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Education

UNIVERSITY OF IOWA, Iowa City, IA Graduated December 2016

COLLEGE OF ENGINEERING

PhD, Environmental Engineering & NSF Graduate Research Fellow (GPA 4.14)

Thesis: Development of electrospun nanofiber composites for point-of-use water treatment

Thesis Advisor: David M. Cwiertny

WASHINGTON UNIVERSITY IN ST. LOUIS, St. Louis, MO Graduated May 2013

SCHOOL OF ENGINEERING AND APPLIED SCIENCE

Bachelor of Science in Chemical Engineering, Second Major: Spanish, valedictorian, *summa cum laude* (GPA 4.0)

Relevant Experience

CENTER FOR URBAN WATERS, Tacoma, WA Oct. 2021–present

Research Scientist, University of Washington Tacoma

- Researching urban contaminant occurrence, aquatic toxicity, and fate in the environment and natural/engineered treatment systems, with an emphasis on roadway and tire rubber-derived chemicals.
- Developing novel methods to apply liquid chromatography – high-resolution mass spectrometry (LC-HRMS) non-targeted analysis (NTA) data to fingerprint and track contaminant sources in environmental systems and enable quantitation of complex mixtures.
- Contributing to multi-institution research proposals and collaborations; transmission of findings through presentations, technical reports, and manuscripts; and active leadership in international NTA working group.

NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGY, Charleston, SC Aug. 2019–Oct. 2021

Physical Scientist [*Aug 2019-July 2021: National Research Council Postdoctoral Research Fellow*]

- Developed novel measurement methods to identify, differentiate, and track sources of organic contaminants in the environment, with a focus on per- and polyfluorinated alkyl substances (PFAS).
- Applied HRMS to identify novel contaminants and assess complex mixture concentrations in key PFAS sources, fluorine-free firefighting foams, and contaminated groundwater.
- Engaged in multi-institution research collaborations; active leadership in NTA working groups; contributed to and reviewed proposals and manuscripts.

CENTER FOR URBAN WATERS, Tacoma, WA Dec. 2016–July 2019

Postdoctoral Research Scientist, University of Washington Tacoma

- Applied HRMS to research contaminant occurrence, toxicity, and fate in the environment and natural/engineered treatment systems, with a focus on urbanization, stormwater impacts on aquatic organisms, and tire rubber-derived chemicals; developed novel HRMS-based methods for source tracking.
- Contributed to discovery of a toxic, tire-derived chemical (6PPD-quinone) responsible for decades of unexplained salmon mortality in Pacific Northwest urban streams, including publication in *Science*.
- Responsible for day-to-day project management, including mentoring, training and supervision of (under)graduate researchers and technicians, contributing to LC-HRMS troubleshooting and maintenance.
- Contributed to research proposals, transmission of findings through presentations and manuscripts.
- Led citizen science engagement efforts; Engaged in active multi-disciplinary research collaborations.

CWIERTNY ENVIRONMENTAL ENGINEERING LABORATORY, Iowa City, IA Aug. 2013–Dec. 2016

Graduate Research Fellow: *National Science Foundation Graduate Research Fellow*

- Fabrication, characterization, and performance testing of engineered nanomaterial-based technologies for removal of persistent contaminants in drinking water, with focus on electrospun nanofiber membranes
- Led maintenance, troubleshooting, and training on liquid chromatography & BET instrumentation
- Mentored two undergraduate researchers; engaged in inter-departmental and inter-university research

collaborations; contributed to technical writing/editing of manuscripts and grant proposals

FORTNER ENVIRONMENTAL ENGINEERING LABORATORY, St. Louis, MO May 2012-May 2013

Undergraduate Research Assistant

- Conducted experiments involving carbonaceous nanomaterials, aqueous photochemistry, and spectroscopic analysis; contributed to custom photoreactor design, proposal technical writing/editing

WASHINGTON UNIV. SCHOOL OF ENGINEERING, St. Louis, MO

Aug. 2010-Dec. 2012

Problem Solving Team Leader – Introductory Energy, Environmental, and Chemical Engineering Course

- Guided over 30 students in reviewing concepts, enabled understanding of problem sets and collaboration

