

EDWARD P. KOLODZIEJ

Curriculum Vitae

Department of Sciences and Mathematics (UW Tacoma)
Department of Civil and Environmental Engineering (UW Seattle)
Center for Urban Waters (Tacoma, WA)
University of Washington
Box Number 358436, 1900 Commerce St
Tacoma, WA 98402

Phone: (253) 692-5659
Email: koloj@uw.edu

EDUCATION

University of California, Berkeley. Berkeley, CA

Ph.D., Environmental Engineering

Dec. 2004

Dissertation topic: *The Occurrence and Environmental Fate of Steroid Hormones with Endocrine and Pheromonal Activity in Fish*. Minor emphases in Chemical Ecology and Endocrinology

University of California, Berkeley. Berkeley, CA

M.S., with honors in Environmental Engineering

May 1999

Johns Hopkins University. Baltimore, MD

B.S., with general honors in Chemical Engineering

May 1998

EMPLOYMENT

University of Washington. Tacoma/Seattle, WA

Allan and Inger Osberg Professor

2024 - present

Joint Appointment across Tacoma (67%) and Seattle (33%) campuses

2014 – present

Professor (2022+)/Associate Prof. (2014-2022), Interdisciplinary Arts and Sciences

(UW Tacoma)

Professor (2022+)/Associate Prof. (2014-2022), Dept. of Civil and Environmental Eng.

(UW Seattle)

Principal Investigator, Center for Urban Waters

Research expertise includes the occurrence, fate and transport of organic contaminants in natural and engineered systems, characterization of roadway runoff, stormwater and non-point source pollution, impacts of tire rubber pollution on the environment, toxicity identification and evaluation, source apportionment, water reuse, optimization of engineered treatment systems, mitigation of contaminants in urban and agricultural runoff, transformations and retained bioactivity of emerging contaminants, high resolution mass spectrometry, environmental analytical chemistry, innovative and transformative technologies for water quality improvement and protection of ecosystem health.

University of Nevada, Reno, Reno, NV

Assistant/Associate Professor, Dept. of Civil and Environmental Eng.

2007 – 2014

Research expertise includes the occurrence, fate and transport of contaminants in natural and engineered systems, optimization of engineered water reuse and groundwater recharge systems, contaminant fate in agricultural runoff, transformations of endocrine disruptors and other emerging contaminants, analytical method development, innovative technologies for water treatment.

University of California, Berkeley, Berkeley, CA

Post-Doctoral Scholar; CALFED Project Manager

2005 – 2006

Research focused on the fate and occurrence of endocrine disrupting compounds and characterizing non-point source pollution at regional scales and in agricultural watersheds.

AWARDS AND HONORS

U.S. National Champion, [2023 Frontier Planet Prize](#)

2022 Seattle Aquarium Conservation Research Award (awarded to Dr. Zhenyu Tian and all Co-authors of Tian et al. 2021, *Science*)

Excellence in Review Award, 2021, *Environmental Science and Technology Letters*

California Stormwater Quality Association-2021 Outstanding Research Award (EPK and JKM)

Distinguished Research Award (2020), University of Washington-Tacoma

Keynote Speaker, Nontarget Screening of Organic Chemicals in the Environment (NonTarget 2026), Ascona, Switzerland

Keynote Speaker, 6th International Conference on Emerging Contaminants (EmCon 2018), Oslo, Norway

Invited Speaker, 2014 Gordon Research Conference, Environmental Sciences: Water

Exceptional Reviewers of 2014 Award, *Environmental Toxicology and Chemistry*

Excellence in Review Award, 2012, *Environmental Science and Technology*

UNR College of Engineering 2011 Senior Scholar Faculty Mentor, Stephanie Kover

PUBLICATIONS

ORCID ID# 0000-0002-7968-4198, *H-index 35, i-10 62, ~7769 citations (10/2026) from Google Scholar*
Kolodziej Group: ¹Undergraduate students; ²Graduate students; ³Post-doctoral scholars

1) Huang, Y., ²Brown, M.L., Kolodziej, E.P., Yang, Z., Sun, N., Wang, T. 2026. "Partition-Buffered Leaching of 6PPD-Quinone from Tire Wear Particles". *Environ. Sci. Technol.* In press.

DOI:10.1021/acs.est.6c08101

2) ²Maxwell, K.J., ²Martin, K., ³Wang, W., ²Everton, E.V., Gonzalez, M., Kolodziej E.P. 2026. "Lethal Concentrations of 6PPD-Quinone Occur in Endangered Species Act Listed Aquatic Habitats of Central California". *Environ. Sci. Technol. Letters*. **13**(10) 1403-1410. DOI: 10.1021/acs.estlett.6c00745

3) ³Wei, W., Gonzalez, M., ²Everton, E.K., Ge, Y., ³Perala-Dewey, J., Kolodziej, E.P. 2026. "Rubber Dams: An Overlooked Source of Leachable Organic Contaminants Within Water Infrastructure Systems" *Environ. Sci. Technol.* **60**(34) 24,377-24,392. DOI: 10.1021/acs.est.6c05884

4) Dougherty, J.A., Paterson, K., Gonzalez, M., Kolodziej, E.P., Lin, D., Gilbreath, A., Sutton, R. 2026. "Treatment Performance of Urban Rain Gardens/Bioretention Cells with Respect to Stormwater Contaminants of Emerging Concern". **12**(8) 2470-2488. *Environ. Sci. Water Res. Technol.* DOI: 10.1039/d6ew00232c

5) ²Brown, M.L., Ivy, N., Gonzalez, M., Greer, J.B., Hansen, J.D., Kolodziej, E.P., McIntyre, J.K. 2026. "Roadway Runoff Induced Acute Mortality in Juvenile Coho Salmon During Spring Storm Events." *Environ. Sci. Technol.* **60**(1) 1724-1732. DOI: 10.1021/acs.est.5c13992

6) Foster, G.M., Driessnack, M.K., Gonzalez, M.G., Kolodziej, E.P., McIntyre, J.K. 2026. "Life Stage and Population Differences in the Toxicity of 6PPD-Quinone to Coho Salmon". *Can. J. Fish. Aquat. Sci.* **83**, 1-12. DOI: 10.1139/cjfas-2025-0191

7) Cwiertny, D.M., Kolodziej, E.P., Black, G.P., Kucklick, J., Marfil-Vega, R., McEachran, A.D., Place, B.J., Reiner, J.L., Rodowa, A.E. 2025. "In Memoriam: The Scientific Legacy of Dr. Katherine T. Peter". *Environ. Sci. Technol.* **60**(9) 6908-6915. DOI: 10.1021/acs.est.5c15202

8) ²Zhao, H., Peter, K.T., Gonzalez, M., Rideout, C.R., ²Hu, X., ³Tian, Z., Kolodziej E.P. 2025. "Temporal Dynamics of PPD-Class Antioxidants and Transformation Products in a Small Roadway-Runoff Impacted Watershed". *Environ. Sci. Technol.* **59**(34) 18538-18551. DOI: 10.1021/acs.est.5c07576

9) Rodgers, T.F.M., Drew, S., Brown, T., Hiki, K., Hiroshi, Y., King, M., Kolodziej, E.P., Krogh, E.T., McIntyre, J.K., Miller, K., Peng, H., Tomlin, H., Wang, Y., Scholes, R.C. 2025. "Turning the Corner on Hazardous Tire Compounds: A Management Framework for Tire Additive Pollution." *Environ. Sci. Technol. Letters*. **12**(8) 869-880. DOI: 10.1021/acs.estlett.5c00453

10) Blair, S.I., Wetzal, J., Gonzalez, M.G., Rideout, C., Kolodziej, E.P., Mitchell, C., Foster, G., Lynch-Holm, V., McIntyre, J.K. 2025. "Blood-Brain and Blood-Gill Barrier Disruption in Coho Salmon Exposed to

Roadway Runoff and 6PPD-Quinone.” *Environ. Sci. Technol.* **59**(25) 12533-12542. DOI: 10.1021/acs.est.5c01559

