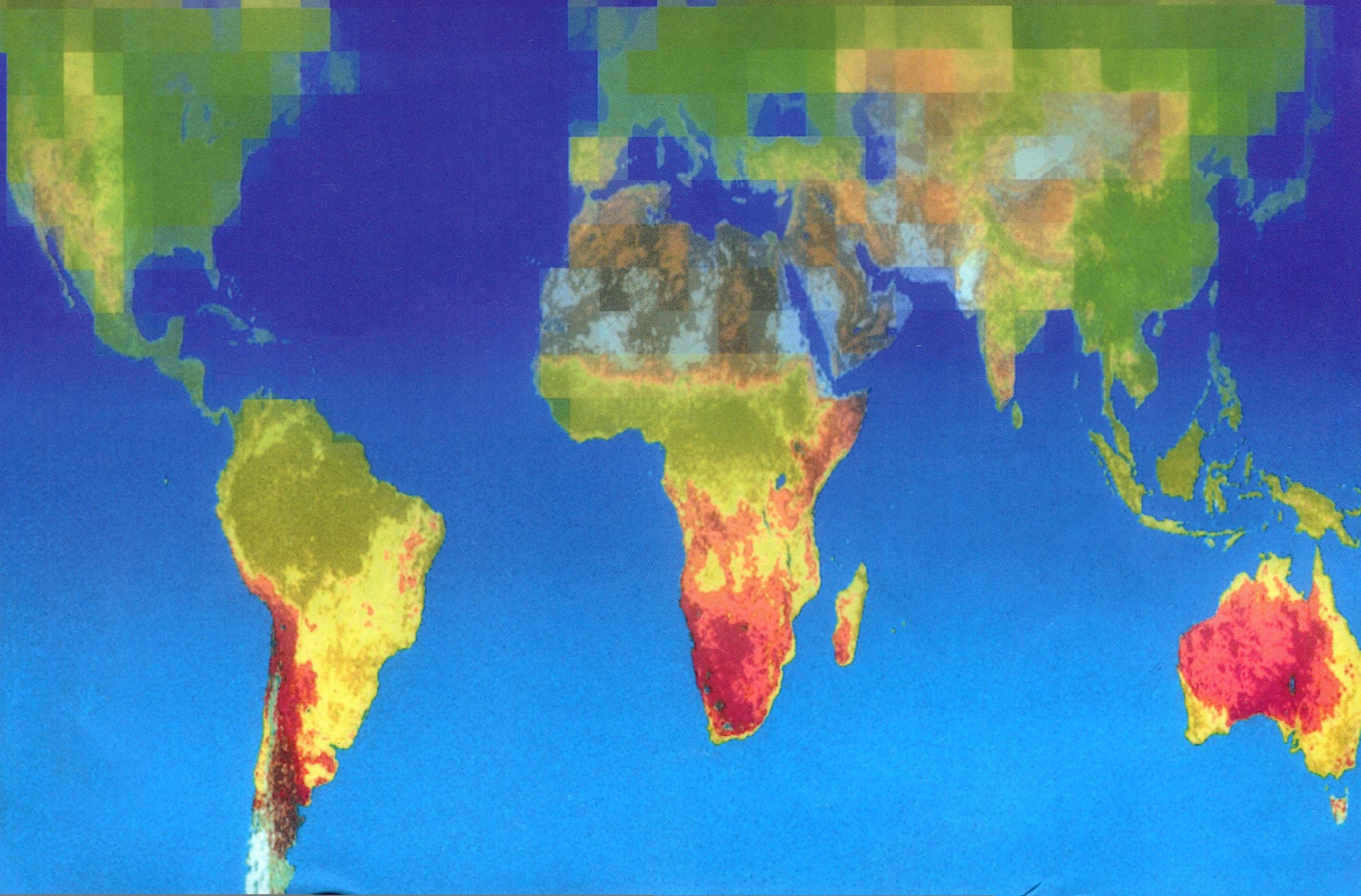
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Environmental Pollution

Volume 181, Pages 1-344 (October 2013)

