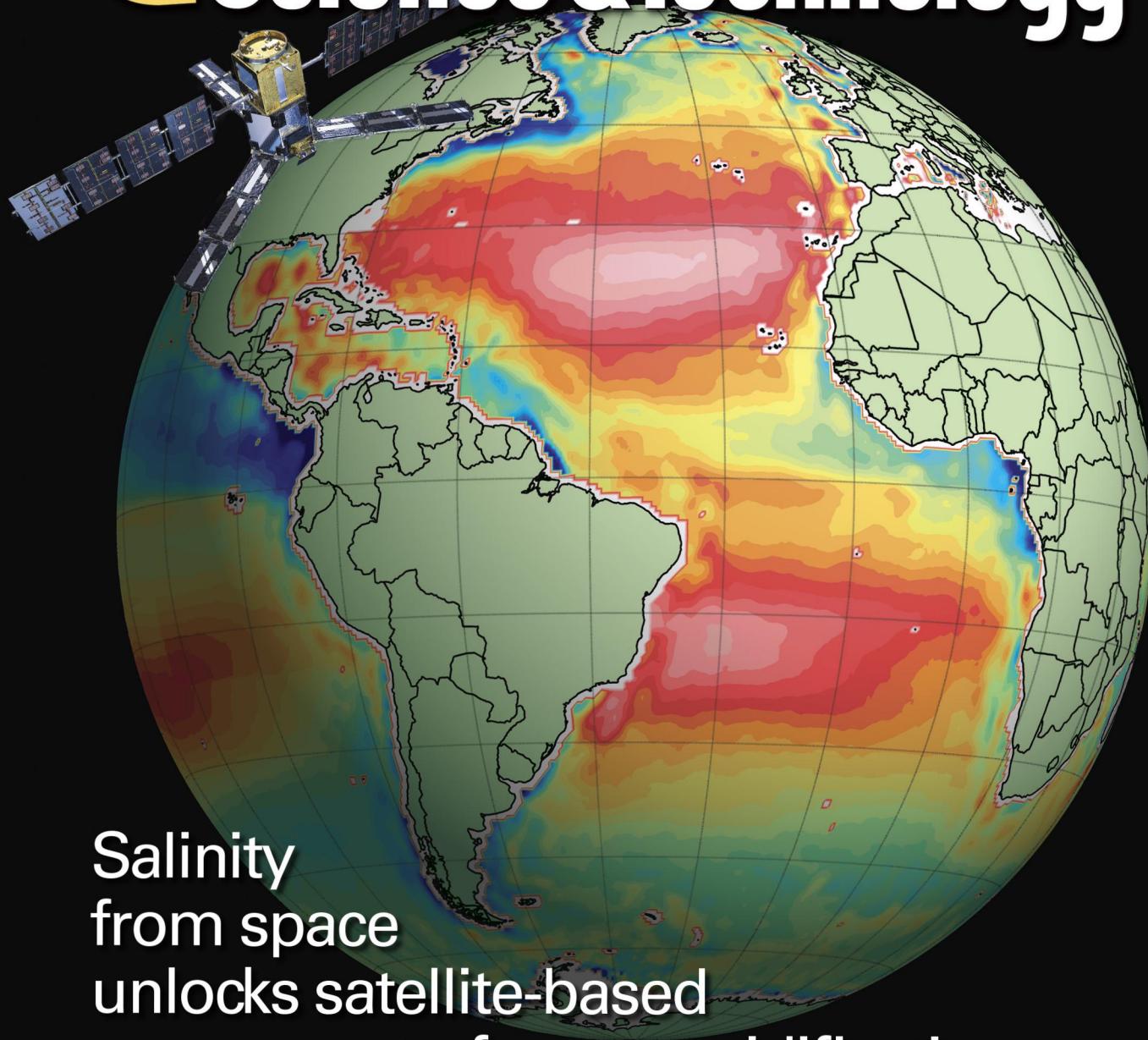


# ENVIRONMENTAL Science & Technology

February 17, 2015  
Volume 49  
Number 4  
[pubs.acs.org/est](http://pubs.acs.org/est)



ACS Publications  
Most Trusted. Most Cited. Most Read.

