

Evan Patrick Gray

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EDUCATION

Ph.D. Environmental Science and Engineering, Colorado School of Mines, 2015

- “Development and Implementation of Analytical Methodology to Quantify Silver Nanoparticle Uptake in Earthworms”
- Advisor: Dr. Christopher Higgins

M.S. Environmental Science & Engineering, Colorado School of Mines, 2012

- Advisor: Dr. Christopher Higgins

B.S. Environmental Toxicology, Western Washington University, 2009

PROFESSIONAL EXPERIENCE

Assistant Professor	2018 – Present	Department of Civil, Environmental and Construction Engineering, Texas Tech University
Postdoctoral Research Fellow	2017 – 2018	The School of Engineering, Brown University
Postdoctoral Research Associate	2016 – 2017	The School of Engineering, Brown University

ACADEMIC HONORS AND AWARDS

Best Poster Presentation North East Superfund Research Program (NESRP) Trainee Annual Meeting 2018, Woods Hole MA

Cynthia L. Browning, Evan Gray, Kyle Gion, Robert Hurt, Agnes Kane Mitochondrial Toxicity of Novel 2D Manganese Oxide Nanosheets in Fish Cells

NIEHS T32 Postdoctoral Fellowship, October 2017-August 2018

Rocky Mountain Chapter of the Society of Environmental Toxicology and Chemistry. Annual Meeting, Best Student Platform Presentation, Runner Up, 2013

Honorable mention for NSF graduate research fellowship, 2010

Ming-Ho Yu Outstanding Student in Toxicology, Western Washington University, May 2009

PUBLICATIONS

1. **Gray, E.P.**; Browning, C.L.; Gion, K.; Wang, M.; Koski, K.J.; Kane, A.B.; Hurt, R.H. Dissolution and Cellular Response to MoO₃ Nanoribbons - a Case Study Within a New Framework for Early Hazard Screening of 2D Materials. Submitted to *ES: Nano*, 2018.
2. Vincent, J. L.; Paterson, M. J.; Norman, B. C.; **Gray, E. P.**; Ranville, J. F.; Scott, A. B.; Frost, P. C.; Xenopoulos, M. A. Chronic and pulse exposure effects of silver nanoparticles on natural lake phytoplankton and zooplankton. *Ecotoxicology* 2017, 1–14 DOI: 10.1007/s10646-017-1781-8.
3. **Gray, E. P.**; Coleman, J. G.; Bednar, A. J.; Kennedy, A. J.; Ranville, J. F.; Higgins, C. P. Extraction and Analysis of Silver and Gold Nanoparticles from Biological Tissues Using Single Particle Inductively Coupled Plasma Mass Spectrometry. *Environ. Sci. Technol.* 2013, 47 (24), 14315–14323 DOI: 10.1021/es403558c.

4. Bednar, A. J.; Poda, A. R.; Mitrano, D. M.; Kennedy, A. J.; **Gray, E. P.**; Ranville, J. F.; Hayes, C. A.; Crocker, F. H.; Steevens, J. A. Comparison of on-line detectors for field flow fractionation analysis of nanomaterials. *Talanta* 2013, 104, 140–148 DOI: 10.1016/j.talanta.2012.11.008.
5. Coleman, J. G.; Kennedy, A. J.; Bednar, A. J.; Ranville, J. F.; Laird, J. G.; Harmon, A. R.; Hayes, C. A.; **Gray, E. P.**; Higgins, C. P.; Lotufo, G.; et al. Comparing the effects of nanosilver size and coating variations on bioavailability, internalization, and elimination, using *Lumbriculus variegatus*. *Environ. Toxicol. Chem.* 2013, 32 (9), 2069–2077 DOI: 10.1002/etc.2278.
6. Pace, H. E.; Rogers, N. J.; Jarolimek, C.; Coleman, V. A.; **Gray, E. P.**; Higgins, C. P.; Ranville, J. F. Single Particle Inductively Coupled Plasma-Mass Spectrometry: A Performance Evaluation and Method Comparison in the Determination of Nanoparticle Size. *Environ. Sci. Technol.* 2012, 46 (22), 12272–12280 DOI: 10.1021/es301787d.
7. **Gray, E. P.**; Bruton, T. A.; Higgins, C. P.; Halden, R. U.; Westerhoff, P.; Ranville, J. F. Analysis of gold nanoparticle mixtures: a comparison of hydrodynamic chromatography (HDC) and asymmetrical flow field-flow fractionation (AF4) coupled to ICP-MS. *J. Anal. At. Spectrom.* 2012, 27 (9), 1532–1539 DOI: 10.1039/C2JA30069A.

SELECT PRESENTATIONS

Presentations at Regional, National, and International Conferences (presenting author underlined)

1. **Gray EP**, Gion K., Hurt RH. Stability of 2D MoO₃ and MnO₂ in Biological and Environmental Media. Gordon Research Conference on Environmental Nanotechnology, 18-23 August 2017. Golden, Colorado (Poster).
2. **Gray EP**, Gion K., Hurt RH. Stability of 2D MoO₃ and MnO₂ in Biological and Environmental Media. Gordon Research Seminar on Environmental Nanotechnology, 17-18 August 2017. Stowe, Vermont (Platform).
3. **Gray EP**, Gion K., Hurt RH. Stability of 2D MoO₃ in Biological and Environmental Media. 11th Annual International Conference on the Effects of Engineered Nanoparticles and Nanomaterials (ICEENN), 14-18 August 2016. Golden, Colorado (Poster).
4. **Gray EP**, Bednar AJ, Ranville JF, Higgins CP Evaluating Bioaccumulation of Silver and Gold Nanoparticles Using Tissue Extraction and spICP-MS Analysis. 24th Annual SETAC Europe Meeting, 11-15 May, 2014. Basel, Switzerland (Platform).
5. **Gray EP**, Coleman JG, Bednar, AJ, Ranville JF, Higgins, CP. Extraction and Analysis of Ag and Au Nanoparticles from Organism Tissues Using TMAH and Single Particle ICP-MS Analysis. Gordon Research Conference on Environmental Nanotechnology, 2-7 June. Stowe, Vermont (Poster).

TEACHING EXPERIENCE

Texas Tech University

Environmental Chemistry (ENVE 5315)

Brown University – Guest Lecturer

Fundamentals of Environmental Engineering (ENGN 490).

Colorado School of Mines –Guest Lecturer 2011-2013

Environmental Water Chemistry (ESGN 500) and Environmental Engineering Laboratory (ESGN 355).

PROFESSIONAL ACTIVITIES, SERVICES, AND AFFILIATIONS

ad hoc Reviewer: **Carbon, Analytical Chemistry, ES&T Letters**

Professional Affiliations

Society of Environmental Toxicology and Chemistry, 2010-2014
American Chemical Society, 2008-2010