



William Mitch

Professor of Civil and Environmental Engineering

 Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrator**

Jack Chiueh - Administrative Associate

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Bio

BIO

Bill Mitch received a B.A. in Anthropology (Archaeology) from Harvard University in 1993. During his studies, he excavated at Mayan sites in Belize and surveyed sites dating from 2,000 B.C. in Louisiana. He switched fields by receiving a M.S. degree in Civil and Environmental Engineering at UC Berkeley. He worked for 3 years in environmental consulting, receiving his P.E. license in Civil Engineering in California. Returning to UC Berkeley in 2000, he received his PhD in Civil and Environmental Engineering in 2003. He moved to Yale as an assistant professor after graduation. His dissertation received the AEESP Outstanding Doctoral Dissertation Award in 2004. At Yale, he serves as the faculty advisor for the Yale Student Chapter of Engineers without Borders. In 2007, he won a NSF CAREER Award. He moved to Stanford University as an associate professor in 2013.

Employing a fundamental understanding of organic chemical reaction pathways, his research explores links between public health, engineering and sustainability.

Topics of current interest include:

Public Health and Emerging Carcinogens: Recent changes to the disinfection processes fundamental to drinking and recreational water safety are creating a host of highly toxic byproducts linked to bladder cancer. We seek to understand how these compounds form so we can adjust the disinfection process to prevent their formation.

Global Warming and Oceanography: Oceanic dissolved organic matter is an important global carbon component, and has important impacts on the net flux of CO₂ between the ocean and atmosphere. We seek to understand some of the important abiotic chemical reaction pathways responsible for carbon turnover.

Sustainability and Persistent Organic Pollutants (POPs): While PCBs have been banned in the US, we continue to produce a host of structurally similar chemicals. We seek to understand important chemical pathways responsible for POP destruction in the environment, so we can design less persistent and problematic chemicals in the future.

Engineering for Sustainable Wastewater Recycling: The shortage of clean water represents a critical challenge for the next century, and has necessitated the recycling of wastewater. We seek to understand ways of engineer this process in ways to minimize harmful byproduct formation.

Carbon Sequestration: We are evaluating the formation of nitrosamine and nitraminecarcinogens from amine-based carbon capture, as well as techniques to destroy any of these byproducts that form.

ACADEMIC APPOINTMENTS

- Professor, Civil and Environmental Engineering

HONORS AND AWARDS

- Excellence in Review Award, Environmental Science and Technology (2013)
- Elected Vice-Chair of the 4th Disinfection Byproducts Gordon Conference in 2015, Disinfection Byproducts Gordon Conference (2015)
- Invited speaker for the 3rd Disinfection Byproducts Gordon Conference, Mt. Holyoke College, Disinfection Byproducts Gordon Conference (2012)
- Environmental Science and Technology Editors Choice Award Best Paper 3rd runner up, Environmental Science and Technology (2010)
- Top 10 most-accessed articles, 2nd Quarter, Environmental Science and Technology (2010)
- Invited speaker, Environmental Sciences Water Gordon Conference (2010)
- Member, US EPA Scientific Advisory Board Drinking Water Committee (2010)
- Invited speaker, Disinfection Byproducts Gordon Conference, Mt. Holyoke College (2009)
- CAREER Award, NSF (2007)
- Advisor of recipient, ACS Environmental Chemistry Graduate Student Award (2007)
- Invited speaker, Disinfection Byproducts Gordon Conference, Mt. Holyoke College (2006)
- Certificate of Merit, 230th ACS National Meeting (2005)
- Arthur Greer Memorial Prize for teaching and research excellence by a junior faculty member, Yale University (2005)
- Outstanding Doctoral Dissertation Award, Association of Environmental Engineering and Science Professors and Parsons Engineering (2004)
- Graduated Summa Cum Laude and elected into the Phi Beta Kappa Academic Honor Society, Harvard University (1993)

PROFESSIONAL EDUCATION

- B.A., Harvard University (Summa Cum Laude) , Anthropology (Archaeology) (1993)
- M.S., University of California, Berkeley , Civil and Environmental Engineering (1996)
- Ph.D., University of California, Berkeley , Civil and Environmental Engineering (2003)