[www.acs.org](http://www.acs.org)

## Content

- 1. Salinity from Space Unlocks Satellite-Based Assessment of Ocean Acidification**  
Peter E. Land, Jamie D. Shutler, Helen S. Findlay, Fanny Girard-Ardhuin, Roberto Sabia, Nicolas Reul, Jean-Francois Piolle, Bertrand Chapron, Yves Quilfen, Joseph Salisbury, Douglas Vandemark, Richard Bellerby, and Punyasloke Bhadury  
*Environmental Science & Technology* 2015 49 (4), 1987-1994  
DOI: 10.1021/es504849s
- 2. Answering the Call for Improved Chemical Alternatives Assessments (CAA)**  
Joel A. Tickner, David C. Dorman, and Marilee Shelton-Davenport  
*Environmental Science & Technology* 2015 49 (4), 1995-1996  
DOI: 10.1021/es505446x
- 3. Cheaper Oil—Challenge and Opportunity for Climate Change**  
Qiang Wang  
*Environmental Science & Technology* 2015 49 (4), 1997-1998  
DOI: 10.1021/es505704u
- 4. Environmental Concerns of Roxarsone in Broiler Poultry Feed and Litter in Maryland, USA**  
Daniel J. Fisher, Lance T. Yonkos, and Kenneth W. Staver  
*Environmental Science & Technology* 2015 49 (4), 1999-2012  
DOI: 10.1021/es504520w
- 5. Incorporating Land-Use Requirements and Environmental Constraints in Low-Carbon Electricity Planning for California**  
Grace C. Wu, Margaret S. Torn, and James H. Williams  
*Environmental Science & Technology* 2015 49 (4), 2013-2021  
DOI: 10.1021/es502979v
- 6. Global Mining Risk Footprint of Critical Metals Necessary for Low-Carbon Technologies: The Case of Neodymium, Cobalt, and Platinum in Japan**  
Keisuke Nansai, Kenichi Nakajima, Shigemi Kagawa, Yasushi Kondo, Yosuke Shigetomi, and Sangwon Suh  
*Environmental Science & Technology* 2015 49 (4), 2022-2031  
DOI: 10.1021/es504255r
- 7. Chinese Rice Production Area Adaptations to Climate Changes, 1949–2010**  
Zhengguo Li, Zhenhuan Liu, Weston Anderson, Peng Yang, Wenbin Wu, Huajun Tang, and Liangzhi You  
*Environmental Science & Technology* 2015 49 (4), 2032-2037  
DOI: 10.1021/es505624x
- 8. Regionally-Varying Combustion Sources of the January 2013 Severe Haze Events over Eastern China**  
August Andersson, Junjun Deng, Ke Du, Mei Zheng, Caiqing Yan, Martin Sköld, and Örjan Gustafsson  
*Environmental Science & Technology* 2015 49 (4), 2038-2043  
DOI: 10.1021/es503855e
- 9. Occurrence of Halogenated Transformation Products of Selected Pharmaceuticals and Personal Care Products in Secondary and Tertiary Treated Wastewaters from Southern California**  
Daryl N. Bulloch, Eric D. Nelson, Steve A. Carr, Chris R. Wissman, Jeffrey L. Armstrong, Daniel Schlenk, and Cynthia K. Larive  
*Environmental Science & Technology* 2015 49 (4), 2044-2051  
DOI: 10.1021/es504565n