- 11) Kralles, Z.T., Deheriker, P.K., Werner, C.A., ²Hu, X.M., Kolodziej, E.P., Dai, N. 2024. “Halogenation of Anilines: Formation of Haloacetonitriles and Large-Molecule Disinfection Byproducts”. *Environ. Sci. Technol.* **58**(39) 5621-5632. DOI: 10.1021/acs.est.4c05434
- 12) Peter, K.T., Gilbreath, A., Gonzalez, M.G., ³Tian, Z., Wong, A., Yee, D., Miller, E.L., Avellaneda, P., Chen, D., Patterson, A., Fitzgerald, N., Higgins, C.P., Kolodziej E.P., Sutton, R. 2024. “Storms Mobilize Organophosphate Esters, Bisphenols, PFAS, and Vehicle-Derived Contaminants to San Francisco Bay Watersheds.” *Environ. Sci. Proc. Impacts.* **26**(10). 1760-1779. DOI: 10.1039/d4em00117f
- 13) Mayer, P.M., et al. 2024. “Where the Rubber Meets the Road: Emerging Environmental Impacts of Tire Wear Particles and Their Chemical Cocktails.” *Sci. Tot. Environ.* **927**, 171153. DOI:10.1016/j.scitotenv.2024.171153
- 14) Halama, J.J., McKane, R.B., Barnhart, B. L., Pettus, P.P., Brookes, A.F., Adams, A.K., Gockel, C.K., Djang, K.S., Phan, V., Chokshi, S.M., Graham, J.J., ³Tian, Z., Peter, K.T., Kolodziej, E.P. 2024. “Watershed Analysis of Urban Stormwater Contaminant 6PPD-Quinone Hotspots and Stream Concentrations Using a Process Based Ecohydrological Model.” *Frontiers in Environ. Sci.* **12**, 1364673. DOI:10.3389/fenvs.2024.1364673
- 15) ²Hu, X., Mar, D., Suzuki, N., Zhang, B., Peter, K.T., Beck, D.A.C., Kolodziej, E.P. 2023. “Mass-Suite: A Novel Open-source Python Package for High Resolution Mass Spectrometry Data Analysis.” *J. ChemoInformatics.* **15**:87. DOI:10.1186/s13321-023-00741-9
- 16) Duchet, C., ²Hou, F., Sinclair, C.A., ³Tian, Z., Kraft, A., Kolar, V., Kolodziej, E.P., McIntyre, J.K., Stark, J. 2023. “Neonicotinoid Mixture Alters Trophic Interactions in a Freshwater Aquatic Invertebrate Community.” *Sci. Tot. Environ.* **897**, 165419. DOI:10.1016/j.scitotenv.2023.165419
- 17) ²Hu, X., ²Zhao, H., ³Tian, Z., Peter K.T., Dodd, M.D., Kolodziej, E.P. 2023. “Chemical Characteristics, Leaching, and Stability of the Ubiquitous Tire Rubber Toxicant 6PPD-Quinone” *Environ. Sci. Proc. Impacts.* **25**(5), 901-911. DOI:10.1039/D3EM00047H
- 18) Mehinto, A.C., Du, B., Wenger, E., ³Tian, Z., Kolodziej, E.P., Apeti, D., Maruya, K.A. 2023. “Bioanalytical and Non-Target Mass Spectrometric Screening for Contaminants of Emerging Concern in Southern California Bight Sediments.” *Chemosphere.* **331**, 138789. DOI:10.1016/j.chemosphere.2023.138789
- 19) ²Zhao, H., ²Hu, X., ³Tian, Z., Gonzalez, M., Rideout C.A., Peter K.T., Dodd, M.D., Kolodziej, E.P. 2023. “Transformation Products of Tire Rubber Antioxidant 6PPD in Heterogeneous Gas-Phase Ozonation: Identification and Environmental Occurrence.” *Environ. Sci. Technol.* **57**(14) 5621-5632. DOI: 10.1021/acs.est.2c08690
- 20) ²Zhao, H., ²Hu, X., Gonzalez, M., Rideout, C.A., Hobby, G.C., Fisher, M.F., McCormick, C.J., Dodd, M.D., Kim, K.E., ³Tian, Z., Kolodziej, E.P. 2023. “Screening p-Phenylenediamine Antioxidants, Their Transformation Products, and Industrial Chemical Additives in Crumb Rubber and Elastomeric Consumer Products.” *Environ. Sci. Technol.* **57**(7) 2779-2791. DOI: 10.1021/acs.est.2c07014
- 21) ²Tang, T., Kolodziej, E.P. 2022. “Sorption and Desorption of Urban Stormwater-Derived Organic Contaminants in Soils.” *ACS ES&T Water.* **12**(2) 2623-2633. DOI:10.1021/acsestwater.2c00380
- 22) ²Hu, X., ³Zhao, H., ³Tian, Z., Peter K.T., Dodd, M.D., Kolodziej, E.P. 2022. “Transformation Product Formation Upon Heterogeneous Ozonation of the Tire Rubber Antioxidant 6PPD (*N*-(1,3-dimethylbutyl)-*N*-phenyl-*p*-phenylenediamine).” *Environ. Sci. Technol. Letters.* **9**(5) 413-419. DOI: 10.1021/acs.estlett.2c00187.
- 23) Peter, K.T., Lundeen, J.I., Wu, C., Feist, B., ³Tian, Z., Cameron, J., Scholz, N.L., Kolodziej, E.P. 2022. “Measuring The Chemical Profile of Biological Decline in Stormwater-Impacted Watersheds.” *Environ. Sci. Technol.* **56**(5) 3159-3169. DOI: 10.1021/acs.est.1c08274.
- 24) Peter, K.T., Kolodziej E.P., Kucklik, J. 2022. “Assessing Reliability of Non-Target High Resolution Mass Spectrometry Fingerprints for Quantitative Source Apportionment in Complex Matrices.” *Anal. Chem.* **94** (6) 2723-2731. DOI: 10.1021/acs.analchem.1c03202.
- 25) ³Tian, Z., Gonzalez, M., Rideout, C., ²Zhao, H., ²Hu, X., Wetzel, J., Mudrock, E., James, C.A., McIntyre, J.K., Kolodziej, E.P. 2021. “6PPD-Quinone: Revised Toxicity Assessment and Quantification Method Development with a Commercial Standard.” *Environ. Sci. Technol. Letters.* **9** (2) 140-146. DOI: 10.1021/acs.estlett.1c00910.

-Selected as one of seven “Best Papers of 2022” by *ES&T Letters* (10/10/2023)