LINKS

- Lab Website: <https://mitchlab.sites.stanford.edu/>

Teaching

COURSES

2019-20

- Environmental Organic Reaction Chemistry: CEE 270B (Spr)
- Providing Safe Water for the Developing and Developed World: CEE 174A (Aut)
- Wastewater Treatment: From Disposal to Resource Recovery: CEE 174B (Win)

2018-19

- Environmental Organic Reaction Chemistry: CEE 270B (Spr)

- Providing Safe Water for the Developing and Developed World: CEE 174A (Aut)
- Wastewater Treatment: From Disposal to Resource Recovery: CEE 174B (Win)

2017-18

- Current Topics in Sustainable Engineering: CEE 177X, CEE 277X (Win)
- Design for a Sustainable World: CEE 177S, CEE 277S (Spr)
- Engineering Writing, Reviewing and Presentations: CEE 350 (Spr)
- Environmental Organic Reaction Chemistry: CEE 270B (Spr)
- Providing Safe Water for the Developing and Developed World: CEE 174A (Aut)
- Wastewater Treatment: From Disposal to Resource Recovery: CEE 174B (Win)

2016-17

- Current Topics in Sustainable Engineering: CEE 177X, CEE 277X (Win)
- Design for a Sustainable World: CEE 177S, CEE 277S (Spr)
- Environmental Organic Reaction Chemistry: CEE 270B (Spr)
- Providing Safe Water for the Developing and Developed World: CEE 174A (Aut)
- Wastewater Treatment: From Disposal to Resource Recovery: CEE 174B (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Katy Graham, Daniel Smith

Postdoctoral Faculty Sponsor

Stephanie Lau

Doctoral Dissertation Advisor (AC)

Kirin Furst, Adam Simpson, Alex Szczuka

Master's Program Advisor

Savannah Butler, Yifan Cheng, Sydney Cunniff, Yuping Li, Zunhui Lin, Jessica MacDonald, Tyler Oshiro, Anita Shao, Ankun Wang, Cindy Weng, Sizhuo Zhang

Doctoral (Program)

Jack King, Djordje Vuckovic

Publications

PUBLICATIONS

- **N-nitrosamine, halogenated disinfection byproduct, and byproduct precursor control in UV/free chlorine and UV/H₂O₂ treatment trains: A parallel comparison in a pilot plant**
Chuang, Y., Szczuka, A., Mitch, W.
AMER CHEMICAL SOC.2018
- **Sunlight-mediated inactivation of health-relevant microorganisms in water: a review of mechanisms and modeling approaches** *ENVIRONMENTAL SCIENCE-PROCESSES & IMPACTS*
Nelson, K. L., Boehm, A. B., Davies-Colley, R. J., Dodd, M. C., Kohn, T., Linden, K. G., Liu, Y., Maraccini, P. A., McNeill, K., Mitch, W. A., Nguyen, T. H., Parker, K. M., Rodriguez, et al
2018; 20 (8): 1089–1122
- **Distributed Chlorine Injection To Minimize NDMA Formation during Chloramination of Wastewater** *ENVIRONMENTAL SCIENCE & TECHNOLOGY LETTERS*