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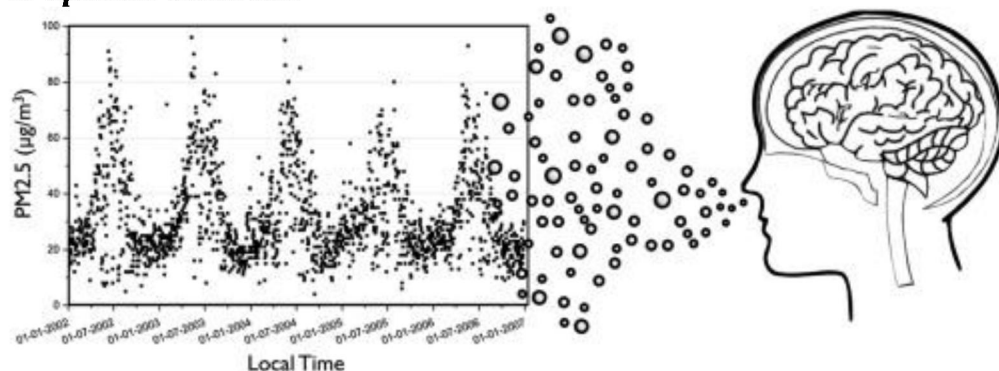
A five-year study of particulate matter (PM_{2.5}) and cerebrovascular diseases

Original Research Article

Pages 1-6

Manuel A. Leiva G, Daniela A. Santibañez, Sergio Ibarra E, Patricia Matus C, Rodrigo Seguel

Graphical abstract



Relationship between PM pollution and strokes is not well characterized. In Santiago the risk of the stroke increased by 1.29%; for every increase of 10 µg m⁻³ in PM_{2.5}.

Hexabromocyclododecane in alpine fish from the Tibetan Plateau, China

Original Research Article

Pages 7-13

Nali Zhu, Jianjie Fu, Yan Gao, Patrick Ssebugere, Yawei Wang, Guibin Jiang

HBCD was ubiquitous in fish of the Tibetan Plateau, and its concentration was significantly correlated with lipid content.

Seasonal and spatial variation of trace elements and metals in quasi-ultrafine (PM_{0.25}) particles in the Los Angeles metropolitan area and characterization of their sources

Original Research Article

Pages 14-23

Arian Saffari, Nancy Daher, Martin M. Shafer, James J. Schauer, Constantinos Sioutas

Characterization of sources of trace elements and metals in quasi-ultrafine particles in the Los Angeles south coast air basin and explaining their seasonal and spatial variability.

Chronic exposure to volcanogenic air pollution as cause of lung injury

Original Research Article

Pages 24-30

Ricardo Camarinho, Patrícia Ventura Garcia, Armindo Santos Rodrigues

Non-eruptive active volcanism as a cause of lung injury.

Occurrence of estrogenic activities in second-grade surface water and ground water in the Yangtze River Delta, China

Original Research Article

Pages 31-37

Wei Shi, Guanjiu Hu, Sulan Chen, Si Wei, Xi Cai, Bo Chen, Jianfang Feng, Xinxin Hu, Xinru Wang, Hongxia Yu

Estrogenic activities were observed in second-grade surface water and ground water in Yangtze River Delta, and BPA was the responsible contaminant.

Total arsenic, inorganic arsenic, and other elements concentrations in Italian rice grain varies with origin and type

Original Research Article

Pages 38-43

A. Sommella, C. Deacon, G. Norton, M. Pigna, A. Violante, A.A. Meharg

There was significant geographical variation for both Ast and Asi for Italian rice with percentage of Asi varying between 0.4% and 96%.

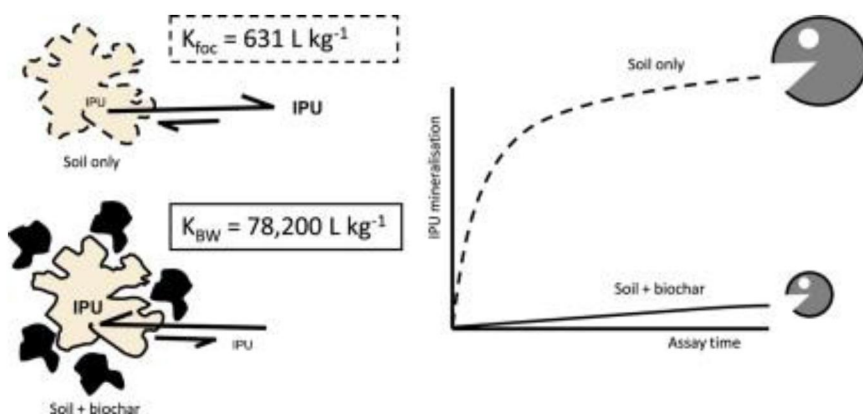
Influence of biochar on isoproturon partitioning and bioaccessibility in soil

Original Research Article

Pages 44-50

B.J. Reid, F.L. Pickering, A. Freddo, M.J. Whelan, F. Coulon

Graphical abstract



Biochar dramatically reduced ^{14}C -IPU extractability (<2%) with K_{BW} being $\times 123$ greater than the apparent K_{foc} . Correspondingly, microbial bioaccessibility of IPU was negligible.

