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- 1076 Photochemical processing of aldrin and dieldrin in frozen aqueous solutions under arctic field conditions**
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- 1108 New insights into the sorption mechanism of cadmium on red mud**
L. Luo, C. Ma, Y. Ma, S. Zhang, J. Lv, M. Cui
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- 1114 Potential mechanisms of phthalate ester embryotoxicity in the abalone *Haliotis diversicolor supertexta***
J. Zhou, Z.-H. Cai, K.-Z. Xing
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- 1123 In situ measurements of concentrations of Cd, Co, Fe and Mn in estuarine porewater using DGT**
Z. Wu, M. He, C. Lin
Vertical profiles of metals were measured by the in situ application of DGT (diffusive gradients in thin films).
- 1129 Impact of the global economic crisis on metal levels in particulate matter (PM) at an urban area in the Cantabria Region (Northern Spain)**
A. Arruti, I. Fernández-Olmo, A. Irabien
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- 1136 A chemometric approach to the evaluation of atmospheric and fluvial pollutant inputs in aquatic systems: The Guadalquivir River estuary as a case study**
J.A. López-López, M. García-Vargas, C. Moreno
By combining trace environmental analysis and selected chemometric tools atmospheric and fluvial inputs of pollutants in rivers may be identified. The extension of the pollution originated by each anthropic activity developed along the River may be established, as well as the identification of the pollution introduced into the river by the tributary rivers (point sources) and by rains (non-point sources).
- 1144 Risks of using membrane filtration for trace metal analysis and assessing the dissolved metal fraction of aqueous media – A study on zinc, copper and nickel**
Y. Hedberg, G. Herting, I.O. Wallinder
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- 1151 Combined effects of titanium dioxide and humic acid on the bioaccumulation of cadmium in Zebrafish**
X. Hu, Q. Chen, L. Jiang, Z. Yu, D. Jiang, D. Yin
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- 1159 Altered vegetative assemblage trajectories within an urban brownfield**
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- 1167 Occurrence of perfluorooctanoate and perfluorooctanesulfonate in the Korean water system: Implication to water intake exposure**
S.-K. Kim, Y.L. Kho, M. Shoeib, K.-S. Kim, K.-R. Kim, J.-E. Park, Y.-S. Shin
Tap water intake accounted for a significant portion of total PFOA exposure for Korean citizens living along the river contaminated by the highest PFOA in this study.
- 1174 Locating industrial VOC sources with aircraft observations**
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- 1183 Methane emissions from a dairy feedlot during the fall and winter seasons in Northern China**
Z. Gao, H. Yuan, W. Ma, X. Liu, R.L. Desjardins
High methane emission intensity and low milk productivity of Chinese dairy production are indicated.
- 1190 Measurements and modeling of reactive nitrogen deposition in southeast Brazil**
A.G. Allen, C.M.D. Machado, A.A. Cardoso
A new procedure based on NO₂ measurements is used to estimate reactive nitrogen deposition in a developing region experiencing agro-industrial growth.

