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Destruction *of the* World Trade Center *and* PCBs, PBDEs, PCDD/Fs, PBDD/Fs, *and* Chlorinated Biphenylenes

Perfluorinated Chemicals Infiltrate Ocean Waters

Research

Critical Reviews

Characterization of Natural and Affected Environments

Environmental Science & Technology

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5651

Reductive Dechlorination of Polychlorinated Biphenyls: Threshold Concentration and Dechlorination Kinetics of Individual Congeners in Aroclor 1248

Young-Cheol Cho, Roger C. Sokol, Robert C. Frohnhoefer, and G-Yull Rhee

The threshold concentration for microbial dechlorination varies widely among PCB congeners, and these differences affect the level and pattern of dechlorination in contaminated sediments.

■ 5657

Classifying NOM—Organic Sorbate Interactions Using Compound Transfer from an Inert Solvent to the Hydrated Sorbent

Mikhail Borisover and Ellen R. Graber

An inert solvent reference state is valuable for delineating differences in organic compound interactions with NOM, enabling sorbate classification according to strength of sorbate—NOM interactions.

5665

Products of Aqueous Chlorination of 17β-Estradiol and Their Estrogenic Activities

Jianying Hu, Shuijie Cheng, Takako Aizawa, Yoshiyasu Terao, and Shoichi Kunikane

The products of aqueous chlorination of 17β-estradiol are characterized using LC-MS, and the estrogenic activities of these compounds are evaluated.

5671

Surface Chemical Heterogeneity of Bacteriogenic Iron Oxides from a Subterranean Environment

Raul E. Martinez, D. Scott Smith, Karsten Pedersen, and F. Grant Ferris

Modeling of the surface reactivity of bacteriogenic iron oxides through the use of a fully optimized continuous affinity pK_a spectroscopy method.

Environmental Measurements Methods

5678

Congener-Based Aroclor Quantification and Speciation Techniques: A Comparison of the Strengths, Weaknesses, and Proper Use of Two Alternative Approaches

Paula J. Sather, John W. Newman, and Michael G. Ikonomou

Two approaches to Aroclor quantification and speciation are systematically compared to determine strengths and limitations of each, identify sources of bias, and determine the best use for each.

5687

Disposable Indicators for Monitoring Lighting Conditions in Museums

Mauro Bacci, Costanza Cucci, Anne-Laurence Dupont, Bertrand Lavédrine, Marcello Picollo, and Simone Porcinai

A colorimetric indicator is investigated and proposed as an early warning system for fast and easy assessment of the light exposure of objects in museums.

5695

Portable Sick House Syndrome Gas Monitoring System Based on Novel Colorimetric Reagents for the Highly Selective and Sensitive Detection of Formaldehyde

Yoshio Suzuki, Nobuo Nakano, and Koji Suzuki

Highly selected and sensitive detection of indoor formaldehyde gas was carried out using a hand-held instrument based on a novel colorimetric agent.

5701

Fluorescence Excitation—Emission Matrix Regional Integration to Quantify Spectra for Dissolved Organic Matter

Wen Chen, Paul Westerhoff, Jerry A. Leenheer, and Karl Booksh

Fluorescence regional integration, a quantitative technique that integrates the volume beneath an excitation emission matrix, is illustrated by analysis of drinking water and wastewater.

5711

A Continuous Analyzer for Soluble Anionic Constituents and Ammonium in Atmospheric Particulate Matter

Rida Al-Horr, Gautam Samanta, and Purnendu K. Dasgupta

A novel steamless particle collector/analysis system is described; field data are presented.

5721

Direct Injection GC Method for Measuring Light Hydrocarbon Emissions from Cooling-Tower Water

Max M. Lee, Tim D. Logan, Kefu Sun, N. Spencer Hurley, Jr., Robert A. Swatloski, and Steve J. Gluck

A new GC method for quantifying low level (~1 ppb (w/v)) of light hydrocarbons (C_1—C_6) in cooling-tower water is developed and validated.

5727

Determination of Strongly Reducing Substances in Sediment

Qingman Li, Shuping Bi, and Guoliang Ji

Strongly reducing substances in sediments are determined by the proposed method based on the oxidation by Fe(III) and determination of the produced Fe(II) by colorimetry.

■ Supporting Information is available free of charge via the Internet at http://pubs.acs.org.

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