Effects of dilution on the properties of $n\text{C}_{60}$

Original Research Article

Pages 51-59

Xiaojun Chang, Peter J. Vikesland

The simple act of dilution has the potential to alter the colloidal properties of $n\text{C}_{60}$. Extreme care should be taken to ensure that dilution does not alter $n\text{C}_{60}$ in undetected ways.

Sorption of antibiotic sulfamethoxazole varies with biochars produced at different temperatures

Original Research Article

Pages 60-67

Hao Zheng, Zhenyu Wang, Jian Zhao, Stephen Herbert, Baoshan Xing

Solution pH and biochar property control the sorption amount and mechanisms of antibiotic sulfamethoxazole.

Titanium distribution in swimming pool water is dominated by dissolved species

Original Research Article

Pages 68-74

R. David Holbrook, Donna Motabar, Oscar Quiñones, Benjamin Stanford, Brett Vanderford, Donna Moss

In children's swimming pool water, the majority of titanium is found in the dissolved phase.

Dioxin-related compounds in house dust from New York State: Occurrence, in vitro toxic evaluation and implications for indoor

exposure

Original Research Article

Pages 75-80

Nguyen Minh Tue, Go Suzuki, Shin Takahashi, Kurunthachalam Kannan, Hidetaka Takigami, Shinsuke Tanabe

PBDFs—degradation products of PBDEs—and unknown contaminants contributed significantly to the dioxin-like activities in New York house dust.

A comparison of methane emission measurements using eddy covariance and manual and automated chamber-based techniques in Tibetan Plateau alpine wetland

Original Research Article

Pages 81-90

Lingfei Yu, Hao Wang, Guangshuai Wang, Weimin Song, Yao Huang, Sheng-Gong Li, Naishen Liang, Yanhong Tang, Jin-Sheng He

The chamber-based methods and the eddy covariance method showed similar seasonal CH₄ flux patterns, but the manual static chamber method resulted in a higher CH₄ flux measurement.

Variations and constancy of mercury and methylmercury accumulation in rice grown at contaminated paddy field sites in three Provinces of China

Original Research Article

Pages 91-97

B. Li, J.B. Shi, X. Wang, M. Meng, L. Huang, X.L. Qi, B. He, Z.H. Ye

Rice possesses widescale variations between cultivars and stability within a cultivar in grain THg and MeHg under different field conditions.

Fate of pharmaceutical compounds in hydroponic mesocosms planted with *Scirpus validus*

Original Research Article

Pages 98-106

Dong Qing Zhang, Richard M. Gersberg, Tao Hua, Junfei Zhu, Manish Kumar Goyal, Wun Jern Ng, Soon Keat Tan

All the tested pharmaceuticals (carbamazepine, naproxen, diclofenac, clofibric acid and caffeine) were efficiently removed from nutrient solution.

Source contributions to carbonaceous species in PM_{2.5} and their uncertainty analysis at typical urban, peri-urban and background sites in southeast China

Original Research Article

Pages 107-114

Zhenchuan Niu, Sen Wang, Jinsheng Chen, Fuwang Zhang, Xiaoqiu Chen, Chi He, Lifeng Lin, Liqian Yin, Lingling Xu

The contributions of OC_{bio} and OC_{bb} to TC have a natural logarithmic relationship with the levoglucosan/ OC_{bb} ratios.

Multimedia fate and source apportionment of polycyclic aromatic hydrocarbons in a coking industry city in Northern China

Original Research Article

Pages 115-121

Y.L. Wang, Z.H. Xia, D. Liu, W.X. Qiu, X.L. Duan, R. Wang, W.J. Liu, Y.H. Zhang, D. Wang, S. Tao, W.X. Liu

Based on multimedia model correction, the specific isomeric ratios could provide reasonable apportionments for the local PAHs emission sources.