- 1198 Solubilization properties of polycyclic aromatic hydrocarbons by saponin, a plant-derived biosurfactant**
W. Zhou, J. Yang, L. Lou, L. Zhu
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- 1205 Linking chemical elements in forest floor humus (O_n-horizon) in the Czech Republic to contamination sources**
J. Sucharova, I. Suchara, M. Hola, C. Reimann, R. Boyd, P. Filzmoser, P. Englmaier
Forest floor humus, the atmosphere–biosphere–pedosphere interface, archives an environmental contamination signal over long time periods.
- 1215 Bioaccessibility and health risk of arsenic, mercury and other metals in urban street dusts from a mega-city, Nanjing, China**
X. Hu, Y. Zhang, J. Luo, T. Wang, H. Lian, Z. Ding
Bioaccessibility and health risks of trace elements differed with street dusts from different land use districts in Nanjing.
- 1222 Effects of environmental exposure and diet on levels of persistent organic pollutants (POPs) in eggs of a top predator in the North Atlantic in 1980 and 2008**
E.H.K. Leat, S. Bourgeon, K. Borgå, H. Strøm, S.A. Hanssen, G.W. Gabrielsen, Æ. Petersen, K. Olafsdottir, E. Magnúsdóttir, A.T. Fisk, S. Ellis, J.O. Bustnes, R.W. Furness
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E. Simon, M. Braun, A. Vidic, D. Bogyó, I. Fábrián, B. Tóthmérész
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- 1234 Polycyclic aromatic hydrocarbons in lake sediments from the High Tatras**
B.L. van Drooge, J. López, P. Fernández, J.O. Grimalt, E. Stuchlík
High sedimentary PAH loads were observed in alpine lakes in the High Tatras (Eastern Europe) which are related to high PAH atmospheric deposition fluxes.
- 1241 Cocaine and other illicit drugs in airborne particulates in urban environments: A reflection of social conduct and population size**
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The presence of illicit drugs in atmospheric particles can be used to track illicit drug abuse.
- 1248 Transport of copper as affected by titania nanoparticles in soil columns**
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- 1257 Salting our landscape: An integrated catchment model using readily accessible data to assess emerging road salt contamination to streams**
L. Jin, P. Whitehead, D.I. Siegel, S. Findlay
A newly developed integrated catchment model for salinity can be used to manage and forecast the inputs and transport of chloride to streams.
- 1266 Identification of magnetic particulates in road dust accumulated on roadside snow using magnetic, geochemical and micro-morphological analyses**
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- 1277 To duckweeds (*Landoltia punctata*), nanoparticulate copper oxide is more inhibitory than the soluble copper in the bulk solution**
J. Shi, A.D. Abid, I.M. Kennedy, K.R. Hristova, W.K. Silk
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- 1283 Characterization of mercury species in brown and white rice (*Oryza sativa* L.) grown in water-saving paddies**
S.E. Rothenberg, X. Feng, B. Dong, L. Shang, R. Yin, X. Yuan
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- 1290 Dechlorane Plus (DP) in air and plants at an electronic waste (e-waste) site in South China**
S.-J. Chen, M. Tian, J. Wang, T. Shi, Y. Luo, X.-J. Luo, B.-X. Mai
E-waste recycling in South China results in wide occurrence of DP in the air and plant.
- 1297 Analyzing trophic transfer of heavy metals for food webs in the newly-formed wetlands of the Yellow River Delta, China**
B. Cui, Q. Zhang, K. Zhang, X. Liu, H. Zhang
The newly-formed wetlands show slight heavy metal contamination and weak biomagnification through the food webs in the Yellow River Delta.

- 1307 **Cell size dependence of additive versus synergetic effects of UV radiation and PAHs on oceanic phytoplankton**
P. Echeveste, S. Agustí, J. Dachs
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- 1317 **Distribution, availability, and sources of trace metals in different particle size fractions of urban soils in Hong Kong: Implications for assessing the risk to human health**
X.-s. Luo, S. Yu, X.-d. Li
Anthropogenic trace metals tend to accumulate in fine fractions of urban soils, and may pose potential risks to human health through the inhalation of resuspended soil particles and ingestion of soil materials.
- 1327 **Effects of canopy–deposition interaction on H⁺ supply to soils in *Pinus banksiana* and *Populus tremuloides* ecosystems in the Athabasca oil sands region in Alberta, Canada**
K. Jung, S.X. Chang, M.A.(Charlie) Arshad
A modified canopy budget model was developed and organic acid leaching from jack pine canopies was a significant source of H⁺ in the oil sands region of Alberta.
- 1334 **Detection of fullerenes (C₆₀ and C₇₀) in commercial cosmetics**
T.M. Benn, P. Westerhoff, P. Herckes
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- 1343 **Expression of *mtc* in *Folsomia candida* indicative of metal pollution in soil**
B. Nota, R. Vooijs, N.M. van Straalen, D. Roelofs
*Exposure to metal containing soil induces the expression of *mtc* in the springtail *Folsomia candida*.*
- 1348 **A rapid and high-throughput quantum dots bioassay for monitoring of perfluorooctane sulfonate in environmental water samples**
J. Zhang, Y. Wan, Y. Li, Q. Zhang, S. Xu, H. Zhu, B. Shu
We developed a rapid and high-throughput bioassay for monitoring of PFOS in environmental water samples.
- 1354 **The removal of microorganisms and organic micropollutants from wastewater during infiltration to aquifers after irrigation of farmland in the Tula Valley, Mexico**
A. Chávez, C. Maya, R. Gibson, B. Jiménez
Water extracted from aquifers fed by wastewater used for irrigation may contain microorganisms and persistent polar organic micropollutants and requires treatment to be a potable supply.
- 1363 **Accumulation of ¹⁴C-trinitrotoluene and related nonextractable (bound) residues in *Eisenia fetida***
J.B. Belden, G.R. Lotufo, C.K. Chambliss, J.C. Fisher, D.R. Johnson, R.E. Boyd, J.G. Sims
The majority of trinitrotoluene accumulation in earthworms occurs as nonextractable residues that have a significantly longer half life in the worm as compared to TNT and its solvent-extractable deaminated metabolites.
- 1369 **Influence of extracellular polymeric substances (EPS) on Cd adsorption by bacteria**
X. Wei, L. Fang, P. Cai, Q. Huang, H. Chen, W. Liang, X. Rong
Intact bacterial cells and EPS-free cells have similar binding mechanisms for Cd.
- 1375 **PBDD/F impurities in some commercial deca-BDE**
M. Ren, P. Peng, Y. Cai, D. Chen, L. Zhou, P. Chen, J. Hu
PBDD/Fs can be formed as contaminants in the commercial DBDE production.
- 1381 **Polychlorinated biphenyls in freshwater salmonids from the Kerguelen Islands in the Southern Ocean**
A. Jaffal, N. Givaudan, S. Betoulle, A. Terreau, S. Paris-Palacios, S. Biagianti-Risbourg, E. Beall, H. Roche
Salmonids in hydrosystems of the Kerguelen Islands (Southern Ocean) show a high PCB bioaccumulation.
- 1390 **Aquatic subsidies transport anthropogenic nitrogen to riparian spiders**
F. Akamatsu, H. Toda
Smaller spiders assimilate anthropogenic nitrogen through the predation on aquatic subsidies.
- 1398 **Arsenic strongly associates with ferrihydrite colloids formed in a soil effluent**
A. Fritzsche, T. Rennert, K.U. Totsche
Natural concentrations of competing (in)organic species in soil-derived solutions do not impede the strong and quantitative association between As and colloidal ferrihydrite.
- 1406 **Modeling short-term variability of semivolatile organic chemicals in air at a local scale: An integrated modeling approach**
M. Morselli, D. Ghirardello, M. Semplice, A. Di Guardo
AirFug, an integrated multimedia fate - meteorological preprocessor model was developed to capture the short-term dynamics of semivolatile organic chemicals at the local scale.