- 10. FTIR and Synchronous Fluorescence Heterospectral Two-Dimensional Correlation Analyses on the Binding Characteristics of Copper onto Dissolved Organic Matter**  
Wei Chen, Nuzahat Habibul, Xiao-Yang Liu, Guo-Ping Sheng, and Han-Qing Yu  
*Environmental Science & Technology* 2015 49 (4), 2052-2058  
DOI: 10.1021/es5049495
- 11. Mercury in Little Brown Bat (*Myotis lucifugus*) Maternity Colonies and Its Correlation with Freshwater Acidity in Nova Scotia, Canada**  
Megan E. Little, Neil M. Burgess, Hugh G. Broders, and Linda M. Campbell  
*Environmental Science & Technology* 2015 49 (4), 2059-2065  
DOI: 10.1021/es5050375
- 12. A Multiyear Assessment of Air Quality Benefits from China's Emerging Shale Gas Revolution: Urumqi as a Case Study**  
Wei Song, Yunhua Chang, Xuejun Liu, Kaihui Li, Yanming Gong, Guixiang He, Xiaoli Wang, Peter Christie, Mei Zheng, Anthony J. Dore, and Changyan Tian  
*Environmental Science & Technology* 2015 49 (4), 2066-2072  
DOI: 10.1021/es5050024
- 13. Occurrence of Synthetic Phenolic Antioxidants and Major Metabolites in Municipal Sewage Sludge in China**  
Runzeng Liu, Shanjun Song, Yongfeng Lin, Ting Ruan, and Guibin Jiang  
*Environmental Science & Technology* 2015 49 (4), 2073-2080  
DOI: 10.1021/es505136k
- 14. Comparison of Organic Matter Composition in Agricultural versus Forest Affected Headwaters with Special Emphasis on Organic Nitrogen**  
Marlen Heinz, Daniel Graeber, Dominik Zak, Elke Zwirnmann, Joerg Gelbrecht, and Martin T. Pusch  
*Environmental Science & Technology* 2015 49 (4), 2081-2090  
DOI: 10.1021/es505146h
- 15. Long-Term Evaluation of the Controlled Pressure Method for Assessment of the Vapor Intrusion Pathway**  
Chase Holton, Yuanming Guo, Hong Luo, Paul Dahlen, Kyle Gorder, Erik Dettenmaier, and Paul C. Johnson  
*Environmental Science & Technology* 2015 49 (4), 2091-2098  
DOI: 10.1021/es5052342
- 16. Effects of Manure-Application Practices on Curli Production by *Escherichia coli* Transported through Soil**  
Allison M. Truhlar, Anthony E. Salvucci, M. Todd Walter, Lorin D. Warnick, Anthony G. Hay, and Tammo S. Steenhuis  
*Environmental Science & Technology* 2015 49 (4), 2099-2104  
DOI: 10.1021/es5053039
- 17. Biomonitoring the Spatial and Historical Variations of Persistent Organic Pollutants (POPs) in an Industrial Region**  
Mustafa Odabasi, Ezgi Ozgunerge Falay, Gizem Tuna, Hasan Altıok, Melik Kara, Yetkin Dumanoglu, Abdurrahman Bayram, Doganay Tolunay, and Tolga Elbir  
*Environmental Science & Technology* 2015 49 (4), 2105-2114  
DOI: 10.1021/es506316t
- 18. Phosphorus in Manure and Sewage Sludge More Recyclable than in Soluble Inorganic Fertilizer**  
H. Kahiluoto, M. Kuisma, E. Ketoja, T. Salo, and J. Heikkinen  
*Environmental Science & Technology* 2015 49 (4), 2115-2122  
DOI: 10.1021/es503387y
- 19. Evaluating Enhanced Sulfate Reduction and Optimized Volatile Fatty Acids (VFA) Composition in Anaerobic Reactor by Fe (III) Addition**  
Yiwen Liu, Yaobin Zhang, and Bing-Jie Ni  
*Environmental Science & Technology* 2015 49 (4), 2123-2131  
DOI: 10.1021/es504200j
- 20. Modeling Nitrous Oxide Production and Reduction in Soil through Explicit Representation of Denitrification Enzyme Kinetics**  
Jianqiu Zheng and Paul V. Doskey  
*Environmental Science & Technology* 2015 49 (4), 2132-2139  
DOI: 10.1021/es504513v