PHYCAL, Cleveland, OH

May-August 2011

Research Intern: *Phycal is a cassava and algae-based advanced biofuels and bioproducts company*

- Worked with the Fixed Carbon Production research team on development of a low-cost carbon source

Peer-Reviewed Publications

- Hu, X., Mar, D., Suzuki, N., Zhang, B., **Peter, K.T.**, Beck, D.A.C., Kolodziej, E.P. Mass-Suite: a novel open-source python package for high-resolution mass spectrometry data analysis. *Journal of Cheminformatics*, **2023**, 15 (1), 87. DOI: 10.1186/s13321-023-00741-9
- Hu, X., Zhao, H.N., Tian, Z., Gonzalez, M., Rideout, C.A., **Peter, K.T.**, Dodd, M.C., Kolodziej, E.P. Transformation Products of Tire Rubber Antioxidant 6PPD in Heterogeneous Gas-Phase Ozonation: Identification and Environmental Occurrence. *Environmental Science & Technology*, **2023**, 57 (14), 5621-5632. DOI: 10.1021/acs.est.2c08690
- Phillips, A.L., **Peter, K.T.**, Sobus, J.R., Fisher, C.M., Manzano, C.A., McEachran, A.D., Williams, A.J., Knolhoff, A.M., Ulrich, E.M. Standardizing non-targeted analysis reporting to advance exposure science and environmental epidemiology. *Journal of Exposure Science & Environmental Epidemiology*. **2023**, 33, 501-504. DOI: 10.1038/s41370-022-00490-1
- Hu, X., Zhao, H.N., Tian, Z., **Peter, K.T.**, Dodd, M.C., Kolodziej, E.P. Chemical Characteristics, Leaching, and Stability of the Ubiquitous Tire Rubber-Derived Toxicant 6PPD-quinone. *Environmental Science: Processes & Impacts*, **2023**, 25 (5), 901-911. DOI: 10.1039/D3EM00047H
- Black, G., Lowe, C., Anumol, T., Bade, J., Favela, K., Feng, Y.L., Knolhoff, A., McEachran, A.D., Nuñez, J., Fisher, C.M., **Peter, K.T.**, Quinete, N.S., Sobus, J.R., Sussman, E., Wickramasekara, S., Williams, A., Young, T. Exploring Chemical Space in Non-Targeted Analysis: A Proposed ChemSpaceTool. *Analytical and Bioanalytical Chemistry*, **2023**, 415, 35-44. DOI: 10.1007/s00216-022-04434-4
- Peter, K.T.**, Fisher, C.M., Newton, S.R., Schaub, A.J., Sobus, J.R. Approaches for Assessing Performance of High-Resolution Mass Spectrometry-based Non-Targeted Analysis Methods. *Analytical and Bioanalytical Chemistry*, **2022**, 414 (22), 6455-6471. DOI: 10.1007/s00216-022-04203-3
- Hu, X., Zhao, H.N., Tian, Z., **Peter, K.T.**, Dodd, M.C., Kolodziej, E.P. Transformation Product Formation upon Heterogeneous Ozonation of the Tire Rubber Antioxidant 6PPD (N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine). *Environmental Science & Technology Letters*, **2022**, 9 (5), 413-419. DOI: 10.1021/acs.estlett.2c00187
- Peter, K.T.**, Lundin, J.I., Wu, C., Feist, B.E., Tian, Z., Cameron, J.R., Scholz, N.L., Kolodziej, E.P. Characterizing the Chemical Profile of Biological Decline in Stormwater-Impacted Urban Watersheds. *Environmental Science & Technology*, **2022**, 56 (5), 3159-3169. DOI: 10.1021/acs.est.1c08274
- Peter, K.T.**, Kolodziej, E.P., Kucklick, J.R. Assessing Reliability of Non-Targeted High-Resolution Mass Spectrometry Fingerprints for Quantitative Source Apportionment in Complex Matrices. *Analytical Chemistry*, **2022**. DOI: 10.1021/acs.analchem.1c03202
- Place, B.J., Ulrich, E.M., Challis, J.K., Chao, A., Du, B., Favela, K., Feng, Y.L., Fisher, C.M., Gardinali, P., Hood, A., Knolhoff, A.M., McEachran, A.D., Nason, S.L., Newton, S.R., Ng, B., Nuñez, J., **Peter, K.T.**, Phillips, A.L., Quinete, N., Renslow, R., Sobus, J.R., Sussman, E.M., Warth, B., Wickramasekara, S., Williams, J. An Introduction to the Benchmarking and Publications for Non-Targeted Analysis Working Group. *Analytical Chemistry*, **2021**, 93 (49), 16289-16296. DOI: 10.1021/acs.analchem.1c02660
- Peter, K.T.**, Phillips, A.L., Knolhoff, A.M., Gardinali, P.R., Manzano, C.A., Miller, K.E., Pristner, M., Sabourin, L., Sumarah, M.W., Warth, B., Sobus, J.R. The Non-Targeted Analysis Study Reporting Tool (SRT): A Framework to Improve Research Transparency and Reproducibility. *Analytical Chemistry*, **2021**. 93 (41), 13870-13879. DOI: 10.1021/acs.analchem.1c02621