- 26) ²Zhou, H., ³Tian, Z., Kim, K.E., ²Wang, R., ¹Lam, K., Kolodziej, E.P. 2021. “Biotransformation of Current-Use Progestins Dienogest and Drospirenone in Laboratory Scale Activated Sludge Systems Forms High-Yield Products with Altered Endocrine Activity.” *Environ. Sci. Technol.* **55**(20) 13869-13880. DOI: 10.1021/acs.est.1c03805.
- 27) McIntyre, J.K., Prat, J., Cameron, J., Wetzel, J., Mudrock, E., ³Peter, K.T., ³Tian, Z., MacKenzie, C., Lundin, J., Stark, J.D., King, K., Davis, J.W., Kolodziej, E.P., Scholz, N.L. 2021. “Treading Water: Tire Wear Particle Leachate Recreates and Urban Runoff Mortality Syndrome in Coho But Not Chum Salmon.” *Environ. Sci. Technol.* **55**(17) 11767-11774 DOI: 10.1021/acs.est.1c03569
- 28) Kumar, N., ²Zhao, H., Awoyemi, A., Kolodziej, E.P., Crago, J. 2021. “Toxicity Testing of Effluent Dominated Stream using Predictive Molecular Level Toxicity Signatures Based on High Resolution Mass Spectrometry: A Case Study of the Lubbock Canyon Lake System”. *Environ. Sci. Technol.* **55**(5) 3070-3080. DOI: 10.1021/acs.est.0c05546
- 29) ³Tian, Z., ²Zhao, H.Q., ³Peter, K.T., ¹Gonzalez, M., Wetzel, J., ¹Wu, C., ²Hu, X., Prat, J., Mudrock, E., ¹Hettinger, R., ¹Cortina, A.E., Biswas, R.G., Kock, F.V.C., Soong, R., Jenne, A., ³Du, B., ²Hou, F., He, H., ³Lundeen, R., Gilbreath, A., Sutton, R., Scholz, N.L. Davis, J.W., Dodd, M.C., Simpson, A., McIntyre, J.K., Kolodziej, E.P. 2021. “Ubiquitous Tire Rubber-Derived Chemical Induces Acute Mortality in Coho Salmon.” *Science*. Published online 12/3/20, in print 1/8/21. **371** (6525) 185-189. DOI 10.1126/science.abd6951
-“First Release” online 12/3/2020, global media coverage, Altmetric attention score: 1854
- 30) Du, B., ³Tian, Z., ³Peter, K.T., Kolodziej, E.P., Wong, C. 2020. “Developing Unique Non-Target High Resolution Mass Spectrometry Signatures to Track Contaminant Sources in Urban Waters.” *Environ. Sci. Technol. Letters* **7**(12) 923-930. DOI: 10.1021/acs.estlett.0c00749
- 31) Pflug, N.C., Kral, A.K., Hankard, M.K., Breuckman, K.C., Kolodziej, E.P., Gloer, J.B., Wammer, K.H., Cwiertny, D.M. 2020. “Overlooked Environmental Fate Pathways for Trienone Steroids: Reversible Photo-Nucleophilic Addition and Thermal Binding of Photohydrates to Dissolved Organic Matter.” *Environ. Sci. Technol.* **54**(19) 12181-12190. DOI: 10.1021/acs.est.0c03821
- 32) ³Peter, K.T., ²Hou, F., ³Tian, Z., ¹Wu, C., Goehring, M., Liu, F., Kolodziej, E.P. 2020. “More Than a First Flush: Urban Creek Storm Hydrographs Reveal Broad Contaminant Pollutographs” *Environ. Sci. Technol.* **54**(10) 6152-6165. DOI: 10.1021/acs.est.0c00872
- 33) ³Tian, Z., ³Peter, K.T., Gipe, A.D., ²Zhou, H., ²Hou, F., ¹Wark, D.A., Kolodziej, E.P., James, C.A. 2020. “Suspect and Non-target Screening for Contaminants of Emerging Concern in an Urban Estuary.” *Environ. Sci. Technol.* **54**(2) 889-901. DOI: 10.1021/acs.est.9b06126
- 34) ³Peter, K.T., ³Tian, Z., ¹Wu, C., Kolodziej, E.P. 2019. “Application of Non-Target High Resolution Mass Spectrometry Data to Quantitative Source Apportionment.” *Environ. Sci. Technol.* **53**(21) 12257-12268. DOI: 10.1021/acs.est.9b04481
- 35) ²Hou, F., ³Tian, Z., ³Peter, K.T., ¹Wu, C., ¹Alegria, E., Gipe, A.D., ²Zhao, H., Liu, F., Kolodziej, E.P. 2019. “Quantification of Organic Contaminants in Urban Stormwater by Isotope Dilution and Liquid Chromatography-Tandem Mass Spectrometry.” *Anal. Bioanal. Chem.* **411**(29) 7791-7806. DOI: 10.1007/s00216-019-02177-3
- 36) ²Yang, X., ²Zhao, H., Cwiertny D.M., Kolodziej E.P. 2019. “Sorption and Transport of Trenbolone and Altrenogest Photoproducts in Soil-Water Systems.” *Environ. Sci. Processes Impacts.* **21**(10) 1650-1663. DOI: 10.1039/C9EM00305C
-Front cover article, October 2019, *Environ. Sci. Processes Impacts*.
- 37) Pflug, N., Patterson, E., Martinovic-Weigelt, D., Kolodziej, E.P., Gloer, J., McNeill, K., Cwiertny, D.M., Wammer, K. 2019. “Intramolecular [2+2] Photocycloaddition of Altrenogest: Confirmation of Product Structure, Theoretical Mechanistic Insight, and Bioactivity Assessment.” *J. Org. Chem.* **84**(17) 11366-11371. DOI: 10.1021/acs.joc.9b02070
- 38) Bains, A., Perez-Garcia, O., Lear, G., Greenwood, D., Swift, S., Middleditch, M., Kolodziej E.P., Singhal, N. 2019. “Induction of Microbial Oxidative Stress as a New Strategy to Enhance the Enzymatic Degradation of Organic Micropollutants in Synthetic Wastewater.” *Environ. Sci. Technol.* **53**(16), 9553-9563. DOI: 10.1021/acs.est.9b02219

- 39) ²Kenyon, P., ²Zhao, H., ²Yang, X., ¹Wu, C., Cwierny, D.M., Kolodziej, E.P. 2019. "Detection and Quantification of Metastable Photoproducts of Trenbolone and Altrenogest Using Liquid Chromatography-Tandem Mass Spectrometry." *J. Chrom. A.* 1603, 150-159. DOI: 10.1016/j.chroma.2019.06.030
- 40) ³Peter, K.T., Herzog, S., ³Tian, Z., ¹Wu, C., McCray, J.E., Lynch, K., Kolodziej, E.P. 2019. "Evaluating Emerging Organic Contaminant Removal in an Engineered Hyporheic Zone using High Resolution Mass Spectrometry." *Water Research.* **150** (3), 140-152. DOI: 10.1016/j.watres.2018.11.050
- 41) ³Peter, K.T., ³Tian, Z., ¹Wu, C., ¹Lin, P., ¹White, S., ³Du, B., McIntyre, J.K., Scholz, N.L., Kolodziej E.P. 2018. "Using High-Resolution Mass Spectrometry to Identify Organic Contaminants Linked to Urban Stormwater Mortality Syndrome in Coho Salmon." *Environ. Sci. Technol.*, **52**(18) 10317-10327. DOI: 10.1021/acs.est.8b03287
- 42) Salls, K.A., ²Won, D., Kolodziej, E.P., Childress, A.E., Hiibel, S.R. 2018. "Transport of Metals and Semi-Volatile Contaminants In Direct Contact Membrane Distillation." *Desalination.* **427**, 35-41, DOI: 10.1016/j.desal.2017.11.001
- 43) Pflug, N.C., Hankard, M.K., Berg, S.M., O'Connor, M., Gloer, J.C., Kolodziej, E.P., Cwierny, D.M., Wammer, K.H. 2017. "Environmental Photochemistry of Dienogest: Phototransformation to Estrogenic Products and Increased Environmental Persistence via Reversible Photohydration." *Environ. Sci. Processes Impacts.* **19**, 1414-1426, DOI: 10.1039/c7em00346c
- 44) ³Du, B., ¹Lofton, J.M., ³Peter, K.T., Gipe, A.D., James, C.A., McIntyre, J.K., Scholz, N.L., Baker, J.E., Kolodziej, E.P. 2017. "Development of Suspect and Non-Target Screening Methods for Detection of Organic Contaminants in Highway Runoff and Fish Tissue with High-Resolution Time-of-Flight Mass Spectrometry." *Environ. Sci. Processes Impacts.* **19**, 1185-1196. DOI 10.1039/C7EM00243B
- 45) Kolodziej E.P., Choi, K., Marfil-Vega, R., Brooks, B.W. 2017. "The Necessity of Bioanalytical Tools for Advancing Water and Sediment Quality Assessment." *Environ. Sci. Processes Impacts.* **19**, 1113-1116. DOI: 10.1039/C7EM90032E
- Editorial content, not peer-reviewed
- 46) Pflug, N.C., Kupsco, A., Kolodziej, E.P., Schlenk, D., Teesch, L.M., Gloer, J.B., Cwierny, D.M. 2017. "Formation of Bioactive Transformation Products During Glucocorticoid Chlorination." *Environmental Science: Water Research and Technology.* **3**, 450-461. DOI 10.1039/C7EW00033B
- 47) Wammer, K.H., Anderson, K.C., Erickson, P.R., Kliegman, S., Moffat, M.E., Heitzman, J.A., McNeill, K., Martinovic-Weigelt, D., Cwierny, D.M., Kolodziej, E.P. 2016. "Environmental Photochemistry of Altrenogest: Photoisomerization Followed by Reversible Photohydration." *Environ. Sci. Technol.* **50**(14). 7480-7488. DOI 10.1021/acs.est.6b02608
- 48) Baltrusatis, J., Patterson, E., O'Connor, M., Shen, Q., Kolodziej E.P., Cwierny, D.M. 2016. "Reversible Photohydration of Trenbolone Acetate Metabolites: Mechanistic Understanding of Product-To-Parent Reversion through Complementary Experimental and Theoretical Approaches." *Environ. Sci. Technol.* **50**(13). 6753-6761. DOI 10.1021/acs.est.5b03905
- 49) Ward, A.S., Cwierny, D.M., Kolodziej, E.P., Brehm, C.C. 2015. "Stream-Hyporheic Spiraling Increases Environmental Persistence of Trenbolone Metabolites." *Nature Communications*, **6**, Article #7067, DOI 10.1038/ncomms8067
- 50) ²Cole, E.A. ¹McBride, S., ¹Kimbrough K.C., Marchand, E.A., Cwierny, D.M., Kolodziej, E.P. 2015. "Rates and Product Identification for Trenbolone Acetate Metabolite Biotransformation in Aerobic Conditions." *Environ. Toxicol. Chem.* **34**(7), 1472-1484, DOI: 10.1002/etc.2962
- 51) Qu, S., Kolodziej, E.P., Cwierny, D.M. 2014. "Sorption and Mineral Promoted Transformation of Synthetic Hormone Growth Promoters in Soil Systems" *J. Agricul. Food Chem.* **62**(51), 12277-12286. DOI 10.1021/jf5035527
- 52) ²Jones, G.D., ¹Benchetler, P.V., Tate, K.W., Kolodziej E.P. 2014. "Trenbolone Acetate Metabolite Transport in Rangelands and Irrigated Pastures: Observations and Conceptual Approaches for Agro-Ecosystems." *Environ. Sci. Technol.* **48**(21) 12569-12576. DOI: 10.1021/es503406h
- 53) Cwierny, D.M. Schlenk, D., Snyder, S.A., Kolodziej E.P. 2014. "Environmental Designer Drugs: When Transformation Does Not Eliminate Risk." *Environ. Sci. Technol.* **48**(20) 11737-11745. DOI: 10.1021/es503425w