- 21. Arsenic Biotransformation in Solid Waste Residue: Comparison of Contributions from Bacteria with Arsenate and Iron Reducing Pathways**  
Haixia Tian, Qiantao Shi, and Chuanyong Jing  
*Environmental Science & Technology* 2015 49 (4), 2140-2146  
DOI: 10.1021/es504618x
- 22. Functionalized Fullerenes in Water: A Closer Look**  
Samuel D. Snow, Ki Chul Kim, Kyle J. Moor, Seung Soon Jang, and Jae-Hong Kim  
*Environmental Science & Technology* 2015 49 (4), 2147-2155  
DOI: 10.1021/es504735h
- 23. Using Chromate to Investigate the Impact of Natural Organics on the Surface Reactivity of Nanoparticulate Magnetite**  
Andrew L. Swindle, Isabelle M. Cozzarelli, and Andrew S. Elwood Madden  
*Environmental Science & Technology* 2015 49 (4), 2156-2162  
DOI: 10.1021/es504831d
- 24. Emission of Titanium Dioxide Nanoparticles from Building Materials to the Environment by Wear and Weather**  
Neeraj Shandilya, Olivier Le Bihan, Christophe Bressot, and Martin Morgeneyer  
*Environmental Science & Technology* 2015 49 (4), 2163-2170  
DOI: 10.1021/es504710p
- 25. Production and Transformation of Mixed-Valent Nanoparticles Generated by Fe(0) Electrocoagulation**  
Kristian L. Dubrawski, Case M. van Genuchten, Caroline Delaire, Susan E. Amrose, Ashok J. Gadgil, and Madjid Mohseni  
*Environmental Science & Technology* 2015 49 (4), 2171-2179  
DOI: 10.1021/es505059d
- 26. Mineralization of RDX-Derived Nitrogen to N<sub>2</sub> via Denitrification in Coastal Marine Sediments**  
Richard W. Smith, Craig Tobias, Penny Vlahos, Christopher Cooper, Mark Ballantine, Thivanka Ariyarathna, Stephen Fallis, and Thomas J. Groshens  
*Environmental Science & Technology* 2015 49 (4), 2180-2187  
DOI: 10.1021/es505074v
- 27. Correlation of the Physicochemical Properties of Natural Organic Matter Samples from Different Sources to Their Effects on Gold Nanoparticle Aggregation in Monovalent Electrolyte**  
Stacey M. Louie, Eleanor R. Spielman-Sun, Mitchell J. Small, Robert D. Tilton, and Gregory V. Lowry  
*Environmental Science & Technology* 2015 49 (4), 2188-2198  
DOI: 10.1021/es505003d
- 28. Emissions of Polychlorinated Biphenyls in Switzerland: A Combination of Long-Term Measurements and Modeling**  
Pascal S. Diefenbacher, Christian Bogdal, Andreas C. Gerecke, Juliane Glüge, Peter Schmid, Martin Scheringer, and Konrad Hungerbühler  
*Environmental Science & Technology* 2015 49 (4), 2199-2206  
DOI: 10.1021/es505242d
- 29. Biotic Ligand Model Does Not Predict the Bioavailability of Rare Earth Elements in the Presence of Organic Ligands**  
Chun-Mei Zhao and Kevin J. Wilkinson  
*Environmental Science & Technology* 2015 49 (4), 2207-2214  
DOI: 10.1021/es505443s
- 30. Formation and Chlorination of Carbazole, Phenoxazine, and Phenazine**  
Mohammednoor Altarawneh and Bogdan Z. Dlugogorski  
*Environmental Science & Technology* 2015 49 (4), 2215-2221  
DOI: 10.1021/es505948c
- 31. Disentangling Natural and Anthropogenic Sources of Atmospheric Sulfur in an Industrial Region Using Biomonitoring**  
Ceres Barros, Pedro Pinho, Rita Durão, Sofia Augusto, Cristina Máguas, Maria João Pereira, and Cristina Branquinho  
*Environmental Science & Technology* 2015 49 (4), 2222-2229  
DOI: 10.1021/es505292t
- 32. Evaluating Alternate Biokinetic Models for Trace Pollutant Cometabolism**

