

# Curriculum Vitae as of May 24, 2022

## Personal Information

Name: Philipp Wanner  
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## Current Position

Sep 2020 – present: Universitetslektor, biträdande in hydrogeochemistry and contaminant hydrogeology (equivalent to tenure-track Assistant Professor), University of Gothenburg, Sweden, Department of Earth Sciences  
Principal Investigator of the North American University Consortium for Field-Focused Groundwater Research  
<https://theuniversityconsortium.org/pis/>

## Academic Degrees

Nov 2012 – Dec 2016: PhD in Contaminant Hydrogeology at University of Neuchâtel, Switzerland, Centre for Hydrogeology and Geothermics (CHYN).  
Sep 2010 – Oct 2012: MSc in Environmental and Resource Geochemistry at University of Bern, Switzerland, Institute of Geological Sciences.  
Sep 2007 – Aug 2010: BSc in Geology at University of Bern, Switzerland, Institute of Geological Sciences.

## Previous Positions and Fellowships

Jan 2019 – Aug 2020: Post-doctoral fellow, University of Bern, Switzerland, Institute of Geological Sciences.  
Feb 2017 – Dec 2018: Post-doctoral fellow, University of Guelph, Canada, G360 Institute for Groundwater Research.  
Nov 2012 – Dec 2016: PhD student and assistant at University of Neuchâtel, Switzerland, Centre for Hydrogeology and Geothermics (CHYN).  
Jun 2015 and Apr 2016: Guest Researcher at University of Princeton, USA, Princeton Environmental Institute.  
Sep 2010 – Oct 2012: MSc student and technical assistant at University of Bern, Switzerland, Institute of Geological Sciences.

- Sep 2007 – Aug 2010: BSc student and technical assistant at University of Bern, Switzerland, Institute of Geological Sciences.
- Jun 2006 – Jul 2006: Internship in a private consulting company (Kellerhals und Haefeli AG) in Bern, Switzerland.

### Received research grants

- Jan 2022 - Dec 2025: FORMAS Early career research grant: “Artificial groundwater recharge – A shortcut for harmful poly- and perfluoroalkyl substances (PFASs) into groundwater systems and drinking water supplies – Can we avoid this?” Main Applicant, 3’969’025 SEK.
- Jan 2022 - Dec 2025: Swedish Research Council (VR) Starting Grant: “Plastic and pesticides in agricultural soils – A risk for groundwater systems and drinking water supplies worldwide?” Main Applicant, 4’000’000 SEK.
- Jan 2022 – Dec 2024: Carl Tryggers Stiftelse: ”Determining chlorinated solvent biodegradation in contaminated groundwater systems and its implications for remediation” Main Applicant, 360’750 SEK..
- Apr 2021: Support grant for purchase and or maintenance of equipment for teaching & Research in collaboration with the Marine Science Department, University of Gothenburg. Co-Applicant, 115’000 SEK.
- Jan 2019 – Dec 2023: Discovery Grant from Natural Sciences and Engineering Research Council of Canada (NSERC): “Assessing long-term impacts of chlorinated hydrocarbons to freshwater aquifers due to diffusive transport and reactions within clayey aquitards” Co- Applicant, 225’000 Canadian dollars.
- Jan 2018 – Dec 2018: Research grant from BP Canada “Assessing Toluene biodegradation in the vadose zone of a poplar phytoremediation system using metagenomics and toluene-specific stable carbon isotope analysis” Co-Applicant, 75’000 Canadian dollars
- Nov 2015: Supplementary grant for PhD thesis from Swiss National Science Foundation (SNSF), University of Neuchatel, Switzerland. Main-Applicant, 70’000 Swiss Francs.
- Jan 2011: Travel grant from Swiss Academy of Natural Sciences (SCNAT+) for conducting a groundwater sampling campaign in Oman for the Master thesis, University of Bern, Switzerland. Main Applicant, 750 Swiss Francs.