Fungal hyphae stimulate bacterial degradation of 2,6-dichlorobenzamide (BAM)

Original Research Article

Pages 122-127

Berith Elkær Knudsen, Lea Ellegaard-Jensen, Christian Nyrop Albers, Søren Rosendahl, Jens Aamand

This study brings new knowledge to the benefits of applying bacterial–fungal consortia for bioremediation.

Is there sufficient ‘sink’ in current bioaccessibility determinations of organic pollutants in soils?

Original Research Article

Pages 128-132

C.D. Collins, M. Mosquera-Vazquez, J.L. Gomez-Eyles, P. Mayer, V. Gouliarmou, F. Blum

The inclusion of a ‘contaminant trap’ within physiologically based extraction tests significantly increases the bioaccessibility estimates of PAHs in contaminated soils.

Attribution of sources to metal accumulation in an alpine tarn, the Snowy Mountains, Australia

Original Research Article

Pages 133-143

Nicola Stromsoe, J. Nikolaus Callow, Hamish A. McGowan, Samuel K. Marx

Fluvial geogenic metals subdue the anthropogenic enrichment signal in a region previously demonstrated to receive atmospheric pollutants.

Critical evaluation of a new passive exchange-meter for assessing multimedia fate of persistent organic pollutants at the air-soil interface

Original Research Article

Pages 144-150

Xiang Liu, Li-Li Ming, Luca Nizzetto, Katrine Borgå, Thorjørn Larssen, Qian Zheng, Jun Li, Gan Zhang

Time integrated multimedia exchange of POPs in vegetation litter is resolved under dynamic conditions of OM ageing.

Feasibility of using low density polyethylene sheets to detect atmospheric organochlorine pesticides in Alexandria, Egypt

Original Research Article

Pages 151-158

Mohammed A. Khairy, Rainer Lohmann

LDPE passive air samplers spiked with PRCs can be used as a practical low cost technique for monitoring gas phase OCPs in Egypt.

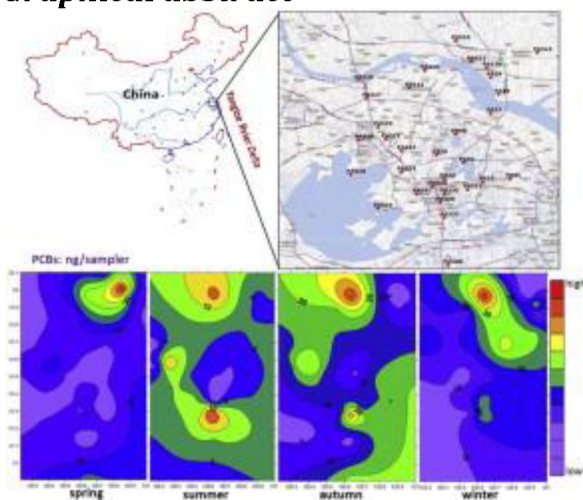
Passive air sampling of organochlorine pesticides and polychlorinated biphenyls in the Yangtze River Delta, China: Concentrations, distributions, and cancer risk assessment

Original Research Article

Pages 159-166

Lifei Zhang, Liang Dong, Wenlong Yang, Li Zhou, Shuangxin Shi, Xiulan Zhang, Shan Niu, Lingling Li, Zhongxiang Wu, Yeru Huang

Graphical abstract



A detailed study of organochlorine pesticides and polychlorinated biphenyls in air across the Yangtze River Delta area using passive air samplers.

Soil humic-like organic compounds in prescribed fire emissions using nuclear magnetic resonance spectroscopy

Original Research Article

Pages 167-171

M.-C. Chalbot, G. Nikolich, V. Etyemezian, D.W. Dubois, J. King, D. Shafer, G. Gamboa da Costa, J.F. Hinton, I.G. Kavouras

Humic-like soil organic matter may be an important component of particulate emissions in the early stages of wildfires.

An intercomparison of satellite-derived ground-level NO₂ concentrations with GMSMB modeling results and in-situ measurements – A North American study

Original Research Article

Pages 172-181

Baozhen Wang, Zhi Chen

The satellite derived NO₂ data are cross-validated with air quality modeling and in-situ measurement results with extended analyses, to help assessing and managing air pollution issues.