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1413 Spatial and seasonal variations of polycyclic aromatic hydrocarbons in Haihe Plain, China

R. Wang, H. Cao, W. Li, W. Wang, W. Wang, L. Zhang, J. Liu, H. Ouyang, S. Tao

Spatial and seasonal variations of PAHs in Haihe Plain were studied using a dynamic fugacity model with spatial resolution.

1419 Identification of perfluoroalkyl acid sources in Swiss surface waters with the help of the artificial sweetener acesulfame

C.E. Müller, A.C. Gerecke, A.C. Alder, M. Scheringer, K. Hungerbühler

The analysis of correlations between surface water concentrations of perfluorinated compounds (PFCs) and source parameters revealed that consumer products are the most important source for PFCs in Switzerland, whereas industry and atmospheric deposition make a minor contribution.

1427 Quantification of net carbon flux from plastic greenhouse vegetable cultivation: A full carbon cycle analysis

Y. Wang, H. Xu, X. Wu, Y. Zhu, B. Gu, X. Niu, A. Liu, C. Peng, Y. Ge, J. Chang

The conversion from conventional vegetable cultivation to plastic greenhouse vegetable cultivation could substantially enhance carbon sink potential by 8.6 and 1.3 times for temperate and subtropical area, respectively.

1435 The performance of passive flow monitors and phosphate accumulating passive samplers when exposed to pulses in external water flow rate and/or external phosphate concentrations

D. O'Brien, D. Hawker, M. Shaw, J.F. Mueller

The performance of an integrative phosphate passive sampler has been assessed when exposed to pulses in flow rate and concentration, both individually and simultaneously.

Short Communications

1442 BETR global – A geographically-explicit global-scale multimedia contaminant fate model

M. MacLeod, H. von Waldow, P. Tay, J.M. Armitage, H. Wöhrnschimmel, W.J. Riley, T.E. McKone, K. Hungerbühler

Two new software implementations of the Berkeley-Trent Global Contaminant Fate Model are available. The new model software is illustrated using a case study of the global fate of decamethylcyclopentasiloxane (D5).

1446 First detection of an NSAID, flunixin, in sheep's wool using GC-MS

N. Richards, S. Hall, K. Scott, N. Harrison

This is the first time that an NSAID has been investigated or detected in sheep's wool. As such, it details a novel exposure pathway for scavenging species in the environment and offers a potential tool for future monitoring effort in vulture conservation.

Corrigenda

1451 Corrigendum to "Accumulation and maternal transfer of polychlorinated biphenyls in Steller sea lions (*Eumetopias jubatus*) from Prince William Sound and the Bering Sea, Alaska" [Environ. Pollut. 159 (2011) 71–77]

J. Wang, K. Hülck, S.-M. Hong, S. Atkinson, Q.X. Li

1452 Corrigendum to "Partitioning behaviour of perfluorinated alkyl contaminants between water, sediment and fish in the Orge River (nearby Paris, France)" [Environ. Pollut. 159 (2011) 391–397]

P. Labadie, M. Chevreuil

Acknowledgement of Referees

1454 Acknowledgement of Referees