Li Liu, Philip J. Binning, and Barth F. Smets  
*Environmental Science & Technology* 2015 49 (4), 2230-2236  
DOI: 10.1021/es5035393

**33. High-Resolution Assessment of Land Use Impacts on Biodiversity in Life Cycle Assessment Using Species Habitat Suitability Models**

Laura de Baan, Michael Curran, Carlo Rondinini, Piero Visconti, Stefanie Hellweg, and Thomas Koellner  
*Environmental Science & Technology* 2015 49 (4), 2237-2244  
DOI: 10.1021/es504380t

**34. Evaluation of One-Dimensional and Two-Dimensional Volatility Basis Sets in Simulating the Aging of Secondary Organic Aerosol with Smog-Chamber Experiments**

Bin Zhao, Shuxiao Wang, Neil M. Donahue, Wayne Chuang, Lea Hildebrandt Ruiz, Nga L. Ng, Yangjun Wang, and Jiming Hao  
*Environmental Science & Technology* 2015 49 (4), 2245-2254  
DOI: 10.1021/es5048914

**35. Selenium Preferentially Accumulates in the Eye Lens Following Embryonic Exposure: A Confocal X-ray Fluorescence Imaging Study**

Sanjukta Choudhury, Jith K. Thomas, Nicole J. Sylvain, Olena Ponomarenko, Robert A. Gordon, Steve M. Heald, David M. Janz, Patrick H. Krone, Ian Coulthard, Graham N. George, and Ingrid J. Pickering  
*Environmental Science & Technology* 2015 49 (4), 2255-2261  
DOI: 10.1021/es503848s

**36. Regional Material Flow Accounting and Environmental Pressures: The Spanish Case**

Sergio Sastre, Óscar Carpintero, and Pedro L. Lomas  
*Environmental Science & Technology* 2015 49 (4), 2262-2269  
DOI: 10.1021/es504438p

**37. Modeling Uptake of Hydrophobic Organic Contaminants into Polyethylene Passive Samplers**

Jay M. Thompson, Ching-Hong Hsieh, and Richard G. Luthy  
*Environmental Science & Technology* 2015 49 (4), 2270-2277  
DOI: 10.1021/es504442s

**38. Nitrogen Stable Isotope Composition ( $\delta^{15}\text{N}$ ) of Vehicle-Emitted NO<sub>x</sub>**

Wendell W. Walters, Stanford R. Goodwin, and Greg Michalski  
*Environmental Science & Technology* 2015 49 (4), 2278-2285  
DOI: 10.1021/es505580v

**39. Optical Sensor Nanoparticles in Artificial Sediments—A New Tool To Visualize O<sub>2</sub> Dynamics around the Rhizome and Roots of Seagrasses**

Klaus Koren, Kasper E. Brodersen, Sofie L. Jakobsen, and Michael Kühl  
*Environmental Science & Technology* 2015 49 (4), 2286-2292  
DOI: 10.1021/es505734b

**40. Enhanced Permeability, Selectivity, and Antifouling Ability of CNTs/Al<sub>2</sub>O<sub>3</sub> Membrane under Electrochemical Assistance**

Xinfei Fan, Huimin Zhao, Yanming Liu, Xie Quan, Hongtao Yu, and Shuo Chen  
*Environmental Science & Technology* 2015 49 (4), 2293-2300  
DOI: 10.1021/es5039479

**41. Changes in Physicochemical and Transport Properties of a Reverse Osmosis Membrane Exposed to Chloraminated Seawater**

Lauren Valentino, Tennie Renkens, Thomas Maugin, Jean-Philippe Croué, and Benito J. Mariñas  
*Environmental Science & Technology* 2015 49 (4), 2301-2309  
DOI: 10.1021/es504495j

**42. Bactericidal Mechanisms Revealed for Rapid Water Disinfection by Superabsorbent Cryogels Decorated with Silver Nanoparticles**