- McIntyre, J.K., Prat, J., Cameron, J., Wetzel, J., Mudrock, E., **Peter, K.T.**, Tian, Z., MacKenzie, C., Lundin, J., Stark, J.D., Davis, J.W., Kolodziej, E.P., Scholz, N.L. Treading water: Tire wear particle leachate recreates an urban runoff mortality syndrome in coho but not chum salmon. *Environmental Science & Technology*, **2021**, 55 (17), 11767–11774. DOI: 10.1021/acs.est.1c03569
- Tian, Z., Zhao, H., **Peter, K.T.**, Gonzalez, M., Wetzel, J., Wu, C., Hu, X., Prat, J., Mudrock, E., Hettinger, R., Cortina, A.E., Biswas, R.G., Kock, F.V.C., Soong, R., Jenne, A., Du, B., Hou, F., He, H., Lundeen, R., Gilbreath, A., Sutton, R., Scholz, N.L., Davis, J.W., Dodd, M.C., Simpson, A., McIntyre, J.K., Kolodziej, E.P. A Ubiquitous Tire Rubber-Derived Chemical Induces Acute Mortality in Coho Salmon. *Science*, **2021**, 371 (6525), 185-189. DOI: 10.1126/science.abd6951
- Du, B., Tian, Z., **Peter, K.T.**, Kolodziej, E.P., Wong, C.S. Developing Unique Non-Target High Resolution Mass Spectrometry Signatures to Track Contaminant Sources in Urban Waters. *Environmental Science & Technology Letters*, **2020**, 7 (12), 923-930. DOI: 10.1021/acs.estlett.0c00749
- Peter, K.T.**, Hou, F., Tian, Z., Wu, C., Goehring, M., Liu, F., Kolodziej, E.P. More Than a First Flush: Urban Creek Storm Hydrographs Demonstrate Broad Contaminant Pollutographs. *Environmental Science & Technology*, **2020**, 54 (10), 6152-6165. DOI: 10.1021/acs.est.0c00872
- Tian, Z., **Peter, K.T.**, Gipe, A.D., Zhao, H., Hou, F., Wark, D.A., Khangaonkar, T., Kolodziej, E.P., James, C.A. Suspect and Nontarget Screening for Contaminants of Emerging Concern in an Urban Estuary. *Environmental Science & Technology*, **2020**, 54 (2), 889-901. DOI: 10.1021/acs.est.9b06126
- Peter, K.T.**, Wu, C., Tian, Z., Kolodziej, E.P., Application of Non-target High Resolution Mass Spectrometry to Quantitative Source Apportionment. *Environmental Science & Technology*. **2019**, 53 (21), 12257-12268. DOI: 10.1021/acs.est.9b04481
- Tian, Z., **Peter, K.T.**, Wu, C., Gipe, A.D., Zhao, H., Liu, F., Kolodziej, E.P., Quantification of organic contaminants in urban stormwater by isotope dilution and liquid chromatography-tandem mass spectrometry, *Analytical and Bioanalytical Chemistry*, **2019**, 411, 7791-7806. DOI: 10.1007/s00216-019-02177-3
- Peter, K.T.**, Herzog, S., Tian, Z., McCray, J., Lynch, K., Kolodziej, E.P., Evaluating Removal of Emerging Organic Contaminants in an Engineered Hyporheic Zone using High Resolution Mass Spectrometry. *Water Research*, **2019**, 150, 140-152. DOI: 10.1016/j.watres.2018.11.050
- Peter, K.T.**, Tian, Z., Wu, C., Lin, P., White, S., Du, B., McIntyre, J.K., Scholz, N.L., Kolodziej, E.P., Using High-Resolution Mass Spectrometry to Identify Organic Contaminants Linked to Urban Stormwater Mortality Syndrome in Coho Salmon. *Environmental Science & Technology*, **2018**, 52, 10317-10327. DOI: 10.1021/acs.est.8b03287
- Peter, K.T.**, Myung, Nosang V., Cwiertny, D.M., Surfactant-Assisted Fabrication of Porous Polymeric Nanofibers with Surface-Enriched Iron Oxide Nanoparticles: Composite Filtration Materials for Removal of Metal Cations. *Environ. Sci.: Nano.*, **2018**, 5, 669-681. DOI: 10.1039/C7EN00720E
- Du, B., Lofton, J.M., **Peter, K.T.**, Gipe, A.D., James, C.A., McIntyre, J.K., Scholz, N.L., Baker, J.E., Kolodziej, E.P., 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*, **2017**, 19, 1185-1196. DOI: 10.1039/C7EM00243B
- Peter, K.T.**, Johns, A.J., Myung, Nosang V., Cwiertny, D.M., Functionalized Polymer-Iron Oxide Hybrid Nanofibers: Electrospun Filtration Devices for Metal Oxyanion Removal. *Water Research*, **2017**, 117, 207-217. DOI: 10.1016/j.watres.2017.04.007
- Peter, K.T.**, Vargo, J., Rupasinghe, T., De Jesus, A., Tivanski, A.V., Sander, E., Myung, N.V., Cwiertny, D.M., Synthesis, Optimization and Performance Demonstration of Electrospun Carbon Nanofiber-Carbon Nanotube Composite Sorbents for Point-of-Use Water Treatment. *ACS Appl. Mater. Interfaces*, **2016**, 8 (18), 11431-11440. DOI: 10.1021/acsami.6b01253
- Wu, J., Goodwin, D., **Peter, K.T.**, Benoit, D., Li, W., Fairbrother, D.H., Fortner, J., Photo-Oxidation of Hydrogenated Fullerene (Fullerane) in Water. *Environmental Science & Technology Letters*, **2014**, 1, 490-494. DOI: 10.1021/ez5003055