### Supervision of junior researchers at graduate and postgraduate level

- Apr 2021 – Present: Main supervisor of MSc student Max Boestam at the University of Gothenburg, Sweden.
- Dec 2020 – Present: Main supervisor of MSc student Crayton Bessong at the University of Gothenburg, Sweden.
- Jan 2018 – Dec 2018: Co-supervision of MSc student Flavia Isenschmid at the University of Neuchatel, Switzerland.
- Feb 2017 – Dec 2018: Co-supervision of PhD student Michael BenIsrael at the University of Guelph, Canada.
- Feb 2017 – Aug 2018: Co-supervision of MSc student Andrea Roebuck at the University of Guelph, Canada

## Teaching activities

Fall 2020 – present:	Full undergraduate course “Hydrology and Hydrogeology (GV2002)” at the University of Gothenburg, Sweden. Full graduate course “Applied Hydrogeology (GVG460)” at the University of Gothenburg, Sweden. Full undergraduate course “Naturvetenskapliga verktyg för geovetar (GV200)” at the University of Gothenburg, Sweden.
Fall semester 2019:	Lectures in graduate course “Low-T isotope geochemistry” at the University of Bern, Switzerland.
Fall semester 2018:	Lectures in graduate course “Aquitards” at the University of Guelph, Canada.
Spring semester 2017:	Lectures in graduate course “Diffusion in porous media” at the University of Guelph, Canada.
Fall semester 2016:	Lectures in graduate course “Numerical modelling of hydrochemical processes” at the University of Neuchatel, Switzerland.
Fall semester 2016:	Lectures in undergraduate course in “Hydrochemistry and Geochemistry” at the University of Neuchatel, Switzerland.
Spring semester 2015:	Full undergraduate practical course “General geology” at the University of Neuchatel, Switzerland.

## Theses examinations

May 2022:	Examiner Master thesis Patricio Gallardo Garcia Freire “Downscaling the Planetary Boundaries: An Exploration of Watershed Sustainability at the Göta River Basin”, University of Gothenburg, Sweden.
June 2021:	Examiner Master thesis Andreas Solberg “Dynamic Streams in a Pre-Alpine Catchment”, University of Gothenburg, Sweden.
June 2021:	Examiner Bachelor thesis Robin Johansson “Investigating and Comparing the Formation Environment and Presence of Acid Sulfate Soils in Västra Götaland on the West Coast of Sweden”, University of Gothenburg, Sweden.
June 2021:	Examiner Bachelor thesis Pierre Cederholm “Föroreningars spridning i grundvatten - En studie i hydraulisk konduktivitet i Kungsbacka”, University of Gothenburg, Sweden.
May 2021:	Examiner Bachelor thesis Tim Waterstradt “Untersuchung zum möglichen Eintrag von Mikroplastik in Grundwasserleiter”, Technische Universität Dresden, Germany.
Nov 2020:	Examiner for PhD thesis Manon Lincker “Modélisation géochimique des fractionnements isotopiques avec le code de transport réactif Hytec et applications environnementales”, MINES ParisTech, Paris, France.

## Membership of scientific societies and committees

Jun 2021 – present:	Member of the steering committee for the Skogaryd field station, Vänersborg, Sweden
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Mar 2021 – present: Principal Investigator of the North American University Consortium for field-focused groundwater research (<https://theuniversityconsortium.org/pis/>).

Jun 2016 – Dec 2017: Member of the American Chemical Society (ACS)

Nov 2011 – Mar 2016: Member of the International Mine Water Association (IMWA)

## Reviewing activities

### Reviews for scientific journals:

Environmental Science and Technology (IF: 7.2): 13 papers reviewed.

Environmental Science and Technology Letters (IF: 6.9): 12 papers reviewed.

Science of the Total Environment (IF: 5.6): 9 papers reviewed.

Chemosphere (IF: 5.1): 2 papers reviewed.