Siew-Leng Loo, William B. Krantz, Anthony G. Fane, Yiben Gao, Teik-Thye Lim, and Xiao Hu  
*Environmental Science & Technology* 2015 49 (4), 2310-2318  
DOI: 10.1021/es5048667

**43. Ferrate(VI)-Prompted Removal of Metals in Aqueous Media: Mechanistic Delineation of Enhanced Efficiency via Metal Entrenchment in Magnetic Oxides**

Robert Prucek, Jiří Tuček, Jan Kolařík, Ivana Hušková, Jan Filip, Rajender S. Varma, Virender K. Sharma, and Radek Zbořil

*Environmental Science & Technology* 2015 49 (4), 2319-2327

DOI: 10.1021/es5048683

**44. Copper Tolerance Mechanisms of *Mesorhizobium amorphae* and Its Role in Aiding Phytostabilization by *Robinia pseudoacacia* in Copper Contaminated Soil**

Xiuli Hao, Pin Xie, Yong-Guan Zhu, Safiyih Taghavi, Gehong Wei, and Christopher Rensing

*Environmental Science & Technology* 2015 49 (4), 2328-2340

DOI: 10.1021/es504956a

**45. Complete Perchlorate Reduction Using Methane as the Sole Electron Donor and Carbon Source**

Yi-Hao Luo, Ran Chen, Li-Lian Wen, Fan Meng, Yin Zhang, Chun-Yu Lai, Bruce E. Rittmann, He-Ping Zhao, and Ping Zheng

*Environmental Science & Technology* 2015 49 (4), 2341-2349

DOI: 10.1021/es504990m

**46. Spatial Confinement of a Co<sub>3</sub>O<sub>4</sub> Catalyst in Hollow Metal–Organic Frameworks as a Nanoreactor for Improved Degradation of Organic Pollutants**

Tao Zeng, Xiaole Zhang, Saihua Wang, Hongyun Niu, and Yaqi Cai

*Environmental Science & Technology* 2015 49 (4), 2350-2357

DOI: 10.1021/es505014z

**47. Chabazite: Stable Cation-Exchanger in Hyper Alkaline Concrete Pore Water**

Leen Van Tendeloo, Wauter Wangermez, Mert Kurttepeli, Benny de Blochouse, Sara Bals, Gustaaf Van Tendeloo, Johan A. Martens, André Maes, Christine E. A. Kirschhock, and Eric Breynaert

*Environmental Science & Technology* 2015 49 (4), 2358-2365

DOI: 10.1021/es505346j

**48. Plant Functional Traits Predict Green Roof Ecosystem Services**

Jeremy Lundholm, Stephanie Tran, and Luke Gebert

*Environmental Science & Technology* 2015 49 (4), 2366-2374

DOI: 10.1021/es505426z

**49. Carbon Nanotube Membrane Stack for Flow-through Sequential Regenerative Electro-Fenton**

Guandao Gao, Qiaoying Zhang, Zhenwei Hao, and Chad D. Vecitis

*Environmental Science & Technology* 2015 49 (4), 2375-2383

DOI: 10.1021/es505679e

**50. Surface-Confined Atomic Silver Centers Catalyzing Formaldehyde Oxidation**

Pingping Hu, Zakariae Amghouz, Zhiwei Huang, Fei Xu, Yixin Chen, and Xingfu Tang

*Environmental Science & Technology* 2015 49 (4), 2384-2390

DOI: 10.1021/es504570n

**51. A Sustainable Slashing Industry Using Biodegradable Sizes from Modified Soy Protein To Replace Petro-Based Poly(Vinyl Alcohol)**

Yi Zhao, Yuzhu Zhao, Helan Xu, and Yiqi Yang

*Environmental Science & Technology* 2015 49 (4), 2391-2397

DOI: 10.1021/es504988w

**52. Simultaneous Recovery of Organic and Inorganic Content of Paper Deinking Residue through Low-Temperature Microwave-Assisted Pyrolysis**