- Invited (EPK) feature article (cover article) for *Environ. Sci. Technol.*
- Ranked #6, Most Read Articles of 2014; First runner up, Best Feature Article of 2014
- 54) ²Jones, G.D., ¹Benchetler, P.V., Tate, K.W., Kolodziej E.P. 2014. "Surface and Subsurface Attenuation of Trenbolone Acetate Metabolites and Manure-derived Constituents in Irrigation Runoff on Agro-Ecosystems" *Environ. Sci. Processes Impacts*. **16**, 2507-2516. DOI: 10.1039/c4em00385c
 - 55) ²Jones, G.D., ¹Benchetler, P.V., Tate, K.W., Kolodziej E.P. 2014. "Mass Balance Approaches to Characterizing the Leaching Potential of Trenbolone Acetate Metabolites in Agro-Ecosystems." *Environ. Sci. Technol.* **48**(7) 3715-3723. DOI 10.1021/es405701f
 - 56) Cavallin, J.E., Durhan, E., Evans, N., Foreman, W.T., Jensen, K.M., Kahl, M.D., Kolodziej, E.P., Kolpin, D., LaLone, C.A., Makynen, E.A., Seidl, S.M., Thomas, L.M., Villeneuve, D.L., Weberg, M.A., Wilson, V., Ankley, G.A. 2014. "Integrated Assessment of Runoff from Animal Feeding Operations: Analytical Chemistry, In Vitro Bioassays, and In Vivo Fish Exposures." *Environ. Toxicol. Chem.* **33**(8) 1849-1857. DOI 10.1002/etc.2627
 - 57) Qu, S., Kolodziej, E.P., Long, S.A., Gloer, J.B., Patterson, E.V., Baltrusaitis, J., ²Jones, G.D., ¹Benchetler, P.V., ²Cole, E.A., ¹Kimbrough, K.C., Tarnoff, M.D., Cwiertyny, D.M. 2013. "Product-to-Parent Reversion of Trenbolone: Unrecognized Risks for Endocrine Disruption." *Science*. Published online 9/26/2013 in *Science Express*, in print 10/18/2013. **342**(6156), 347-351. DOI 10.1126/science.1243192
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Technical Reports

- 1) Hildebrandt, A., Hu, X., Germeau, H., Gonzalez, M., Yih, F., Rideout, C., Kolodziej E.P. "Evaluation of 6PPD-Quinone Sorption to Treatment Media and Engineered Soil Mixtures." 02/03/24. Washington Department of Ecology.
- 2) Hu, X., Peter, K.T., Rideout, C., Gonzalez, M., Germeau, H., Hildebrandt, A., Kolodziej E.P. "Solvent Extraction & Aqueous Leaching of Tire Tread Particles: Understanding Tire Compositions by Quantifying PPD antioxidants and Transformation Products Using Non-Targeted Analysis." 02/05/24. Washington Department of Ecology.
- 3) Peter, K.T., Hu, X., Rideout, C., Gonzalez, M., Germeau, H., Hildebrandt, A., Kolodziej E.P. "6PPD-Quinone Leaching in Rubber-Water Systems with Varied Conditions." 02/05/24. Washington Department of Ecology.
- 4) Kolodziej E.P., Jack, R., Klug, J., Collins, D., Hatch, J. 2023. "Use of Recycled Municipal Wastewater for Agricultural Irrigation in the Sammamish River Valley." 01/31/24. King County and Washington Water Trust.
- 5) Tian, Z., Peter, K.T., Wu, C., Du, B., Leonard, B., McIntyre, J.K., Kolodziej, E.P. "Performance Evaluation Of Compost-Amended Biofiltration Swales For Highway Runoff Treatment In Field And Laboratory." 08/09/2019. Washington Department of Transportation, Federal Highway Administration.
- 6) Peter, K.T., Herzog, S., Tian, Z., McCray, J., Kolodziej, E.P. "Flow Path Delineation and Water Quality Assessment in the Thornton Creek Engineered Hyporheic Zone." 03/09/2018. Seattle Public Utilities.
- 7) Du, W., Kolodziej E.P. "Literature Review and Comment on Groundwater Aquifer Recharge and Recovery Systems. 06/21/2011. City of Reno, NV.
- 8) Callahan, S., Kolodziej E.P. "Assessment and Optimization of Aquifer Recharge and Recovery Systems for the Removal of Trace Organic Contaminants." 04/16/2010. City of Reno, NV.

OTHER SCHOLARLY ACTIVITY

Select Invited Lectures and Seminars *(many presentations below include students and collaborator co-authors)*

1. **Kolodziej, E.P.**, et al. "6PPD-Quinone: Occurrence, Fate and Characteristics" Invited Plenary presentation, Nontarget 2026 Conference, Ascona, Switzerland, April 12, 2026.
2. **Kolodziej, E.P.**, et al. "6PPD-Quinone: Occurrence, Fate and Characteristics" Invited, Washington State Academy of Sciences Workgroup, Seattle, WA, May 3, 2024.
3. **Kolodziej, E.P.**, et al. "Occurrence, Fate and Characteristics of 6PPD-Quinone and related Compounds" Invited presentation, Washington Department of Ecology, Olympia, WA, April 30, 2024.
4. **Kolodziej, E.P.**, et al. "6PPD-Quinone: Introduction and Background." Conference Keynote, invited, "Protecting Salmon from Tire Wear Toxins-6PPD-Quinone Workshop", Nanaimo, BC, April 28-29, 2024.
5. **Kolodziej, E.P.**, et al. "Car Tires, Coho Salmon, and Water Quality" Invited talk, *Nature Matters* community event, Astoria, OR, April 25, 2024.
6. **Kolodziej, E.P.**, et al. "Car Tires, Coho Salmon, and Water Quality" Invited presentation and panelist, "A Celebration of Longfellow Creek" community event, Seattle, WA, Nov. 8, 2023.
7. **Kolodziej, E.P.**, et al. "6PPD-Quinone: Background and Chemical Characteristics." Invited presentation, 2023 International Symposium on Alternatives Assessment, Tacoma, WA, Oct. 26, 2023.
8. **Kolodziej, E.P.**, et al. "Roadway Runoff, Car Tires, and Coho Salmon." Invited presentation, session keynote, Canadian Society of Chemistry Annual Conference, Vancouver, BC, June 6, 2023.
9. **Kolodziej, E.P.** "6PPD-Quinone: Context and Background." Invited presentation, 6PPD Innovation Forum for Northwest Indian Fisheries Commission (Virtual), March 14, 2023.
10. **Kolodziej, E.P.**, et al. "Toxic Tires and Trout." Invited presentation, Trout Unlimited (Virtual), Feb. 2, 2023.
11. **Kolodziej, E.P.**, et al. "Car Tires and Coho Salmon and Miller Creek." Invited, Miller-Walker Community Salmon Investigation, Burien, WA, Jan. 17, 2023; Jan 25, 2024; Jan 28, 2025; Feb. 24, 2026.
12. **Kolodziej, E.P.** "6PPD-Quinone: Context and Background." Invited, 6PPD Innovation Forum, Highline College, Des Moines, WA, Dec. 14, 2022.

