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An in-depth assessment into simultaneous monitoring of dissolved reactive phosphorus (DRP) and low-molecular-weight organic phosphorus (LMWOP) in aquatic environments using diffusive gradients in thin films (DGT)

Christian Wilhelm Mohr,* Rolf David Vogt, Oddvar Røyset, Tom Andersen and Neha Amit Parekh

In situ P fractionation size distribution is altered during uptake by the DGT due to the size and physiochemical properties of the molecular species.

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The establishment of preliminary safety threshold values for cyanobacteria based on periodic variations in different microcystin congeners in Lake Chaohu, China

Lixia Shang, Muhua Feng,* Feifei Liu, Xiangen Xu, Fan Ke, Xiangchao Chen and Wenchao Li

It is necessary to establish periodic safety threshold values for cyanobacteria referring to the main MC congeners rather than MC-LR.

740

***In situ* tryptophan-like fluorometers: assessing turbidity and temperature effects for freshwater applications**

K. Khamis,* J. P. R. Sorensen, C. Bradley, D. M. Hannah, D. J. Lapworth and R. Stevens

This study combines laboratory experimentation and field trials to provide new insights into the standardization of *in situ* tryptophan-like fluorescence measurements for freshwater applications.

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Combining remote sensing and eddy covariance data to monitor the gross primary production of an estuarine wetland ecosystem in East China

Mingquan Wu,* Shakir Muhammad, Fang Chen, Zheng Niu and Changyao Wang

A new model performance better than the MODIS GPP product for wetland ecosystems was proposed and validated.

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Kinetic and multidimensional profiling of accelerated degradation of oil sludge by biostimulation

Yijie Dong, Zhe Lang, Xian Kong, Diannan Lu* and Zheng Liu*

Component variation and microbial ecology evolution during biostimulation treatment of oil sludge.

775

Nanoscale mapping of carbon oxidation in pyrogenic black carbon from ancient Amazonian anthrosols

B. S. Archanjo,* D. L. Baptista, L. A. Sena, L. G. Cançado, N. P. S. Falcão, A. Jorio and C. A. Achete

Carbon–oxygen functional groups dominate over different spatial regions in nanoscale carbon grains from ancient Amazonian anthrosols (*Terra Preta de Índio*).

Formation of manganese phosphate and manganese carbonate during long-term sorption of Mn^{2+} by viable *Shewanella putrefaciens*: effects of contact time and temperature

Natalia Chubar,* Cristina Avramut and Tom Visser

Mn^{2+} sorption by Mn-reducing bacterium *Shewanella putrefaciens* over 30 days.

An isotope hydrochemical approach to understand fluoride release into groundwaters of the Datong Basin, Northern China

Chunli Su, Yanxin Wang,* Xianjun Xie and Yapeng Zhu

The hydrogeochemical and isotopic investigations of high fluoride (up to 8.26 mg L^{-1}) groundwater in the Datong Basin, Northern China were carried out. The elevated δD and $\delta^{18}O$, low F/Cl ratios, and the presence of low tritium in the high fluoride groundwater reflected the effects of long water-rock reactions and evapotranspiration.

Source apportionment of airborne nanoparticles in a Middle Eastern city using positive matrix factorization

Abdullah N. Al-Dabbous and Prashant Kumar*

Airborne nanoparticles have been studied worldwide, but little is known about their sources in the Middle East region, where hot, arid and dusty climatic conditions generally prevail.

Effect of the orientation and fluid flow on the accumulation of organotin compounds to Chemcatcher passive samplers

H. Ahkola,* J. Juntunen,* M. Laitinen, K. Krogerus, T. Huttula, S. Herve and A. Witick

The effect of environmental conditions on the passive sampling process should be understood to estimate the concentration of chemical required by environmental legislation.

825

The temporal distribution, source and potential toxicity of polycyclic aromatic hydrocarbons in a sediment core from an urban lake in Wuhan, China

Qian Lu, Zeyu Yang,* Laiyan Wu, Xinchao Ruan and Wenwen Yang

The temporal distribution, source and toxicity of PAHs and APAHs in a sediment core from an urban lake in Wuhan, were studied.

835

The influence of carbon sources on the expression of the *recA* gene and genotoxicity detection by an *Acinetobacter* bioreporter

Bo Jiang, Yizhi Song, Dayi Zhang, Wei E. Huang, Xu Zhang and Guanghe Li*

Bacterial whole-cell bioreporters are practical and reliable analytical tools to assess the toxicity and bioavailability of environmental contaminants, yet evidence has shown that their performance could be affected by different carbon sources.

844

Iodine status of *Eeyou Istchee* community members of northern Quebec, Canada, and potential sources

Benita Tam,* Leonard J. S. Tsuji, Ian D. Martin, Eric N. Liberda, Pierre Ayotte, Suzanne Côté, Éric Dewailly and Evert Nieboer

Comparison of urinary iodine concentrations and iodine/creatinine ratios for six Canadian indigenous communities.

854

Urban contamination sources reflected in inorganic pollution in urban lake deposits, Bergen, Norway

Malin Andersson* and Ola Anfin Eggen

The 7000 years transition from a pristine environment towards a modern city has brought a number of chemical changes and effects to urban lake sediments in Bergen.

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Oxidative potential of particulate matter at a German motorway

Bryan Hellack,* Ulrich Quass, Carmen Nickel, Gabriele Wick, Roel P. F. Schins and Thomas A. J. Kuhlbusch

Ambient particulate matter (PM10) was sampled alongside a motorway at clear up- and downwind situations and analysed to their oxidative potential.

Bioremediation of the oil spill polluted marine intertidal zone and its toxicity effect on microalgae

Yongrui Pi, Nana Xu, Mutai Bao,* Yiming Li, Dong Lv and Peiyan Sun

Custom-designed devices with 0.6 m (*L*) × 0.3 m (*W*) × 0.4 m (*H*) and a microbial consortium were applied to simulate bioremediation on the oil spill-polluted marine intertidal zone.