Role of arbuscular mycorrhizal fungus *Rhizophagus custos* in the dissipation of PAHs under root-organ culture conditions

Original Research Article

Pages 182-189

Elisabet Aranda, José Martín Scervino, Patricia Godoy, Rocío Reina, Juan Antonio Ocampo, Regina-Michaela Wittich, Inmaculada García-Romera

The AM fungus *Rhizophagus custos* is involved in PAH dissipation in absence of other microorganisms and could be potentially effective in protecting anthracene exposed plants.

Design and field-scale implementation of an “on site” bioremediation treatment in PAH-polluted soil

Original Research Article

Pages 190-199

A.I. Pelaez, I. Lores, A. Sotres, C. Mendez-Garcia, C. Fernandez-Velarde, J.A. Santos, J.L.R. Gallego, J. Sanchez

PAH-polluted soil underwent biostimulation at the microcosms and pilot-scale to optimize subsequent field-scale bioremediation.

Impact of activated carbon, biochar and compost on the desorption and mineralization of phenanthrene in soil

Original Research Article

Pages 200-210

Geoffrey Marchal, Kilian E.C. Smith, Arno Rein, Anne Winding, Lis Wollensen de Jonge, Stefan Trapp, Ulrich G. Karlson

Extraction into an exhaustive silicone sink measures the maximum phenanthrene desorption from soils with amendments, and this is reflected in the extent of mineralization.

Variations in exposure to traffic pollution while travelling by different modes in a low density, less congested city

Original Research Article

Pages 211-218

Simon Kingham, Ian Longley, Jenny Salmond, Woodrow Pattinson, Kreepa Shrestha

This study carried out in a low density, less congested city, found that like studies in large or densely populated urban areas car drivers are still exposed to the worst quality air.

Chlorinated pesticides in stream sediments from organic, integrated and conventional farms

Original Research Article

Pages 219-225

Pourya Shahpoury, Kimberly J. Hageman, Christoph D. Matthaei, Francis S. Magbanua

Higher concentrations of several chlorinated pesticides were found in conventional farms; however, organic and integrated practices were not pesticide-free.

Effect of long-term human exposure to environmental heavy metals on the expression of detoxification and DNA repair genes

Original Research Article

Pages 226-232

Saleh A. Al Bakheet, Ibraheem M. Attafi, Zaid H. Maayah, Adel R. Abd-Allah, Yousif A. Asiri, Hesham M. Korashy

Long-term human exposure to environmental metals increased the risk of metals contamination and altered expression of detoxifying, metabolizing, and DNA repair genes.

Photosynthetic performance of restored and natural mangroves under different environmental constraints

Original Research Article

Pages 233-241

André Scarlate Rovai, José Bonomi Barufi, Paulo Roberto Pagliosa, Fernando Scherner, Moacir Aluísio Torres, Paulo Antunes Horta, José Carlos Simonassi, Daiane Paula Cunha Quadros, Daniel Lázaro Gallindo Borges, Eduardo Juan Soriano-Sierra

Photosynthetic performance of mangroves is reduced due to Cu and Pb contamination.

Phytotoxicity and oxidative stress effect of 1-octyl-3-methylimidazolium chloride ionic liquid on rice seedlings

Original Research Article

Pages 242-249

Huijun Liu, Shuxian Zhang, Xiaona Hu, Caidong Chen

Rice morphology and physiological indicators has been affected by [OMIM]Cl. Oxidative stress and changes in cellular ultrastructural morphology were observed.

An SPE LC-MS/MS method for the analysis of human and veterinary chemical markers within surface waters: An environmental forensics application

Original Research Article

Pages 250-256

Cecilia Fenech, Kieran Nolan, Luc Rock, Anne Morrissey

A study on the identification and application of a suite of chemical markers that is suitable for differentiating and characterising sewage and manure inputs to surface waters.

Quantitative analysis on the urban flood mitigation effect by the extensive green roof system

Original Research Article

Pages 257-261

J.Y. Lee, H.J. Moon, T.I. Kim, H.W. Kim, M.Y. Han

Extensive green-roofs are an effective storm water best-management practice and the proposed parameters can be applied to mitigate urban runoff.

Short- and long-term temporal changes in soil concentrations of selected endocrine disrupting compounds (EDCs) following single or multiple applications of sewage sludge to pastures

Original Research Article

Pages 262-270

S.M. Rhind, C.E. Kyle, H. Ruffie, E. Calmettes, M. Osprey, Z.L. Zhang, D. Hamilton, C. McKenzie

Effects of sewage sludge application to pastures on temporal changes in soil concentrations of endocrine disrupting compounds differ with chemical class and season.