13. **Kolodziej, E.P.**, et al. “Impacts of Roadway Runoff and Tire Rubber on Coho Salmon.” Invited, (Virtual), Oregon State Un. April 20, 2022.
14. **Kolodziej, E.P.**, et al. “Car Tires, Coho Salmon, and Water.” Invited, Hawaii Pacific U. April 13, 2022.
15. **Kolodziej, E.P.**, et al. “Identification and Implications of 6PPD-Quinone in Roadway Runoff.” Invited presentation, Department of Fisheries and Oceans-British Columbia. (Virtual format), June 22, 2021
16. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited presentation, Northwestern U., Dept. of Civil and Environ. Eng. (Virtual), May 21, 2021
17. **Kolodziej, E.P.**, et al. “Identification and Implications of 6PPD-Quinone in Roadway Runoff.” Invited, Environmental Protection Agency, National Audience. (Virtual), May 20, 2021
18. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, British Columbia Ministry of the Environ. “BioCall” Seminar. (Virtual), April 22, 2021
19. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, U. of Wisconsin-Madison, Dept. of Civil and Environ. Eng. (Virtual), April 9, 2021
20. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, Environment Canada-Complex Mixtures Workgroup. (Virtual), March 18, 2021
21. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited presentation, Washington State U., Dept. of Civil and Environ. Eng. (Virtual), Mar. 8, 2021
22. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, Pacific Northwest Fish Health Protection Committee. (Virtual), Feb. 24, 2021
23. **McIntyre, JK and Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited presentation, Pacific Salmon Foundation. (Virtual), Feb. 17, 2021
24. **McIntyre, JK and Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited presentation, Toxics In Puget Sound Conference. (Virtual), Feb. 5, 2021
25. **McIntyre, JK and Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, Calif. Division of Toxic Substances Control. (Virtual), Jan. 27, 2021
26. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, U. of Washington-Tacoma, Distinguished Research Award Celebration, Jan. 22, 2021
27. **McIntyre J.K. and Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited presentation, Nisqually River Council. (Virtual), Dec. 18, 2020
28. **Kolodziej, E.P.**, et al. “Roadway Runoff as a Source of Toxic Trace Transformation Products to Surface Waters.” Invited, EAWAG Water Seminar series, Dubendorf, Switzerland. (Virtual), Dec. 10, 2020
29. **McIntyre, J.K. and Kolodziej, E.P.** “Roadway Runoff as a Source of Toxic Trace Transformation Products.” Invited, U.S. Tire Manufacturers Association, related regulatory agencies. (Virtual), Dec. 3, 2020
30. **Kolodziej, E.P.**, et al. “Organic Contaminants in Roadway Runoff and Receiving Waters.” Invited, Amer. Assoc. of State Highway Transp. Officials (AASHTO) Natural Res. Subcommittee. (Virtual). May 13, 2020.
31. **Kolodziej, E.P.**, Katherine Peter, Zhenyu Tian, Nina Zhao, Christopher Wu, Melissa Gonzalez, Allan Cortina, Jen McIntyre. “Characterizing the Environmental Chemistry of Roads, Salmon, and Water with High Resolution Mass Spectrometry.” Invited, Duke U. Integrated Toxicology and Environmental Health Seminar series. Durham, NC, Feb. 20, 2020
32. **Kolodziej, E.P.**, et al. “Stormwater and Salmonid Health.” Invited presentation, Northwest Indian Fisheries Commission Water Quality Board. Olympia, WA, Nov. 19, 2019.
33. **Kolodziej, E.P.** et al. “Impacts of Vehicles and Roads on Urban Water Quality.” Invited, ESPI Editors Symposium, Dept. of Civil Environ. Eng., Massachusetts Inst. of Tech. Cambridge, MA, June 24, 2019.
34. **McIntyre J.K., and Kolodziej, E.P.** “Urban Stormwater Aquatic Toxicology and Chemistry” Invited presentation, Clean Cars Task Force and WA Department of Ecology, Tacoma WA, April 16, 2019.
35. **Kolodziej, E.P.**, et al. “Characterizing Urban Stormwater Impacts on Water Quality to Understand Ecosystem Health.” Invited, NIEHS Superfund Research Program 2018 Meeting. Sacramento CA, Nov. 29, 2018.
36. **Kolodziej, E.P.**, et al. “Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality.” Invited presentation, M. Gordan Wolman Seminar, Johns Hopkins University. November 13, 2018.

37. **Kolodziej, E.P.**, et al. "Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality." Invited presentation, U. of Delaware. Nov. 12, 2018.
38. **Kolodziej, E.P.**, et al. "Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality." Invited, Dr. Jianying Hu Research group, Peking U. Oct. 24, 2018.
39. **Kolodziej, E.P.**, et al. "Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality." Invited seminar, funded, College of Urban and Environmental Sciences, Peking University. Beijing, China, Oct. 23, 2018.
40. **Kolodziej, E.P.**, et al. "Using High-Resolution Mass Spectrometry to Characterize Urban Stormwater and Impacts on Water Quality." Invited presentation, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences. Beijing, China, Oct. 22, 2018.
41. **Kolodziej, E.P.** et al. "Occurrence and Sources of Organic Contaminants in Urban Stormwater and Receiving Waters." Invited presentation, NWIFC Salmon Stormwater Summit, The Point Casino, Suquamish Tribe, Kingston WA. Sept. 20, 2018.
42. **Kolodziej, E.P.** et al. "Stormwater Derived Chemicals and Ecosystem Health." Keynote Speaker, 6th International Conference on Emerging Contaminants (EmCon 2018), Oslo Norway. June 25, 2018.
43. **Kolodziej, E.P.** et al. "Underexplored Bioactive Contaminants in Urban Stormwaters." Invited presentation, Department of Civil and Environmental Engineering, University of California, Berkeley. April 13, 2018.
44. **Kolodziej, E.P.** et al. "Analysis of Urban Water Quality With High Resolution Mass Spectrometry." Invited presentation, Southern California Coastal Water Research Project, Santa Ana, CA. Nov. 3, 2017.
45. **Kolodziej, E.P.** et al. "Detection and Evaluation of Organic Contaminant Flows in the Puget Sound Region". Invited Presentation. NOAA Montlake Lab Monster Jam. Seattle, WA. May 18, 2017
46. **Kolodziej, E.P.** "Understanding Our Chemical Fingerprints on Water: Occurrence and Concerns for Our Contaminants". Invited, U. of California, San Diego, School of Pharmacy, San Diego, CA. Feb. 6, 2017.
47. **Kolodziej, E.P.** "Our Chemical Fingerprints: Safer Water for Our Cities". Invited Presentation. UW College of Engineering 2016 Engineering Lecture Series: "City Smarts: Engineering Resilient Communities." Seattle, WA. November 16, 2016 *-Televised presentation.*
48. **Kolodziej, E.P.** "Emerging Contaminants in Our Waters: The State of the Science". Invited Presentation. Northwest Toxics Community Coalition Annual Conference. Seattle, WA. Oct. 22, 2016
49. **Kolodziej, E.P.** et al. "Linking Contaminant Structure to Bioactivity: Key Issues and Uncertainties for Environmental Health." Invited presentation, Oregon Health & Science, Inst. of Env. Health. Nov. 20, 2015.
50. **Kolodziej, E.P.** et al. "Linking Contaminant Structure to Bioactivity: Key Issues and Uncertainties for Environmental Health" Invited presentation, Oregon State University, Department of Environmental and Molecular Toxicology. Nov. 18, 2015.
51. **Kolodziej, E.P.** et al. "Characterization and Environmental Implications of Pharmaceutical Transformation Products in Water" Invited presentation, funded, "Environmental Analysis" Session, Beijing Conference and Exhibition on Instrumental Analysis, China National Convention Center, Beijing, China, Oct. 29, 2015.
52. **Kolodziej, E.P.** et al. "Addressing the Challenge of Agricultural Pharmaceuticals and Bioactive Contaminants in Aquatic Systems." Invited presentation, Pennsylvania State University, Department of Ecosystem Science and Management; Dept. of Agricultural and Biological Engineering. April 24, 2015.
53. **Kolodziej, E.P.** et al. "Conserved Structure, Conserved Risk: Environmental Transformations of Steroidal Pharmaceuticals" Invited presentation, Gordon Research Conference, Environmental Sciences: Water. Holderness, NH, June 26, 2014.
54. **Kolodziej, E.P.** et al. "The Implications of Structural Conservation During Environmental Transformations of Steroidal Pharmaceuticals" Invited, Session keynote. Canadian Society of Chemistry National Meeting, Vancouver, BC, June 5, 2014.
55. **Kolodziej, E.P.** et al. "The Implications of Novel Transformations of Steroidal Pharmaceuticals for Endocrine Disruption and Environmental Risk Assessment." Invited, Dept. of Civil and Environmental Eng., Stanford University, Nov. 15, 2013.
56. **Kolodziej, E.P.** et al. "In the Twilight of Trenbolone: The Vampire Steroid." Invited presentation, Environmental Science Graduate Program, Ohio State University, Sept. 6, 2013.

