

2016

**Use of semipermeable membrane devices (SPMDs) to characterize dissolved hydrocarbon fractions of both dispersed and undispersed oil**

April R. Van Scoy,\* Jennifer Voorhees, Brian S. Anderson, Bryn M. Philips and Ronald S. Tjeerdema

Crude oil contamination remains a problem along coastal California and its impacts on pelagic organisms are of concern.

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2023

**Pilot-scale *in situ* bioremediation of HMX and RDX in soil pore water in Hawaii**

Zachary M. Payne, Krishna M. Lamichhane, Roger W. Babcock Jr.\* and Stephen J. Turnbull

A nine-month *in situ* bioremediation study was conducted in Makua Military Reservation (MMR) in Oahu, Hawaii (USA) to evaluate the potential of molasses to enhance biodegradation of royal demolition explosive (RDX) and high-melting explosive (HMX) contaminated soil below the root zone.

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2030

**The impact of an anti-idling campaign on outdoor air quality at four urban schools**

Patrick H. Ryan,\* Tiina Reponen, Mark Simmons, Michael Yermakov, Ken Sharkey, Denisha Garland-Porter, Cynthia Eghbalnia and Sergey A. Grinshpun

Idling school buses may increase concentrations of air pollutants including fine particulate matter (PM<sub>2.5</sub>) and elemental carbon (EC) near schools.

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2038

**Influence of organic surface coatings on the sorption of anticonvulsants on mineral surfaces**

Shen Qu and David M. Cwiertny\*

Surfactant coatings considerably enhance sorption of two persistent anticonvulsants on metal oxides, thus affecting their fate in aquatic environments.

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2050

Ocean

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2059

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2068

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2080

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**Challenges in assessing release, exposure and fate of silver nanoparticles within the UK environment**

Cherrie M. Whiteley, Matteo Dalla Valle, Kevin C. Jones and Andy J. Sweetman\*

There are significant challenges in assessing the fate and exposure of nanoparticles (NPs) in the environment owing to the lack of information on their use, potential pathways and sinks in the environment.

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**An evaluation of the effectiveness of novel industrial by-products and organic wastes on heavy metal immobilization in Pb–Zn mine tailings**

Shengxiang Yang,\* Jianbing Cao, Wenyong Hu, Xiaojun Zhang and Chun Duan

The *in situ* immobilization of heavy metals using various easily obtainable amendments is a cost-effective and practical method for the remediation of contaminated sites.

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**Microbial community analysis of Deepwater Horizon oil-spill impacted sites along the Gulf coast using functional and phylogenetic markers**

Jessica K. Looper, Ada Cotto, Byung-Yong Kim, Ming-Kuo Lee, Mark R. Liles, Sinéad M. Ní Chadhain and Ahjeong Son\*

Pyrosequencing based microbial community analysis indicated the selective growth of *Parvibaculum* in the sediment affected by the 2010 Deepwater Horizon oil spill.

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**Evaluation of potential sewage contamination by fecal sterol biomarkers adsorbed in natural biofilms**

Sandro Froehner\* and Juan Sáñez

Fecal steroids, biomarkers of sewage pollution, sorbed by biofilms supported on a glass plate, provide a new approach to assess this type of human contamination.

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2087

**Ultrafine particle concentrations in the surroundings of an urban area: comparing downwind to upwind conditions using Generalized Additive Models (GAMs)**

Claudio Sartini,\* Stefano Zauli Sajani, Isabella Ricciardelli, Juana Mari Delgado-Saborit, Fabiana Scotto, Arianna Trentini, Silvia Ferrari and Vanes Poluzzi

The aim of this study was to investigate the influence of an urban area on ultrafine particle (UFP) concentration in nearby surrounding areas.

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2096

**Urinary nickel and prolactin in workers exposed to urban stressors**

Tiziana Caciari, Maria Valeria Rosati, Valeria Di Giorgio, Teodorico Casale, Benedetta Pimpinella, Barbara Scala, Roberto Giubilati, Assunta Capozzella, Gianfranco Tomei\* and Francesco Tomei

The exposure to the low doses of nickel present in urban pollution induces an increase in prolactin values in outdoor workers.

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2104

**Assessment of mercury bioavailability to benthic macroinvertebrates using diffusive gradients in thin films (DGT)**

Aria Amirbahman,\* Delia I. Massey, Guilherme Lotufo, Nicholas Steenhaut, Lauren E. Brown, James M. Biedenbach and Victor S. Magar

Diffusive gradient in thin films (DGTs) were used in laboratory microcosms as a biomonitoring tool for the uptake of mercury species by benthic macroinvertebrates in estuarine sediments.

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2115

**Wetland-based passive treatment systems for gold ore processing effluents containing residual cyanide, metals and nitrogen species**

R. Álvarez, A. Ordóñez,\* J. Loredó and P. L. Younger

Treatment of mining-derived cyanidation solutions by means of passive systems as a sustainable engineering approach.

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**Toxicological effects of multi-walled carbon nanotubes adsorbed with nonylphenol on earthworm *Eisenia fetida***

Changwei Hu, Yun Cai, Weili Wang, Yibin Cui and Mei Li\*

MWCNTs could facilitate the bioavailability of NP to earthworm *Eisenia fetida* and increased the harmful effects of NP.

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**Mercury dynamics in groundwater across three distinct riparian zone types of the US Midwest**

Philippe G. Vidon,\* Carl P. J. Mitchell, Pierre-André Jacinthe, Matthew E. Baker, Xiaoqiang Liu and Katelin R. Fisher

Hg contamination of groundwater is unlikely to be an issue in the US Midwest, in spite of high deposition rates.

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**Multimedia modeling of the fate of triclosan and triclocarban in the Dongjiang River Basin, South China and comparison with field data**

Qian-Qian Zhang, Jian-Liang Zhao, You-Sheng Liu, Ben-Gang Li and Guang-Guo Ying\*

Contamination levels and fate of personal care products such as triclosan and triclocarban in watersheds can be predicted by the developed fugacity model based on their usages.