Zhanrong Zhang, Duncan J. Macquarrie, Pedro M. Aguiar, James H. Clark, and Avtar S. Matharu

*Environmental Science & Technology* 2015 49 (4), 2398-2404

DOI: 10.1021/es505249w

**53. Deciphering Visible Light Photoreductive Conversion of CO<sub>2</sub> to Formic Acid and Methanol Using Waste Prepared Material**

Qian Zhang, Cheng-Fang Lin, Bor-Yann Chen, Tong Ouyang, and Chang-Tang Chang

*Environmental Science & Technology* 2015 49 (4), 2405-2417

DOI: 10.1021/es505301x

**54. Plant Uptake-Assisted Round-the-Clock Photocatalysis for Complete Purification of Aquaculture Wastewater Using Sunlight**

Zhenfeng Bian, Fenglei Cao, Jian Zhu, and Hexing Li

*Environmental Science & Technology* 2015 49 (4), 2418-2424

DOI: 10.1021/es505540x

**55. Method for Efficient Recovery of High-Purity Polycarbonates from Electronic Waste**

George S. Weeden, Jr., Nicholas H. Soepriatna, and Nien-Hwa Linda Wang  
*Environmental Science & Technology* 2015 49 (4), 2425-2433  
DOI: 10.1021/es5055786

**56. Novel Fluorinated Surfactants Tentatively Identified in Firefighters Using Liquid Chromatography Quadrupole Time-of-Flight Tandem Mass Spectrometry and a Case-Control Approach**

Anna Rotander, Anna Kärrman, Leisa-Maree L. Toms, Margaret Kay, Jochen F. Mueller, and María José Gómez Ramos  
*Environmental Science & Technology* 2015 49 (4), 2434-2442  
DOI: 10.1021/es503653n

**57. Perchlorate in Indoor Dust and Human Urine in China: Contribution of Indoor Dust to Total Daily Intake**

Tao Zhang, Xiaojia Chen, Dou Wang, Rudan Li, Yufang Ma, Weiwen Mo, Hongwen Sun, and Kurunthachalam Kannan  
*Environmental Science & Technology* 2015 49 (4), 2443-2450  
DOI: 10.1021/es504444e

**58. The Challenge of Studying TiO<sub>2</sub> Nanoparticle Bioaccumulation at Environmental Concentrations: Crucial Use of a Stable Isotope Tracer**

Adeline Bourgeault, Cécile Cousin, Valérie Geertsen, Corinne Cassier-Chauvat, Franck Chauvat, Olivier Durupthy, Corinne Chanéac, and Olivier Spalla  
*Environmental Science & Technology* 2015 49 (4), 2451-2459  
DOI: 10.1021/es504638f

**59. Endosulfan Isomers and Sulfate Metabolite Induced Reproductive Toxicity in *Caenorhabditis elegans* Involves Genotoxic Response Genes**

Hua Du, Min Wang, Hui Dai, Wei Hong, Mudi Wang, Jingjing Wang, Nanyan Weng, Yaguang Nie, and An Xu  
*Environmental Science & Technology* 2015 49 (4), 2460-2468  
DOI: 10.1021/es504837z

**60. Intestinal Nematodes Affect Selenium Bioaccumulation, Oxidative Stress Biomarkers, and Health Parameters in Juvenile Rainbow Trout (*Oncorhynchus mykiss*)**

Olesya Hursky and Michael Pietrock  
*Environmental Science & Technology* 2015 49 (4), 2469-2476  
DOI: 10.1021/es5048792

**61. Multi-endpoint, High-Throughput Study of Nanomaterial Toxicity in *Caenorhabditis elegans***

Sang-Kyu Jung, Xiaolei Qu, Boanerges Aleman-Meza, Tianxiao Wang, Celeste Riepe, Zheng Liu, Qilin Li, and Weiwei Zhong  
*Environmental Science & Technology* 2015 49 (4), 2477-2485  
DOI: 10.1021/es5056462