57. **Kolodziej, E.P.** et al. “Trenbolone Transport and Transformation: What Do We Know and What Do We Need To Know?” Invited presentation, Dept. of Civil and Environmental Eng., U. of Iowa, March 9, 2013.
58. **Kolodziej E.P.** “Sources, Transport, and Transformations of Endocrine Disrupting Steroid Hormones Derived From Animal Agriculture.” Invited Presentation, Washington State University. April 9, 2012.
59. **Kolodziej E.P.** “Agricultural Sources and Transformation of Steroid Hormones in Receiving Waters.” Invited Presentation, U. of Missouri. Oct. 4, 2011.
60. **Kolodziej E.P.** et al. “Steroid Hormone Occurrence, Fate, and Transport in Northern California’s Watersheds.” Invited presentation, U. of California, Riverside, April 4, 2008.
61. **Kolodziej E.P.** “Occurrence and Fate of Steroidal Hormones in Surface Waters Impacted by Cattle Grazing and Animal Agriculture.” Plenary Speaker, Water and The Future of Kansas, Topeka, Kansas, Mar. 25, 2008.
62. **Kolodziej E.P.** “Steroid Hormone Occurrence, Fate, and Transport in Northern California’s Watersheds.” Invited Presentation, University of California, Davis, March 17, 2008.

GRADUATE STUDENTS AND RESEARCH GROUP

Chaired Doctoral Degrees

1. Ximin Hu (Chair, U. of Washington CEE) 9/2019 – 08/2023
Dissertation: Applications of Non-Target Screening via High Resolution Mass Spectrometry for Environmental Assessment. Successfully Defended June 2023
 Post-Doctoral Scholar (Dr. Ed Kolodziej), 10/2023-present
2. Haoqi (Nina) Zhao (Chair, U. of Washington CEE) 9/2016 – 09/2021
Dissertation: Identification and Fate of Bioactive Transformation Products of Pharmaceuticals and Industrial Antioxidants. Successfully Defended September 24, 2021
 Post-Doctoral Scholar (Dr. Ed Kolodziej), 09-12/2021
 Post-Doctoral Scholar (Dr. Peter Dorrenstein), U. California, San Diego. 01/01/2022+
3. Gerrad Jones (Chair, U. of Nevada-Reno) 01/2010 - 01/2014
Dissertation: The Environmental Fate and Transport of Trenbolone Acetate Metabolites in Agro-Ecosystems.
 Currently: Assistant Professor, Department of Biological and Ecological Engineering, Oregon State University. Post-Doctoral Scholar (Dr. Lenny Winkel), Swiss Federal Institute of Technology, ETH, Zurich.

Current Doctoral Students-Chair/Co-Chair

4. Alanna Hildebrandt (Co-chair with Dr. Jessica Ray, U. of Wash. CEE) 9/2021 – Present
Dissertation: TBD Currently in progress
5. Kiersten Maxwell (Chair, U. of Washington CEE) 9/2023 – Present
Dissertation: TBD Currently in progress
6. Emily Everton (Chair, U. of Washington CEE) 6/2024 – Present
Dissertation: TBD Currently in progress
7. Kaylee Martin (Chair, U. of Washington CEE) 9/2024 – Present
Dissertation: TBD Currently in progress
8. Wenning Liu (Co-chair, U. of Washington CEE) 9/2024 – Present
Dissertation: TBD Currently in progress

Chaired Masters Degrees-Research Based, Funded Thesis Projects

1. Marlee Brown (Chair, U. of Washington CEE); Thesis 09/2023 – 06/2025
2. Danbi Won (Chair, U. of Washington CEE); Thesis 12/2015 - 03/2017
3. Philip Kenyon (Chair, U. of Washington CEE); Thesis 1/2014 – 12/2015
4. Tianlin Song (Chair, U. of Nevada-Reno CEE); Thesis 1/2013 - 7/2014
5. Philip Benedetti (Chair, U. of Nevada-Reno CEE); Thesis 1/2013 - 1/2015
6. Emily Cole (Chair, U. of Nevada-Reno CEE); Thesis 10/2011 - 12/2013
7. Jaewoong Lee (Chair, U. of Nevada-Reno CEE); Thesis 6/2010 - 12/2011
8. Wenjun Du (Chair, U. of Nevada-Reno CEE); Thesis 1/2010 - 8/2011

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|---|------------------|
| 9. Jackson Webster (Chair, U. of Nevada-Reno CEE); Thesis | 1/2009 - 12/2010 |
| 10. Silas Callahan (Chair, U. of Nevada-Reno CEE); Thesis | 1/2008 - 8/2010 |
| 11. Jed Parker (Chair, U. of Nevada-Reno CEE); Thesis | 1/2008 - 5/2009 |

Other Significant Student Supervision or Professional Mentorship

Post-Doctoral Scholars:

- | | |
|--|-------------------|
| 1. Wei Wang (CUW/UW) | 11/2024 – present |
| 2. Jeffrey Perala-Dewey (CUW/UW) | 10/2024 – present |
| 3. Ximin Hu (CUW/UW)
-Post-Doctoral Scholar | 10/2023 – 01/2024 |
| 4. Nina Zhao (CUW/UW)
-Post-Doctoral Scholar, U. of California, San Diego | 10/2021 – 12/2021 |
| 5. Zhenyu Tian (CUW/UW)
-Tenure-track Faculty, Dept. of Chemistry, Northeastern U. | 02/2018 – 08/2021 |
| 6. Rachel Lundeen (CUW/UW)
-Research Scientist, Fred Hutchinson Cancer Institute | 07/2019 - 02/2020 |
| 7. Katherine Peter (CUW/UW)
-Research Scientist, National Institute of Standards and Technology | 12/2016 - 04/2019 |
| 8. Bowen Du (CUW/UW)
-Scientist, Southern California Coastal Water Research Project | 12/2014 - 06/2017 |

Visiting Ph.D. Students (U. of Washington CEE):

- | | |
|---|-------------------|
| 1. Rui Wang, Two year visiting PhD student, UW VISIT program | 10/2018 – 10/2020 |
| 2. Ting Tang, Two year visiting PhD student, UW VISIT program | 10/2018 – 10/2020 |
| 3. Fan Hou, 16 month visiting PhD student, UW VISIT program | 9/2017 - 1/2019 |
| 4. Xingjian Yang, Two year visiting PhD student, UW VISIT program | 9/2015 - 10/2016 |

Undergraduate Students Participating in Funded Research Projects (UWT/CUW/UW)

- | | |
|--------------------------------|-------------------------------|
| 1. Sophie McCarragher, UWT SAM | 14. Rachel Hettinger, UWT SAM |
| 2. Alessandro Martinez, UW CEE | 15. Melissa Gonzalez, UWT SAM |
| 3. Quan Vo, UW CEE | 16. Allan Cortina, UWT SAM |
| 4. Kristian Kindschy, UWT SAM | 17. Keefe Brockman, UWT SAM |
| 5. Lindsey Overstreet, UWT SAM | 18. David Wark, UWT SAM |
| 6. Allison Aasen, UWT SAM | 19. Kenji Lam, UW CEE |
| 7. Vincent Salazar, UWT SAM | 20. Sarah White, UWT SAM |
| 8. Lydia Bader, UWT SAM | 21. Christopher Wu, UWT SAM |
| 9. Kaya Smith, UWT SAM | 22. Peter Lim, UWT SAM |
| 10. Marlee Brown, UWT SAM | 23. Harpreet Kang, UW CEE |
| 11. Hailey Germeau, UWT SAM | 24. Samantha Randall, UW CEE |
| 12. Heaven Denham, UWT SAM | 25. Jonathan Lofton, UWT CUW |
| 13. Craig Rideout, UWT SAM | 26. Esther Chang, UW CE |