Technical Reports and Patents

- Reiner, J., Place, B., Heckert, N.A., **Peter, K.T.**, Rodowa, A. "Characterization of Reference Materials 8690 to 8693." 01/31/2023. National Institute of Standards and Technology.
- Tian, Z., **Peter, K.T.**, Wu, C., Du, B., Leonard, B., McIntyre, J., 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.

- 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.
- Cwiertny, D.M., Myung, N.V., **Peter, K.T.**, Greenstein, K.E. Electrospun Nanofiber Composites for Water Treatment Applications. US Provisional Patent Application No. 62341753. May 26, 2016.

Presentations & Posters

- Peter, K.T.**, Fisher, C.M., Newton, S.R., Schaub, A.J., Sobus, J.R. Approaches for Assessing Performance of High-Resolution Mass Spectrometry-based Non-Targeted Analysis Methods. Invited Keynote. *Society of Environmental Toxicology and Chemistry (SETAC) NonTarget 2022 Focused Topic Meeting*. Virtual. May 2022.
- Williams, A.J., **Peter, K.T.**, Phillips, A.L., Knolhoff, A.M., Gardinali, P.R., Manzano, C., Miller, K.E., Pristner, M., Sabourin, L., Sumarah, M., Sobus, J.R. Non-Targeted Analysis Study Reporting Tool: A New Framework to Improve Reproducibility and Transparency. Poster. *American Chemical Society Spring Meeting*. April 2022.
- Peter, K.T.**, Kolodziej, E.P., Kucklick, J.R. Assessing Reliability of Non-Targeted High-Resolution Mass Spectrometry Fingerprints for Quantitative Source Apportionment in Complex Matrices. *EmCon 2021*. Virtual. September 2021.
- Peter, K.T.** Evaluating Stormwater Impacts on Chemical Habitat Quality in Urban Watersheds. *Washington University in St. Louis Environmental & Chemical Engineering Graduate Seminar*. Invited. Virtual, St. Louis MO. April 2021.
- Peter, K.T.**, Lundin, J.I., Wu, C., Feist, B.E., Tian, Z., Cameron, J.R., Scholz, N., Kolodziej, E.P. Characterizing the Chemical Profile of Biological Decline in Stormwater-Impacted Urban Receiving Waters. *Salmon Recovery Conference*. Virtual. April 2021.
- Peter, K.T.**, Phillips, A.L., Knolhoff, A.M., Gardinali, P.R., Manzano, C., Miller, K.E., Pristner, M., Sabourin, L., Sumarah, M., Warth, B., Sobus, J.R. The Non-Targeted Analysis Study Reporting Tool: A New Framework to Improve Research Transparency and Reproducibility. Poster. *American Chemical Society (ACS) Spring Meeting*. Virtual. April 2021.
- Peter, K.T.**, Lundin, J.I., Wu, C., Feist, B.E., Tian, Z., Cameron, J.R., Scholz, N., Kolodziej, E.P. Characterizing the Chemical Profile of Biological Decline in Stormwater-Impacted Urban Receiving Waters. *ACS Spring Meeting*. Invited talk: James Morgan Early Career Award Session. Virtual. April 2021.