- Furst, K. E., Pecson, B. M., Webber, B. D., Mitch, W. A.
2018; 5 (7): 462–66
- **Tradeoffs between pathogen inactivation and disinfection byproduct formation during sequential chlorine and chloramine disinfection for wastewater reuse.** *Water research*
Furst, K. E., Pecson, B. M., Webber, B. D., Mitch, W. A.
2018; 143: 579–88
 - **Chlorotyrosines versus volatile byproducts from disinfection during washing of lettuce and spinach**
Mitch, W., Komaki, Y., Simpson, A.
AMER CHEMICAL SOC.2018
 - **When ROS are not ROS: The effect of salts on the degradation of protein**
Mitch, W., Komaki, Y., Choe, J.
AMER CHEMICAL SOC.2018
 - **Halogen radicals promote the photodegradation of microcystins in estuarine systems**
Mitch, W., Parker, K., Ghadouani, A., Reichwaldt, E.
AMER CHEMICAL SOC.2018
 - **Drinking Water Disinfection Byproducts (DBPs) and Human Health Effects: Multidisciplinary Challenges and Opportunities** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Li, X., Mitch, W. A.
2018; 52 (4): 1681–89
 - **Capture and Reductive Transformation of Halogenated Pesticides by an Activated Carbon-Based Electrolysis System for Treatment of Runoff** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Li, Y., Mitch, W. A.
2018; 52 (3): 1435–43
 - **Comparing the UV/Monochloramine and UV/Free Chlorine Advanced Oxidation Processes (AOPs) to the UV/Hydrogen Peroxide AOP Under Scenarios Relevant to Potable Reuse** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Chuang, Y., Chen, S., Chinn, C. J., Mitch, W. A.
2017; 51 (23): 13859–68
 - **New Takes on Emerging Contaminants: Preface** *JOURNAL OF ENVIRONMENTAL SCIENCES*
Mitch, W. A.
2017; 62: 1–2
 - **Nitrosamines and Nitramines in Amine-Based Carbon Dioxide Capture Systems: Fundamentals, Engineering Implications, and Knowledge Gaps** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Yu, K., Mitch, W. A., Dai, N.
2017; 51 (20): 11522–36
 - **Regulated and unregulated halogenated disinfection byproduct formation from chlorination of saline groundwater** *WATER RESEARCH*
Szczyka, A., Parker, K. M., Harvey, C., Hayes, E., Vengosh, A., Mitch, W. A.
2017; 122: 633–44
 - **Reverse Osmosis Shifts Chloramine Speciation Causing Re-Formation of NDMA during Potable Reuse of Wastewater** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
McCurry, D. L., Ishida, K. P., Oelker, G. L., Mitch, W. A.
2017; 51 (15): 8589–96
 - **Effect of Ozonation and Biological Activated Carbon Treatment of Wastewater Effluents on Formation of N-nitrosamines and Halogenated Disinfection Byproducts.** *Environmental science & technology*
Chuang, Y., Mitch, W. A.
2017; 51 (4): 2329-2338
 - **Relative Importance of Different Water Categories as Sources of N-Nitrosamine Precursors** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Zeng, T., Glover, C. M., Marti, E. J., Woods-Chabane, G. C., Karanfil, T., Mitch, W. A., Dickenson, E. R.
2016; 50 (24): 13239-13248