Mentor: Undergraduate Student Capstone Research Projects (UWT/UW)

- | | |
|---|----------------------------|
| 1. Rachel Hettinger, UWT SAM | 5. Jordan Williams UWT SAM |
| 2. David Wark, UWT SAM | 6. Nicole Smith, UWT SAM |
| 3. Ernesto Alegria, UWT SAM | 7. Don Rollalazo, UWT SAM |
| 4. Susanne Gov, UW Seattle Program for
the Environment | |

Undergraduate Students Participating in Funded Research (UNR):

- | | |
|-------------------------|----------------------|
| 1. Jackson Webster | 6. Stephanie Kover |
| 2. Doug Holderman | 7. Melissa DeVera |
| 3. Collin Emmerson | 8. Samantha McBride |
| 4. Jonathan Ebert | 9. Claire Johnson |
| 5. Robert (Alex) Vaughn | 10. Peter Benchetler |

11. Kaitlin Kimbrough
12. Emily Ruskowitz
13. Jasmine Miller

14. Rachel Weber
15. Tatum Demay (NSF REU)

Graduate Student Committee Member (U. Of Washington, CEE)

- | | |
|-----------------------------------|-------------------------|
| 1. Kaylyn Stewart (Ph.D.) | 4. Sin-Yi Liou (Ph.D.) |
| 2. Emily Van Patten French (M.S.) | 5. Tess Young (Ph.D.) |
| 3. Fanny Okaikue-Woodi (Ph.D.) | 6. Nicole Redden (M.S.) |

Graduate Student Committees (External Committee Member)

1. Anya Sherman (Ph.D.) 2025. U. of Vienna, Environmental Geosciences. Vienna, Austria
2. Joseph Monaghan (Ph.D.) 2024. U. of Victoria, Chemistry. Victoria, British Columbia, Canada
3. Kristen Croft (Ph.D.) 2023. U. of Maryland, CEE. College Park, MD
4. Sabine Anliker (Ph.D.) 2021. EAWAG, Durdendorf, Switzerland

Graduate Student Committee Member (U. of Nevada-Reno, all Thesis Degrees)

- | | |
|---------------------------|----------------------------|
| 1. Jazmin Aravena (Ph.D.) | 4. Winn Wilson (M.S.) |
| 2. Nalelli Herrera (M.S.) | 5. Alissa Backman (Ph.D.) |
| 3. Miranda Hutton (M.S.) | 6. Sanjeev Ryaprolu (M.S.) |

SERVICE

Professional

- San Francisco Estuary Institute, Emerging Contaminants Workgroup. 2026-present
- 6PPD Action Plan Advisory and 6PPDQ Steering Committee. Wash. Dept. of Ecology, 2023-2025
- External Reviewer. National Academies, Transportation Research Board, 2025
- External Reviewer. Environment Canada 6PPDQ Computational Modeling, 2025
- Advisory Board, 6PPD Evidence Synthesis Project
- Conference Session Co-Chair/Organizer: "Unlocking Insights from Multivariate Environmental Data". Society of Environmental Toxicology and Chemistry National Meeting, Portland, OR, November 16-20, 2025
- Keynote and Attendee: Collaborative Innovation Forum: 6PPD in Tires. Dec. 14, 2022. Burien, WA.
- Host and Lead Organizer: EMCON 2021: 7th International Conference on Emerging Contaminants. September 13-14, 2021. Virtual Conference. ~160 attendees.
- Technical Advisor, King County Water Reuse; Occurrence of Contaminants of Emerging Concern in Sammamish Valley Recycled Water and the Hollywood Demonstration Garden. 2020-present
- NWRI (National Water Research Institute) Experts Panel for LOTT Clean Water Alliance, Olympia, WA. Invited. 2017-present
- Puget Sound Clean Cars Stormwater Partnership Working Group. Invited. 2017-2021
- Editorial Advisory Board, *Environmental Science: Processes and Impacts*, October 2020-present
- Associate Editor, *Environmental Science: Processes and Impacts*, August 2014-October 2020
- Conference Session Co-Chair: "Elucidating Chemical Transformations in Environmental Fate Research". Society for Environmental Toxicology and Chemistry National Conference, Portland, OR, Nov. 2021
- Conference Session Co-Chair: "Stormwater Characterization and Management Using a Watershed Approach". Salish Sea Ecosystem Conference, Seattle WA, April 4-6, 2018.
- Invited Session Facilitator and Technical Content Contributor: "Contaminants in the Food Web" session, Southern Resident Killer Whale Symposium and Workshop. Sponsored by Environment Canada. Vancouver, BC October 10-12, 2017.
- Conference Session Co-Chair/Organizer: "Integrated Tools For Improving Environmental Fate And Risk Assessment For Unregulated Contaminants And Their Mixtures" Society of Environmental Toxicology and Chemistry National Meeting, Minneapolis, MN, November 12-16, 2017

- Science Committee, The 18th IWA International Conference on Diffuse Pollution and Eutrophication. Los Angeles CA, August 13-17, 2017. Invited. 2016-2017
- Member at Large (Academic), PNW Chapter of Society for Environmental Toxicology and Chemistry (PNW-SETAC), Regionally elected leadership position. 2017-2019.
- Conference Session Co-Chair/Organizer: “Endocrine Disrupting Compounds and Pharmaceuticals in the Environment” Society of Environmental Toxicology and Chemistry National Meeting, Tampa Bay, FL, November 5-10, 2016
- Associate Editor, *Critical Reviews in Environmental Science and Technology*, 2012-2015
- Member at Large, ACS Division of Environmental Chemistry, Nationally elected leadership position. 2013-2015.
- Faculty Mentor and Senior Discussion Leader, 2012 Gordon Research Seminar, Environmental Sciences: Water. “Processes in Ecosystems” Session.
- Adjunct Faculty, UNR Graduate Program in Hydrologic Sciences, 2012-2014
- Member, AWWA Organic Contaminants Research Committee, 2011-2013
- Project Advisory Committee, Water Research Foundation Project #4334
- AAESP Student Award Committee, 2013-2015
- Conference Session Co-Chair/Organizer: “Frontiers in Water Reuse: Detection, Advanced Treatment, and Environmental Fate.” ACS National Conference, Salt Lake City 2009.

Professional Society Memberships

- | | |
|--|--------------|
| -Association of Environmental Engineering Science Professors | 2007-present |
| -American Chemical Society | 2001-present |
| -Society for Environmental Toxicology and Chemistry | 2001-present |

Other

- NSF Review panels: 2009, 2010, 2012, 2017, 2019, 2020, 2021, 2022, 2024
- External Reviewer: NAS/NAE, EnvCanada, UIUC, MIT, CUNY, AOAC, EPA, USGS, USDA, others
- Journal Peer Review (usually 8-20 reviews/year): *Environmental Science and Technology*, *Environmental Science and Technology Letters*, *Environmental Sciences: Processes and Impacts*, *Environmental Pollution*, *Environmental Toxicology and Chemistry*, *Critical Reviews in Environmental Science and Technology*, *Journal of Chromatography, A*, *Journal of Environmental Quality*, *Water Resources Research*, *Aquatic Toxicology*, *Science of the Total Environment*, *Journal of Chemical Ecology*, *Nature Sustainability*

MEDIA, OUTREACH AND COMMUNICATION

Selected Media, links current at time of publication (partial list)

News Media:

2021 *Science*, *Tire Rubber Toxicant* (Tian et al.)

