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A New Role *for* Sulfur *in* Arsenic Cycling

Aerobic Methane Emission from
Plants in the Inner Mongolia Steppe

Sustainable Forests, Renewable Energy,
and the Environment

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CHARACTERIZATION OF NATURAL AND AFFECTED ENVIRONMENTS

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▶ Dechlorane Plus and Other Flame Retardants in Tree Bark from the Northeastern United States

Xinghua Qiu and Ronald A. Hites*

The geographical concentration gradient of Dechlorane Plus in pine tree bark indicates an environmental source of this compound in Niagara Falls, New York.

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Speciation of Cu in a Contaminated Agricultural Soil Measured by XAFS, μ -XAFS, and μ -XRF

Daniel G. Strawn* and Leslie L. Baker

Cu(II) speciation in a contaminated agriculture soil using synchrotron microprobe and XAFS spectroscopy revealed that Cu is adsorbed on soil organic matter by two covalent bonds.

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A Comparison of MAGIC and Paleolimnological Predictions of Preindustrial pH for 55 Swedish Lakes

Martin Erlandsson,* Kevin Bishop, Jens Fölster, Matilda Guhrén, Tom Korsman, Veronika Kronnäs, and Filip Moldan

Reconstructions of pH with paleolimnological and hydrogeochemical models give similar results, although the outcome is dependent on reference values for CO₂-pressure and organic carbon concentrations.

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Identification of Ah Receptor Agonists in Soil of E-waste Recycling Sites from Taizhou Area in China

Chaofeng Shen, Shengbiao Huang, Zijian Wang, Min Qiao, Xianjin Tang, Chunna Yu, Dezhi Shi, Youfeng Zhu, Jiyan Shi, Xincan Chen, Karen Setty, and Yingxu Chen*

A combination of an *in vitro* bioassay and chemical analysis identifies PCBs as the main AhR agonists in soil from e-waste recycling sites in Taizhou, China.

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Contemporary Trends in the Acid-Base Status of Two Acid-Sensitive Streams in Western Maryland

Keith N. Eshleman,* Kathleen M. Kline, Raymond P. Morgan II, Nancy M. Castro, and Timothy L. Negley

Trends show increasing streamwater acid neutralizing capacity due to declining regional acid deposition, but results may portend a decline in the rate of further recovery.

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▶ Aerobic Methane Emission from Plants in the Inner Mongolia Steppe

Zhi-Ping Wang,* Xing-Guo Han, G. Geoff Wang, Yang Song, and Jay Gulledge

Woody plants in the Inner Mongolia grassland, but not grasses or other herbs, emit plant-derived methane under aerobic conditions, partially confirming an earlier controversial finding.

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PCBs, PBDEs and pesticides released to the Arctic Ocean by the Russian Rivers Ob and Yenisei

Jolynn Carroll,* Vladimir Savinov, Tatiana Savinova, Salve Dahle, Robert McCrea, and Derek C. G. Muir

The Russian Rivers Ob and Yenisei are major point sources of pesticides and persistent organic pollutants to the Arctic Ocean.

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Characterization of Polybrominated Dibenzo-*p*-Dioxins and Dibenzofurans in Different Atmospheric Environments

Lin-Chi Wang,* Cheng-Hsien Tsai, Guo-Ping Chang-Chien, and Chung-Hsien Hung

The characteristics of polybrominated-dibenzo-*p*-dioxins and dibenzofurans (PBDD/Fs) in the atmosphere of rural, urban, industrial, and science park areas are presented.

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A New Role for Sulfur in Arsenic Cycling

Jenny C. Fisher, Dirk Wallschläger, Britta Planer-Friedrich, and James T. Hollibaugh*

Reduced sulfur species can enhance arsenate production by stimulating growth of sulfur-oxidizing microbes that catalyze the transformation of arsenite and thioarsenates.

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High-Frequency Archives of Manganese Inputs To Coastal Waters (Bay of Seine, France) Resolved by the LA-ICP-MS Analysis of Calcitic Growth Layers along Scallop Shells (*Pecten maximus*)

A. Barats, D. Amouroux,* C. Pécheyran, L. Chauvaud, and O. F. X. Donard

Scallop shell archives Mn inputs at coastal sediment-water interface.

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Eileen B. Ekstrom* and François M. M. Morel

Low cobalt conditions decrease mercury methylation and growth rates of a complete-oxidizing, sulfate-reducing bacterium.

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Uptake and Storage of PCBs by Plant Cuticles

Claudia Moeckel, Gareth O. Thomas, Jonathan L. Barber, and Kevin C. Jones*

The role of plant cuticles and cuticular waxes in the uptake and storage of gas-phase PCBs is compared when leaf constituents are isolated.

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NMR Investigation of Enzymatic Coupling of Sulfonamide Antimicrobials with Humic Substances

Heidi M. Bialk and Joel A. Pedersen*

Arthromyces ramosus peroxidase mediates the formation of Michael adducts and possibly other covalent linkages between sulfonamide antimicrobials and soil humic acid

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Highly Charged Swelling Mica-Type Clays for Selective Cu Exchange

Ramesh Ravella, Sridhar Komarneni,* and Carmen Enid Martinez

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Enhancement and Inhibition of Denitrification by Fluid-Flow and Dissolved Oxygen Flux To Stream Sediments

Ben L. O'Connor* and Miki Hondzo

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Nancy VanStone, Martin Elsner, Georges Lacrampe-Couloume, Scott Mabury, and Barbara Sherwood Lollar*