- **Development of an Activated Carbon-Based Electrode for the Capture and Rapid Electrolytic Reductive Debromination of Methyl Bromide from Postharvest Fumigations.** *Environmental science & technology*
Li, Y., Liu, C., Cui, Y., Walse, S. S., Olver, R., Zilberman, D., Mitch, W. A.
2016; 50 (20): 11200-11208
- **Development of Predictive Models for the Degradation of Halogenated Disinfection Byproducts during the UV/H₂O₂ Advanced Oxidation Process** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Chuang, Y., Parker, K. M., Mitch, W. A.
2016; 50 (20): 11209-11217
- **N-Nitrosamines and halogenated disinfection byproducts in U.S. Full Advanced Treatment trains for potable reuse.** *Water research*
Zeng, T., Plewa, M. J., Mitch, W. A.
2016; 101: 176-186
- **Halogen Radicals Promote the Photodegradation of Microcystins in Estuarine Systems.** *Environmental science & technology*
Parker, K. M., Reichwaldt, E. S., Ghadouani, A., Mitch, W. A.
2016; 50 (16): 8505-8513
- **Environmental and personal determinants of the uptake of disinfection by-products during swimming** *ENVIRONMENTAL RESEARCH*
Font-Ribera, L., Kogevinas, M., Schmalz, C., Zwiener, C., Marco, E., Grimalt, J. O., Liu, J., Zhang, X., Mitch, W., Critelli, R., Naccarati, A., Heederik, D., Spithoven, et al
2016; 149: 206-215
- **Reductive dehalogenation of disinfection byproducts by an activated carbon-based electrode system** *WATER RESEARCH*
Li, Y., Kemper, J. M., Datuin, G., Akey, A., Mitch, W. A., Luthy, R. G.
2016; 98: 354-362
- **Oral intake of ranitidine increases urinary excretion of N-nitrosodimethylamine** *CARCINOGENESIS*
Zeng, T., Mitch, W. A.
2016; 37 (6): 625-634
- **Halogen radicals contribute to photooxidation in coastal and estuarine waters** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Parker, K. M., Mitch, W. A.
2016; 113 (21): 5868-5873
- **Structural Modifications to Quaternary Ammonium Polymer Coagulants to Inhibit N-Nitrosamine Formation** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Zeng, T., Li, R. J., Mitch, W. A.
2016; 50 (9): 4778-4787
- **Impact of Nitrification on the Formation of N-Nitrosamines and Halogenated Disinfection Byproducts within Distribution System Storage Facilities** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Zeng, T., Mitch, W. A.
2016; 50 (6): 2964-2973
- **Impact of Nitrification on the Formation of N-Nitrosamines and Halogenated Disinfection Byproducts within Distribution System Storage Facilities.** *Environmental science & technology*
Zeng, T., Mitch, W. A.
2016; 50 (6): 2964-2973
- **Ozone Promotes Chloropicrin Formation by Oxidizing Amines to Nitro Compounds.** *Environmental science & technology*
McCurry, D. L., Quay, A. N., Mitch, W. A.
2016; 50 (3): 1209-1217
- **Effect of matrix components on UV/H₂O₂ and UV/S₂O₈(²⁻) advanced oxidation processes for trace organic degradation in reverse osmosis brines from municipal wastewater reuse facilities.** *Water research*
Yang, Y., Pignatello, J. J., Ma, J., Mitch, W. A.
2016; 89: 192-200
- **Influence of Bi-doping on Mn_{1-x}BixFe₂O₄ catalytic ozonation of di-n-butyl phthalate** *CHEMICAL ENGINEERING JOURNAL*

- Ren, Y., Chen, Y., Zeng, T., Feng, J., Ma, J., Mitch, W. A.
2016; 283: 622-630
- **Control of nitrosamines during non-potable and de facto wastewater reuse with medium pressure ultraviolet light and preformed monochloramine** *ENVIRONMENTAL SCIENCE-WATER RESEARCH & TECHNOLOGY*
McCurry, D. L., Krasner, S. W., Mitch, W. A.
2016; 2 (3): 502-510
 - **Formation Pathways and Trade-Offs between Haloacetamides and Haloacetaldehydes during Combined Chlorination and Chloramination of Lignin Phenols and Natural Waters** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Chuang, Y., McCurry, D. L., Tung, H., Mitch, W. A.
2015; 49 (24): 14432-14440
 - **Degradation of Amino Acids and Structure in Model Proteins and Bacteriophage MS2 by Chlorine, Bromine, and Ozone.** *Environmental science & technology*
Choe, J. K., Richards, D. H., Wilson, C. J., Mitch, W. A.
2015; 49 (22): 13331-13339
 - **Contribution of N-Nitrosamines and Their Precursors to Domestic Sewage by Greywaters and Blackwaters.** *Environmental science & technology*
Zeng, T., Mitch, W. A.
2015; 49 (22): 13158-13167
 - **Determinants of disinfectant pretreatment efficacy for nitrosamine control in chloraminated drinking water.** *Water research*
McCurry, D. L., Krasner, S. W., von Gunten, U., Mitch, W. A.
2015; 84: 161-170
 - **Influence of Dissolved Metals on N-Nitrosamine Formation under Amine-based CO₂ Capture Conditions** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Wang, Z., Mitch, W. A.
2015; 49 (19): 11974-11981
 - **Leveraging the Mechanism of Oxidative Decay for Adenylate Kinase to Design Structural and Functional Resistances** *ACS CHEMICAL BIOLOGY*
Howell, S. C., Richards, D. H., Mitch, W. A., Wilson, C. J.
2015; 10 (10): 2393-2404
 - **Controlling Nitrosamines, Nitramines, and Amines in Amine-Based CO₂ Capture Systems with Continuous Ultraviolet and Ozone Treatment of Washwater** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Dai, N., Mitch, W. A.
2015; 49 (14): 8878-8886
 - **Destruction of methyl bromide sorbed to activated carbon by thiosulfate or electrolysis.** *Environmental science & technology*
Yang, Y., Li, Y., Walse, S. S., Mitch, W. A.
2015; 49 (7): 4515-4521
 - **Reduction of Nitroaromatics Sorbed to Black Carbon by Direct Reaction with Sorbed Sulfides** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Xu, W., Pignatello, J. J., Mitch, W. A.
2015; 49 (6): 3419-3426
 - **Predicting N-Nitrosamines: N-Nitrosodiethanolamine as a Significant Component of Total N-Nitrosamines in Recycled Wastewater** *ENVIRONMENTAL SCIENCE & TECHNOLOGY LETTERS*
Dai, N., Zeng, T., Mitch, W. A.
2015; 2 (3): 54-58
 - **Iodide, Bromide, and Ammonium in Hydraulic Fracturing and Oil and Gas Wastewaters: Environmental Implications** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Harkness, J. S., Dwyer, G. S., Warner, N. R., Parker, K. M., Mitch, W. A., Vengosh, A.
2015; 49 (3): 1955-1963
 - **Synthesis and Application of a Quaternary Phosphonium Polymer Coagulant To Avoid N-Nitrosamine Formation** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Zeng, T., Pignatello, J. J., Li, R. J., Mitch, W. A.
2014; 48 (22): 13392-13401