- Peter, K.T.**, Lundin, J.I., Wu, C., Feist, B.E., Tian, Z., Cameron, J.R., Scholz, N., Kolodziej, E.P. Evaluating Stormwater Impacts on Chemical Habitat Quality in Urban Receiving Waters. *Pacific Northwest Society of Environmental Toxicology and Chemistry Meeting*. Virtual. April 2021.
- Peter, K.T.**, Kolodziej, E.P., Kucklick, J.R. Towards Quantitative Applications of High-Resolution Mass Spectrometry: Data Reduction, Matrix Effects, and Non-target Signature Fidelity. Poster. *Sigma Xi Postdoctoral Poster Presentation*. Virtual. March 2021.
- Peter, K.T.** Toxic tires: Identifying the chemical responsible for coho salmon mortality. *Kitsap Environmental Education Program Meeting*. Kitsap, WA (virtual). February 2021.
- Peter, K.T.**, Hou, F., Tian, Z., Wu, C., Goehring, M., Liu, F., Kolodziej, E.P. More Than a First Flush: Urban Creek Storm Hydrographs Demonstrate Broad Contaminant Pollutographs. *Society of Environmental Toxicology and Chemistry (SETAC) North America 41st Annual Meeting*. Virtual. November 2020.
- Nason, S.L., **Peter, K.T.**, Newton, S., Ulrich, E.M., Place, B. Establishing Shared Vocabulary and Reporting for Non-Targeted Studies: An Updated from the Benchmarking and Publications for Non-Targeted Analysis Working Group (BP4NNTA). Poster. *SETAC North America 41st Annual Meeting*. Virtual. November 2020.
- Peter, K.T.**, Kolodziej, E.P., Kucklick, J.R. Towards Quantitative Applications of High-Resolution Mass Spectrometry: Data Reduction, Matrix Effects, and Non-target Signature Fidelity. Poster. *SETAC North America 41st Annual Meeting*. Virtual. November 2020.
- Peter, K.T.** Evaluating Stormwater Impacts on Water Quality in Urban Creeks. *Washington State Central NPDES Coordinators Forum*. WA (virtual). October 2020.
- Peter, K.T.** Evaluating Stormwater Impacts on Water Quality in Urban Creeks. *Puget Sound Ecosystem Monitoring Program (PSEMP) Toxics Working Group*. Tacoma, WA (virtual). July 2020.
- Peter, K.T.**, Tian, Z., Wu, C., Kolodziej, E.P., Kucklick, J.R. Towards Applying High Resolution Mass Spectrometry for Quantitative Source Apportionment: Evaluating Matrix Effects and Non-target Signature Fidelity. Poster. *American Society for Mass Spectrometry 2020 Reboot*. Houston, TX (virtual). June 2020.
- Peter, K.T.**, Toxic Highways: Evaluating Contaminants in Puget Sound Stormwater, *Fort Johnson Seminar Series*. Charleston, SC. October 2019.