Science: <https://www.sciencemag.org/news/2020/12/common-tire-chemical-implicated-mysterious-deaths-risk-salmon>

New York Times: <https://www.nytimes.com/2020/12/03/climate/salmon-kill-washington.html>

Seattle Times: <https://www.seattletimes.com/seattle-news/environment/tire-dust-is-killing-salmon/>

LA Times: <https://www.latimes.com/california/story/2020-12-03/coho-salmon-tire-chemical>

CNN: <https://www.cnn.com/2020/12/03/us/microplastics-tire-rubber-chemicals-killing-coho-salmon-scn/index.html>

The Guardian: <https://www.theguardian.com/environment/2020/dec/03/coho-salmon-pollution-car-tires-die-off>

San Francisco Chronicle: <https://www.sfchronicle.com/environment/article/New-research-explains-why-salmon-are-dying-in-the-15773283.php>

San Francisco Estuary Institute: <https://www.sfei.org/news/toxic-tire-contaminant-found-bay-area-stormwater>

Popular Science: <https://www.popsoci.com/story/environment/coho-salmon-toxic-chemical-car-tires/>

KUOW: <https://www.kuow.org/stories/scientists-pinpoint-chemical-that-s-been-killing-coho-salmon-it-comes-from-car-tires>

Chemistry World: <https://www.chemistryworld.com/news/tyre-compound-driving-mystery-salmon-deaths-identified-after-years-of-chemical-detective-work/4012851.article>

Canadian Geographic: <https://www.canadiangeographic.ca/article/killer-tire-chemical-threatening-canadian-salmon>

Chemical and Engineering News (Feb 2022): <https://cen.acs.org/environment/water/Urban-stormwater-presents-pollution-challenge/100/i6>

Estuary News (Feb. 2022): <https://archive.estuarynews.org/west-coast-salmonids-all-tired-out/>

The Guardian (July 2022): <https://www.theguardian.com/environment/2022/jul/25/tyre-dust-the-stealth-pollutant-becoming-a-huge-threat-to-ocean-life>

KING5 (Nov. 2022): <https://www.king5.com/article/tech/science/environment/common-tire-chemical-mass-coho-salmon-deaths/281-4845a985-b47e-4dbd-8498-c467f12ddb68>

Congressional/EPA Outreach (Oct. 2022): <https://www.tacoma.uw.edu/news/center-urban-waters-work-highlighted-us-epa-announces-36m-puget-sound-funding>

Chemical & Engineering News (May 2023): <https://cen.acs.org/environment/sustainable-tire-market/101/i17>

Seattle Times (Nov. 2023): <https://www.seattletimes.com/seattle-news/environment/fishing-groups-sue-tire-makers-over-toxic-chemical-that-kills-salmon/>

Chemical & Engineering News (Nov. 2023): <https://cen.acs.org/environment/pollution/EPA-grants-tribal-petition-urging-regulations-for-toxic-chemical-found-in-tires/101/web/2023/11>

West Seattle Blog (Nov. 2023): <https://westseattleblog.com/2023/11/saving-and-loving-longfellow-creek-and-its-salmon/>

Slate (Nov. 2023): <https://slate.com/technology/2023/11/car-tires-6ppd-pollution-epa.html>

National Observer (Aug 2024): <https://www.nationalobserver.com/2024/08/13/news/tire-chemicals-killing-coho-salmon-UBC>

National Geographic (Mar. 2025): <https://www.nationalgeographic.com/animals/article/salmon-tires-health-chemical>

Spring coho mortality, Puget Sound Institute (Jan. 2026) <https://www.pugetsoundinstitute.org/juvenile-coho-salmon-at-risk-from-deadly-tire-chemical/>

Courtroom News (Jan. 2026): <https://www.courthousenews.com/trial-begins-in-chemical-runoff-case-against-tire-manufacturers/>

The Guardian (Feb. 2026): <https://www.theguardian.com/environment/2026/feb/02/is-tyre-pollution-causing-mass-deaths-in-vulnerable-salmon-populations>

ACS Engineering News (Aug. 2026): <https://cen.acs.org/business/specialty-chemicals/race-replace-salmon-killing-tire-chemical/104/web/2026/08>

MSN (Sept. 2026): <https://www.msn.com/en-ca/money/general/bc-salmon-are-dying-from-a-toxic-tire-chemical-6ppd-q/ar-AA2bT3vg?ocid=msedgntp&pc=HCTS&cvid=a96fc3269b654c4298bf760ed7c40474&ei=18>

SF Chronicle (Oct. 2026): <https://www.sfchronicle.com/climate/article/salmon-tires-pollution-california-22490213.php>

Frontiers Planet Prize – U.S. National Champion

Puget Sound Institute (April 2023): <https://www.pugetsoundinstitute.org/2023/04/ed-kolodziej-among-finalists-for-frontiers-planet-prize/>

2020 Contaminants in Urban Estuaries (Tian et al.)

UW News (January 2020): <http://www.washington.edu/news/2020/01/22/puget-sound-technique-casts-net-for-concerning-chemicals>

Forbes.com: <https://www.forbes.com/sites/allenelizabeth/2020/01/27/sixty-four-new-chemicals-discovered-in-washingtons-puget-sound/#10a27ef15d93>

KING5 news: <https://www.king5.com/article/news/local/whats-in-puget-sound/281-c122de89-af35-41a6-a47a-42f7345b6389>

2018 Coho Mortality Signature (Peter et al.)

KOUW radio: <https://www.kuow.org/stories/coho>

2017 Engineered Hyporheic Zone Treatment (Peter et al.)

Scientific American (March 2022 Feature Story): <https://www.scientificamerican.com/article/to-revive-a-river-restore-its-hidden-gut1/>

2013 Science, Trenbolone Reversible Photohydration Mechanism (Qu et al.)

Science: <http://www.sciencemag.org/content/341/6153/1441.full>

Nature: <http://www.nature.com/news/hormone-disruptors-rise-from-the-dead-1.13831>

U.S. News and World Report: <http://health.usnews.com/health-news/news/articles/2013/09/26/evidence-shows-steroid-used-in-livestock-can-impact-waterways>

Scientific American: <http://www.scientificamerican.com/article.cfm?id=hormone-disruptors-rise-from-the-dead-like-zombies>

Science Daily: <http://www.sciencedaily.com/releases/2013/09/130926142829.htm>

Chemistry World (Royal Society of Chemistry): <http://www.rsc.org/chemistryworld/2013/09/night-nearly-dead-steroid-trenbolone-acetate>

Chemical and Engineering News: <http://cen.acs.org/articles/91/i39/Growth-Hormones-Knack-Regenerating.html>

Yahoo Health News: <http://health.yahoo.net/articles/healthcare/vampire-steroid-may-haunt-us-rivers-and-streams>

Phys.org: <http://phys.org/news/2013-09-steroids-persist-longer-environment.html>

Huffington Post: http://www.huffingtonpost.com/andrew-gunther/industry-assurances-over-b_4039594.html

Huffington Post: http://www.huffingtonpost.com/andrew-gunther/big-ags-gifts-for-2013_b_4493687.html

The Scientist: <http://www.the-scientist.com/?articles.view/articleNo/37702/title/Steroids-Stick-Around/>

National Science Foundation, "Science360", 9/30/2013 News: <http://news.science360.gov/files/>

ACS "Molecule of the Week" 12/30/2013: <http://www.acs.org/content/acs/en/molecule-of-the-week/archive/trenbolone.html>

Radio, Audio, and Television Media:

KUOW/Public Radio (April 10, 2026): <https://www.kuow.org/stories/every-tire-produces-a-chemical-that-kills-coho-salmon-can-scientists-pump-the-brakes>

Watershed Moments (Nov. 25, 2024): <https://open.spotify.com/show/0XGAITJVDpUcG0jg1cXMx7>

King 5 Seattle (2023): <https://www.youtube.com/watch?v=GRZU6sMI39w>

Ocean Protect Podcast (05/30/22): <https://play.acast.com/s/ocean-protect/tyres-coho-salmon-kills-with-dr-ed-kolodziej>

ABC News-Bay Area (05/25/22): <https://abc7news.com/car-tire-pollution-6ppd-chemicals-plastic/11890606/>

KUOW Toxic Tires (05/11/22): <https://www.kuow.org/stories/all-cars-and-trucks-are-polluters-when-it-comes-to-their-tires>

Minnesota Public Radio (02/10/22): <https://www.mprnews.org/story/2022/02/10/scientists-look-for-toxic-tire-chemical-in-minnesota-waters>

Oregon Public Radio “Think Out Loud” (12/7/20): <https://www.opb.org/article/2020/12/07/scientists-have-discovered-a-chemical-from-tires-is-killing-coho-salmon-in-the-puget-sound/>

Zero Waste Countdown Podcast: <https://zerowastecountdown.podbean.com/e/122-urban-salmon/>

BBC “Inside Science” on 10/03/13: <http://www.bbc.co.uk/programmes/b03bs0z6>

Documentary Films:

Engineering With Nature: An Ode to Wood, Water and Stone. Leaping Frog Films.

World Premier June 8, 2019 at the Seattle International Film Festival (SIFF). Seattle, WA.

<http://www.leapingfrogfilms.com/thorton.html>