- **Superior Removal of Disinfection Byproduct Precursors and Pharmaceuticals from Wastewater in a Staged Anaerobic Fluidized Membrane Bioreactor Compared to Activated Sludge** *ENVIRONMENTAL SCIENCE & TECHNOLOGY LETTERS*
McCurry, D. L., Bear, S. E., Bae, J., Sedlak, D. L., McCarty, P. L., Mitch, W. A.
2014; 1 (11): 459-464
- **Impact of UV/H₂O₂ Pre-Oxidation on the Formation of Haloacetamides and Other Nitrogenous Disinfection Byproducts during Chlorination** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Chu, W., Gao, N., Yin, D., Krasner, S. W., Mitch, W. A.
2014; 48 (20): 12190-12198
- **Enhanced Formation of Disinfection Byproducts in Shale Gas Wastewater-Impacted Drinking Water Supplies** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Parker, K. M., Zeng, T., Harkness, J., Vengosh, A., Mitch, W. A.
2014; 48 (19): 11161-11169
- **Comparative in Vitro Toxicity of Nitrosamines and Nitramines Associated with Amine-based Carbon Capture and Storage** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Wagner, E. D., Osiol, J., Mitch, W. A., Plewa, M. J.
2014; 48 (14): 8203-8211
- **Effects of Flue Gas Compositions on Nitrosamine and Nitramine Formation in Postcombustion CO₂ Capture Systems** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Dai, N., Mitch, W. A.
2014; 48 (13): 7519-7526
- **Sunlight-Driven Photochemical Halogenation of Dissolved Organic Matter in Seawater: A Natural Abiotic Source of Organobromine and Organiodine** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Diego Mendez-Diaz, J., Shimabuku, K. K., Ma, J., Enumah, Z. O., Pignatello, J. J., Mitch, W. A., Dodd, M. C.
2014; 48 (13): 7418-7427
- **Effect of Chemical Oxidation on the Sorption Tendency of Dissolved Organic Matter to a Model Hydrophobic Surface** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Zeng, T., Wilson, C. J., Mitch, W. A.
2014; 48 (9): 5118-5126
- **Comparison of Halide Impacts on the Efficiency of Contaminant Degradation by Sulfate and Hydroxyl Radical-Based Advanced Oxidation Processes (AOPs)** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Yang, Y., Pignatello, J. J., Ma, J., Mitch, W. A.
2014; 48 (4): 2344-2351
- **Influence of Amine Structural Characteristics on N-Nitrosamine Formation Potential Relevant to Postcombustion CO₂ Capture Systems** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
Dai, N., Mitch, W. A.
2013; 47 (22): 13175-13183
- **Influence of ionic strength on triplet-state natural organic matter loss by energy transfer and electron transfer pathways.** *Environmental science & technology*
Parker, K. M., Pignatello, J. J., Mitch, W. A.
2013; 47 (19): 10987-10994
- **Dual role for lysine during protein modification by HOCl and HOBr: lysine nitrile as a putative biomarker for oxidative stress.** *Biochemistry*
Sivey, J., D., Howell, S., C., Bean, D., J., McCurry, D., L., Mitch, W., A., Wilson, C., J.
2013; 52: 1260-1271
- **Influence of amine structural characteristics of N-nitrosamine formation potential relevant to postcombustion CO₂ capture systems.** *Environ. Sci. Technol.*
Dai, N., Mitch, W., A.
2013; 47: 13175-13183
- **Application of ultraviolet, ozone, and advanced oxidation treatments to washwaters to destroy nitrosamines, nitramines, amines, and aldehydes formed during amine-based carbon capture.** *Environ. Sci. Technol.*
Shah, A., D., Dai, N., Mitch, W., A.