- Peter, K.T.** Contaminants and Sources Linked to Urban Runoff Mortality Syndrome in Coho Salmon. *Miller-Walker Basin Community Salmon Investigation Season Finale*. Burien, WA. March 2019.
- Peter, K.T.** Contaminants and Sources Linked to Urban Runoff Mortality Syndrome in Coho Salmon. *Puget Soundkeeper Salmon Monitoring Results Night*. Seattle, WA. March 2019.
- Peter, K.T.,** Kolodziej, E.P. Investigating Contaminants and Sources Linked to Urban Runoff Mortality Syndrome in Coho Salmon. *Salmon Recovery Watershed Leads Meeting*. Invited talk. March 2019.
- Peter, K.T.** Investigating Contaminant Occurrence and Fate in Puget Sound Stormwater. *Northwest Environmental Business Council Regional Stormwater Conference*. Tacoma, WA. March 2019.
- Peter, K.T.** Using High Resolution Mass Spectrometry to Investigate Stormwater Impacts and Contaminant Flows in Puget Sound. *Puget Sound Partnership Brown Bag Lunch Series*. Tacoma, WA. January 2019.
- Peter, K.T.** Identifying Contaminants and Sources Linked to Urban Runoff Mortality Syndrome in Coho Salmon. *Puyallup River Watershed Council's Science Symposium*. Puyallup, WA. December 2018.
- Peter, K.T.,** Herzog, S., Tian, Z., Wu, C., McCray, J., Lynch, K., Kolodziej, E.P. Removal of Emerging Organic Contaminants in an Engineered Hyporheic Zone using High Resolution Mass Spectrometry. *SETAC North America 39th Annual Meeting*. Sacramento, CA. November 2018.
- Peter, K.T.,** Tian, Z., Wu, C., McIntyre, J.K., Scholz, N.L., Kolodziej, E.P. Using High Resolution Mass Spectrometry to Identify Contaminants and Sources Linked to Urban Stormwater Mortality Syndrome in Coho Salmon. Poster. *SETAC North America 39th Annual Meeting*. Sacramento, CA. November 2018.
- Leonard, B.D., **Peter, K.T.,** Tian, Z., Du, B., Stark, J.D., Kolodziej, E.P., McIntyre, J.K. Efficacy of Compost Amended Bioinfiltration Swales as Green Stormwater Infrastructure for Treatment of Toxicants in Road Runoff. Poster. *SETAC North America 39th Annual Meeting*. Sacramento, CA. November 2018.
- Du, B., **Peter, K.T.,** Steele, J., Griffith, J., Kolodziej, E.P., Maruya, K. Non-target HRMS for Tracking Sources of Human Contamination to Stormwater Conveyances. Poster. *SETAC North American 39th Annual Meeting*. Sacramento, CA. November 2018.
- Peter, K.T.** Stormwater and Coho Research at the Center for Urban Waters. *Puget Soundkeeper Salmon Survey Meeting*. Seattle, WA. October 2018.
- Peter, K.T.** Stormwater and Coho Research at the Center for Urban Waters. *Miller Walker Community Salmon Investigation Meeting*. Burien, WA. October 2018.
- Peter, K.T.** Coho Salmon and Stormwater Research, *Puget Soundkeeper Policy & Technical Committee Meeting*. Seattle, WA. June 2018
- Peter, K.T.** Stormwater and Coho Research at the Center for Urban Waters. *Thornton Creek Alliance Meeting*. Seattle, WA. April 3, 2018.
- Peter, K.T.** Understanding Changing Approaches to Stormwater in Puget Sound, *Washington State History Museum UWT Scholarly Selections Seminar Series*. Tacoma, WA. February 2018
- Peter, K.T.,** Toxic Highways: Evaluating Contaminants in Puget Sound Stormwater, *University of Puget Sound Thompson Hall Science & Mathematics Seminar*. Tacoma, WA. February 2018
- Peter, K.T.,** Du, B., Leonard, B., Wu, C., McIntyre, J., Kolodziej, E.P., Suspect and Non-Target Screening of Organic Contaminants in Stormwater Treatment Systems. *SETAC North America 38th Annual Meeting*. Minneapolis, MN. November 2017.
- Peter, K.T.,** Innovative Approaches to Water Treatment and Characterization. *University of Washington Civil & Environmental Engineering Graduate Seminar*. Seattle, WA. April 2017.
- Kolodziej, E.P., Du, B., Lofton, J.L., **Peter, K.T.,** Scholz, N., McIntyre, J., Davis, J., Baker, J., Suspect and Non-Target Screening of Organic Contaminants in Stormwater and Exposed Fish. *253rd Annual ACS Meeting*. San Francisco, CA. April 2017.
- Peter, K.T.,** Johns, A.J., Cwiertyny, D.M., Functionalized Polymer-Iron Oxide Hybrid Nanofibers: Electrospun Filtration Devices for Heavy Metal Removal. Poster. *Gordon Research Conference: Environmental Sciences – Water*. Holderness, NH. June 2016.
- Peter, K.T.,** Johns, A.J., Cwiertyny, D.M., Functionalized Polymer-Iron Oxide Hybrid Nanofibers for Metal Oxyanion Removal. Oral presentation. *18th Annual Jakobsen Conference*. Iowa City, IA. March 2016.
- Peter, K.T.,** Greenstein, K.E., Parkin, G.F., Cwiertyny, D.M., Optimization and Performance Demonstration of Electrospun Nanofiber Filters for Drinking Water Treatment. Poster. *The Association of Environmental Engineering & Science Professors (AEEESP) Conference*. New Haven, CT. June 2015.
- Peter, K.T.,** Cwiertyny, D.M., Application of Electrospun Carbon Nanofibers as Sorbents: Influence of Incorporated Carbon Nanotubes and Macroporosity on Material Properties and Surface Reactivity. Oral