Carbon black vs. black carbon and other airborne materials containing elemental carbon: Physical and chemical distinctions

Review Article

Pages 271-286

Christopher M. Long, Marc A. Nascarella, Peter A. Valberg

Open Access

This review demonstrates the significant physical and chemical distinctions between elemental carbon-containing particles e.g., carbon black, black carbon, and engineered nanomaterials.

Environmental concentrations of engineered nanomaterials: Review of modeling and analytical studies

Review Article

Pages 287-300

Fadri Gottschalk, TianYin Sun, Bernd Nowack

Modeled and measured environmental concentrations of engineered nanomaterials are reviewed and critically discussed.

Measurement of humic-like substances in aerosols: A review

Review Article

Pages 301-314

Guangjie Zheng, Kebin He, Fengkui Duan, Yuan Cheng, Yongliang Ma

This review summarized important developments in measurement of aerosol-phase humic-like substances in the last decade.

Influence of age, sex and breeding status on mercury accumulation patterns in the wandering albatross *Diomedea exulans*

Pages 315-320

S. Tavares, J.C. Xavier, R.A. Phillips, M.E. Pereira, M.A. Pardal

We address the influence of age, sex and breeding status on the accumulation of very high mercury levels in the wandering albatross.

Increased antioxidant response and capability to produce ROS in hemocytes of *Pinna nobilis* L. exposed to anthropogenic activity

Pages 321-324

Antoni Sureda, Antonino Natalotto, Elvira Álvarez, Salud Deudero

Pinna nobilis responds to the anthropogenic activity with an antioxidant adaptation to the increased capability to generate reactive oxygen species.

Sensitivity of a green alga to atrazine is not enhanced by previous acute exposure

Pages 325-328

Leilan Baxter, Richard Brain, Ryan Prosser, Keith Solomon, Mark Hanson

A pulsed exposure to atrazine does not influence subsequent response to a second, reduced range of exposures in an alga. Recovery in all endpoints is rapid.

Effects of chlorothalonil on development and growth of amphibian embryos and larvae

Pages 329-334

Shuangying Yu, Mike R. Wages, George P. Cobb, Jonathan D. Maul

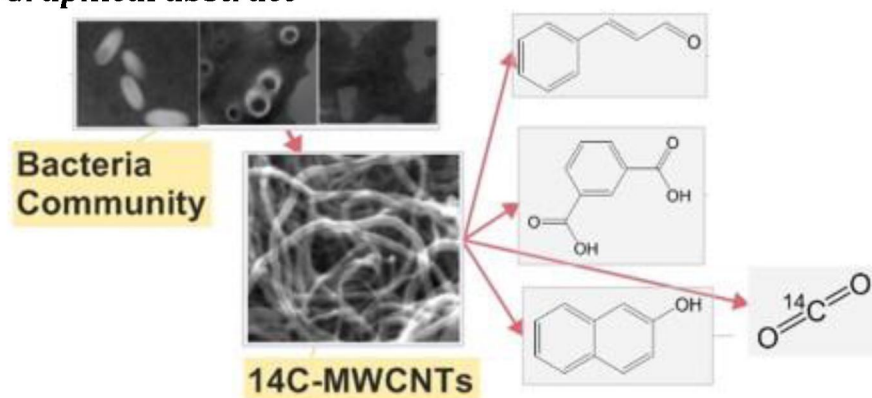
The fungicide chlorothalonil causes growth and developmental effects in larval amphibians at aqueous concentrations reported in the environment.

Degradation of multiwall carbon nanotubes by bacteria

Pages 335-339

Liwen Zhang, Elijah J. Petersen, Mussie Y. Habteselassie, Liang Mao, Qingguo Huang

Graphical abstract



The ¹⁴C-labeled multiwall carbon nanotubes can be degraded to ¹⁴CO₂ and other byproducts by a bacteria community under natural conditions.

Cd isotopes as a potential source tracer of metal pollution in river sediments

Pages 340-343

Bo Gao, Haidong Zhou, Xirong Liang, Xianglin Tu

The information and application of Cd isotopic compositions will provide a new direction in tracing metal pollution in water environment.