2013; 47: 2799-2808

- **Formation, precursors, control, and occurrence of nitrosamines in drinking water: a review.** *Wat. Res.*
Krasner, S., W., Mitch, W., A., McCurry, D., L., Hanigan, D., Westerhoff, P.
2013; 47: 4433-4450
- **The role of black carbon electrical conductivity in mediating hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) transformation on carbon surfaces by sulfides.** *Environ. Sci. Technol.*
Xu, W., Pignatello, J., J., Mitch, W., A.
2013; 47: 7129-7136
- **Relative importance of N-nitrosodimethylamine compared to total N-nitrosamines in drinking waters.** *Environ. Sci. Technol.*
Dai, N., Mitch, W., A.
2013; 47: 3648-3656
- **Formation and control of emerging C- and N-DBPs in drinking water.** *Journal AWWA*
Krasner, S., W., Mitch, W., A., Westerhoff, P., Dotson, A., D.
2012; 104: E582-E595
- **Dichloroacetonitrile and dichloroacetamide can form independently during chlorination and chloramination of drinking waters, model organic matters and wastewater effluents.** *Environ. Sci. Technol.*
Huang, H., Wu, Q.-Y., Hu, H.-Y., Mitch, W., A.
2012; 46: 10624-10631
- **Measurement of nitrosamine and nitramine formation from NO_x reactions with amines during amine-based carbon dioxide capture for post-combustion carbon sequestration.** *Environ. Sci. Technol.*
Dai, N., Shah, A., D., Hu, L., Plewa, M., J., McKague, B., Mitch, W., A.
2012; 46: 9793-9801
- **Impact of halide ions on natural organic matter-sensitized photolysis of 17 β -Estradiol in saline waters.** *Environ. Sci. Technol.*
Grebel, J., E., Pignatello, J., J., Mitch, W., A.
2012; 46: 7128-7134
- **Halonitroalkanes, halonitriles, haloamides and N-nitrosamines: A critical review of nitrogenous disinfection byproduct (N-DBP) formation pathways.** *Environ. Sci. Technol.*
Shah, A., D., Mitch, W., A.
2012; 46: 119-131
- **Comparative genotoxicity of nitrosamine drinking water disinfection byproducts in Salmonella and mammalian cells.** *Mutation Research*
Wagner, E., D., Hsu, K.-M., Lagunas, A., Mitch, W., A., Plewa, M., J.
2012; 741: 109-115
- **Tradeoffs in disinfection byproduct formation associated with precursor pre-oxidation for control of nitrosamine formation.** *Environ. Sci. Technol.*
Shah, A., D., Krasner, S., W., Chen, T., C.-F., Gunten, U., von, Mitch, W., A.
2012; 46: 4809-4818
- **Comparative mammalian cell cytotoxicity of water concentrates from disinfected recreational pools.** *Environ. Sci. Technol.*
Plewa, M., J., Wagner, E., D., Mitch, W., A.
2011; 45: 4159-4165
- **Sorbic acid as a quantitative probe for the formation, scavenging and steady-state concentrations of the triplet-excited state of organic compounds.** *Wat. Res.*
Grebel, J., E., Pignatello, J., J., Mitch, W., A.
2011; 45: 6535-6544
- **Impact of UV disinfection combined with chlorination/chloramination on the formation of halonitromethanes and haloacetonitriles in drinking water.** *Environ. Sci. Technol.*
Shah, A., D., Dotson, A., D., Linden, K., G., Mitch, W., A.
2011; 45: 3657-3664
- **Effect of halide ions on organic contaminant degradation by hydroxyl radical-based advanced oxidation processes.** *Environ. Sci. Technol.*