**62. Sulfidation as a Natural Antidote to Metallic Nanoparticles Is Overestimated: CuO Sulfidation Yields CuS Nanoparticles with Increased Toxicity in Medaka (*Oryzias latipes*) Embryos**

Lingxiangyu Li, Ligang Hu, Qunfang Zhou, Chunhua Huang, Yawei Wang, Cheng Sun, and Guibin Jiang  
*Environmental Science & Technology* 2015 49 (4), 2486-2495  
DOI: 10.1021/es505878f

**63. Potential Hazards of Brominated Carbon Sorbents for Mercury Emission Control**

Teresa M. Bisson and Zhenghe Xu  
*Environmental Science & Technology* 2015 49 (4), 2496-2502  
DOI: 10.1021/es5052793

**64. Greenhouse Gas Mitigation on Marginal Land: A Quantitative Review of the Relative Benefits of Forest Recovery versus Biofuel Production**

Samuel G. Evans, Benjamin S. Ramage, Tara L. DiRocco, and Matthew D. Potts  
*Environmental Science & Technology* 2015 49 (4), 2503-2511  
DOI: 10.1021/es502374f

**65. Cost of Abating Greenhouse Gas Emissions with Cellulosic Ethanol**

Puneet Dwivedi, Weiwei Wang, Tara Hudiburg, Deepak Jaiswal, William Parton, Stephen Long,

Evan DeLucia, and Madhu Khanna

*Environmental Science & Technology* 2015 49 (4), 2512-2522

DOI: 10.1021/es5052588

**66. Characterizing the Metabolic Trade-Off in *Nitrosomonas europaea* in Response to Changes in Inorganic Carbon Supply**

D. Jiang, W. O. Khunjar, B. Wett, S. N. Murthy, and K. Chandran

*Environmental Science & Technology* 2015 49 (4), 2523-2531

DOI: 10.1021/es5043222

**67. Innovative Use of Membrane Contactor as Condenser for Heat Recovery in Carbon Capture**

Shuiping Yan, Shuaifei Zhao, Leigh Wardhaugh, and Paul H. M. Feron

*Environmental Science & Technology* 2015 49 (4), 2532-2540

DOI: 10.1021/es504526s

**68. Green Approach for Photocatalytic Cu(II)-EDTA Degradation over TiO<sub>2</sub>: Toward Environmental Sustainability**

Siew Siang Lee, Hongwei Bai, Zhaoyang Liu, and Darren Delai Sun

*Environmental Science & Technology* 2015 49 (4), 2541-2548

DOI: 10.1021/es504711e

**69. Consumption-Weighted Life Cycle Assessment of a Consumer Electronic Product Community**

Erinn G. Ryen, Callie W. Babbitt, and Eric Williams

*Environmental Science & Technology* 2015 49 (4), 2549-2559

DOI: 10.1021/es505121p

**70. In situ Spectroscopic Identification of Neptunium(V) Inner-Sphere Complexes on the Hematite–Water Interface**

Katharina Müller, Annett Gröschel, André Rossberg, Frank Bok, Carola Franzen, Vinzenz Brendler, and Harald Foerstendorf

*Environmental Science & Technology* 2015 49 (4), 2560-2567

DOI: 10.1021/es5051925

**71. The Impacts of Electricity Dispatch Protocols on the Emission Reductions Due to Wind Power and Carbon Tax**

Yang Yu and Ram Rajagopal

*Environmental Science & Technology* 2015 49 (4), 2568-2576

DOI: 10.1021/es5052099

**72. Metagenomics Shows That Low-Energy Anaerobic–Aerobic Treatment Reactors Reduce Antibiotic Resistance Gene Levels from Domestic Wastewater**

Beate Christgen, Ying Yang, S. Z. Ahammad, Bing Li, D. Catalina Rodriquez, Tong Zhang, and

David W. Graham

*Environmental Science & Technology* 2015 49 (4), 2577-2584

DOI: 10.1021/es505521w