presentation. *248th Annual ACS Meeting*. San Francisco, CA. August 2014 & *Third Sustainable Nanotechnology Organization Conference*. Boston, MA. November 2014

Wu, J., **Peter, K.T.**, Fortner, J.F., Sunlight enhanced, oxidative transformation of hydrogenated fullerene (fullerane) in water. Poster. *247th Annual ACS Meeting*. Dallas, TX. March 2014.

Service & Affiliations

Professional:

- *Environmental Science & Technology* Early Career Editorial Advisory Board member (2021 – present)
- Benchmarking and Publications for Non-Targeted Analysis (BP4NTA) working group, Co-chair of Study Reporting Tool Committee (2018 – present), Member of Study Planning Tool Committee (2022 – present)
- Society of Environmental Toxicology and Chemistry (Member, 2017-present), Steering Committee of North American Chemistry Interest Group (2021 – 2022)
- American Chemical Society (Member, 2014-present)
- Sigma Xi Scientific Research Society (Member, 2013-present)
- Tau Beta Pi Engineering Honor Society (Member, 2011-present): Secretary MO-Gamma Chapter 2012-13
- Society of Women Engineers (2009-2013): Washington U. Chapter Vice President 2012-13
- Member, Hudson River Foundation Contaminant Assessment and Reduction Project Technical Advisory Committee, 2018
- Journal Peer Review: *Environmental Science & Technology*, *Environmental Science & Technology Letters*, *Environmental Sciences: Processes & Impacts*, *Environmental Pollution*, *Environment International*, *Environmental Toxicology & Chemistry*, *Analytical & Bioanalytical Chemistry*, *Nature Communications*, *Archives of Environmental Contamination and Toxicology*, *Analytical Methods*, *Chemosphere*

Community Outreach:

- Judge, Davidson Institute Fellows Scholarship, 2018, 2020, 2022
- Presentation to Seattle Schools 4th grade classrooms (~50 kids): “What’s killing the coho salmon? Using chemistry to solve a stormwater mystery” February 2021, April 2022, May 2023
- Presentation for Virtual Science in the Charleston Schools program: “The 3 W’s of stormwater: What’s in it, why it matters, and what we can do!” December 2020
- Presentation to Montgomery County, MD students (MoCo Scientists for Kids): “What’s in the Water? Using Chemical Fingerprints to Solve Mysteries” August 2020
- Presenter, Women in Science Day, Murray LaSaine Elementary School (James Island, Charleston); shared NIST research and basic mass spectrometry principles with >100 elementary schoolers and their parents.
- Led Center for Urban Waters engagement with 6 Seattle/Tacoma metro area citizen science groups, including:
 - Led presentations/discussion about stormwater and impacts on aquatic life at 6 meetings (2017, 2018)
 - Organized stormwater sampling by Thornton Creek Alliance citizen scientists during 2017-2019 storm seasons in Thornton Creek, as part of a Puget Sound watershed survey
 - Coordinated a program to have citizen scientists from all 6 organizations, which perform salmon surveys in their local watersheds, call our research group if they observed a coho salmon in distress
- Guest speaker in two 8th grade chemistry classes at Westside School (Seattle, WA), November 2018.
- Guest speaker in junior level Environmental Analytical Chemistry course, University of Puget Sound (Tacoma, WA), February 2018.
- Panelist, ACS Career Day at CUW (80 local high school/college students in attendance), January 2018
- Spoke to 30 UWT Honors students about career pathway and trajectory during their visit to CUW (Oct 2017)
- Conference Committee – University of Iowa Careers Outside the Academy Conference, April 2016
- Poster judge at University of Iowa Spring Undergraduate Research Festival, April 2016
- Panelist, University of Iowa Women in Science & Engineering Applying to Graduate School Panel, Dec 2015
- Volunteer, Girl Scout STEM event at University of Iowa State Hygienic Lab

Technical Skills

- Laboratory analysis/instrumentation: 8 years’ experience, including LC & HRMS maintenance & troubleshooting: (U)HPLC (Agilent 1100 & 1200 series; Thermo Vanquish), HRMS (Thermo Q Exactive

Orbitrap; Agilent QTOF), MS/MS (Agilent & Sciex QQQ), LC-DAD; electron microscopy (SEM, TEM, HRTEM), XPS, powder XRD, BET, Zeta potential analysis, UV/vis

- Thermo XCalibur suite, Thermo Compound Discover, Agilent MassHunter suite (Qualitative Analysis, Profinder, Mass Profiler Professional), open-source HRMS data processing tools (MZmine, MSDial, XCMS)
- Microsoft suite, IGOR Pro, SigmaPlot, R, course-based technical writing training

Honors & Awards

- Best Practices for Non-Targeted Analysis (BP4NTA) Outstanding Service Award, 2023
- James J. Morgan Environmental Science & Technology Early Career Award, 2021
- Sigma Xi Postdoctoral Poster Presentation Outstanding Poster Award, 2021
- National Research Council Postdoctoral Research Fellowship, 2019
- Outstanding Reviewer, *Environmental Science: Processes & Impacts*, 2017
- National Science Foundation Graduate Research Fellowship, 2013-2016
- Ballard Seashore Dissertation Fellowship, University of Iowa, Fall 2016
- American Chemical Society Graduate Student Award in Environmental Chemistry, 2016
- William Kersten Environmental Engineering Scholarship, University of Iowa, Fall 2015
- *Conference honors*: First Place – *Math, Physical Sciences, and Engineering Paper Competition, 18th Annual Jakobsen Memorial Graduate Conference, March 2016*; Third Place – *Three Minute Thesis Competition, University of Iowa, March 2016*; Best NanoPitch – *Sustainable Nanotechnology Organization NanoPitch Contest, 3rd SNO Conference, 2014*; Best Presentation Award and Certificate of Merit – *Division of Env. Chemistry, 248th Annual ACS Meeting, 2014*
- *Travel Grants*: UIowa Grad & Professional Student Gov't Conference Travel Grant, 2015; UIowa Women in Science & Engineering Conference Travel Grant, 2014; UIowa CGRER Graduate Student Travel Grant, 2014
- *Undergraduate awards*: St. Louis Section American Institute of Chemical Engineers Award for Academic Excellence, 2013; The Energy, Environmental and Chemical Engineering Academic Achievement Junior Award, 2012; American Institute of Chemical Engineers Donald F. Othmer Sophomore Academic Excellence Award, 2011; Antoinette Frances Dames Award for Productive Scholarship in Engineering, 2011