- Grebel, J., E., Pignatello, J., J., Mitch, W., A.
2010; 44: 6822-6828
- **Chapter 7 Micropollutants in water recycling: A case study of N-nitrosodimethylamine (NDMA) exposure from water versus food.** *Sustainability Science and Engineering*
Schafer, A., I., Mitch, W., A., Walewijk, S., Munoz, A., Teuten, E.
2010; 2: 203-228
 - **Quaternary amines as NDMA precursors: a role for consumer products?** *Environ. Sci. Technol.*
Kemper, J., M., Walse, S., S., Mitch, W., A.
2010; 4 (44): 1224-1231
 - **Influence of the method of reagent addition on dichloroacetonitrile formation during chloramination.** *Environ. Sci. Technol.*
Hayes-Larson, E., L., Mitch, W., A.
2010; 2 (44): 700-706
 - **Genotoxicity of water concentrates from recreational pools after various disinfection methods.** *Environ. Sci. Technol.*
Liviak, D., Wagner, E., D., Mitch, W., A., Altonji, M., J., Plewa, M., J.
2010; 44: 3537-3332
 - **Fecal coliform accumulation within a river subject to seasonally-disinfected wastewater discharges.** *Wat. Res.*
Mitch, A., A., Gasner, K., C., Mitch, W., A.
2010; 16 (44): 4776-4782
 - **Comparison of byproduct formation in waters treated with chlorine and iodine: relevance to point-of-use treatment** *Environ. Sci. Technol.*
Smith, E., M., Plewa, M., J., Lindell, C., L., Richardson, S., D., Mitch, W., A.
2010; 44: 8446-8552
 - **Black-carbon mediated destruction of nitroglycerin and RDX by hydrogen sulfide: relevance to in-situ remediation.** *Environ. Sci. Technol.*
Xu, W., Dana, K., E., Mitch, W., A.
2010; 44: 6409-6415
 - **Application of an optimized total N-nitrosamine (TONO) assay to pools: placing N-nitrosodimethylamine (NDMA) determinations into perspective.** *Environ. Sci. Technol.*
Kulshrestha, P., McKinstry, K., C., Fernandez, B., O., Feelisch, M., Mitch, W., A.
2010; 44: 3369-3375
 - **Exploring amino acid side chain decomposition using enzymatic digestion and HPLC-MS: combined lysine transformations in chlorinated waters.** *Anal. Chem.*
Walse, S., S., Plewa, M., J., Mitch, W., A.
2009; 18 (81): 7650-7659
 - **Occurrence and fate of nitrosamines and their precursors in municipal sludge and anaerobic digestion systems.** *Environ. Sci. Technol.*
Padhye, L., Tezel, U., Mitch, W., A., Pavlostathis, S., G., Huang, C.-H.
2009; 9 (43): 3087-3093
 - **Nitrosamine, dimethylnitramine and chloropicrin formation during strong base anion exchange treatment.** *Environ. Sci. Technol.*
Kemper, J., M., Westerhoff, P., Dotson, A., D., Mitch, W., A.
2009; 2 (43): 466-472
 - **Impact of halides on the photobleaching of dissolved organic matter.** *Marine Chem.*
Grebel, J., E., Pignatello, J., J., Song, W., Cooper, W., J., Mitch, W., A.
2009; 115: 134-144
 - **Nitrosamine carcinogens also swim in pools.** *Environ. Sci. Technol.*
Walse, S., S., Mitch, W., A.
2008; 4 (42): 1032-1037
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