ACS Omega (IF 2.6): 1 paper reviewed.

Environmental Science: Processes and Impact (IF: 2.6): 2 papers reviewed.

Journal of Hydrology (IF: 4.5): 1 paper reviewed.

Water Research (IF:11.2): 1 paper reviewed.

### Reviews of proposal for funding agencies:

Israel Science Foundation (ISF): 1 proposal reviewed

Natural Environment Research Council (NERC) of the UK: 1 proposal reviewed

## Awards

Feb 2020: Featuring of my paper “Assessing toluene biodegradation under temporally varying redox conditions in a fractured bedrock aquifer using stable isotope methods” as research highlight by the College of Engineering and Physical Sciences, University of Guelph, Canada.  
<https://www.uoguelph.ca/ceps/drink-up>

Nov 2016: Best PhD thesis award (Prix Adrien Guebhard-Severine: 1000 Swiss francs) from the University of Neuchatel, Switzerland, Centre for Hydrogeology and Geothermics (CHYN).

Sep 2014: Among the three best presentations at the “In-Situ Remediation” Conference, London, United Kingdom.

Nov 2011: Best Master Thesis poster award from the University of Bern, Switzerland, Institute of Geological Sciences.

May 2010: Best Bachelor Thesis presentation award from the University of Bern, Switzerland, Institute of Geological Sciences.

## Presence in media

Aug 2021: Interview with Sverige TV (SVT) about concrete production by Cementa on Gotland: <https://www.svt.se/nyheter/vetenskap/sa-ser-domstolens-krav-pa-cementa-ut>

## Publications in peer-reviewed scientific journals

[20] Lincker, M., Lagneau, V., Guillon, S., Wanner, P., 2022.

Identification of chlorohydrocarbon degradation pathways in aquitards using dual element compound-specific isotope measurements in aquifers.

Chemosphere

<https://doi.org/10.1016/j.chemosphere.2022.135131>

[19] Wanner, P., Buri, N., Wyss, K., Zischg, A., Weingartner, R., Baumgartner, J., Berger, B., Wanner, C., 2021.

Quantifying the glacial meltwater contribution to streams in mountainous regions using highly resolved stable water isotope measurements

Hydrology and Earth System Sciences Discussions

<https://hess.copernicus.org/preprints/hess-2021-512/>

[18] Zimmermann, J., Wanner, P., Hunkeler, D., 2021.

Compound-specific carbon isotope analysis of volatile organic compounds in complex soil extracts using purge and trap concentration coupled to heart-cutting two-dimensional gas chromatography–isotope ratio mass spectrometry.

Journal of Chromatography A, 1655: 462480.

<https://www.sciencedirect.com/science/article/abs/pii/S002196732100604X?via%3Dihub>

[17] Halloran, L. J. S., Vakili, F., Wanner, P., Shouakar-Stash, O., Hunkeler, D., 2021.

Sorption- and diffusion-induced isotopic fractionation in chloroethenes.

Science of the Total Environment, 788: 147826.

<https://www.sciencedirect.com/science/article/pii/S0048969721028977>

[16] BenIsrael, M., Habtewolda, J.Z., Khoslaa, K., Wanner, P., Aravena, R., Parker, B.L., Haack, E.A., Tsao, D.T., Dunfield, K., 2020.

Degrader bacteria and fungi enriched in rhizosphere soil from a toluene phytoremediation site identified using DNA stable isotope probing.

International Journal of Phytoremediation, 23(8), 846-856.

<https://www.tandfonline.com/doi/full/10.1080/15226514.2020.1860901>

[15] Steelman, C., Meyer, J., Wanner, P., Swanson, B., Conway-White, O., Parker, B., 2020.

The importance of transects for characterizing aged organic contaminant plumes in groundwater

Journal of Contaminant Hydrogeology, 235: 103728.

<https://www.sciencedirect.com/science/article/pii/S016977222030317X?via%3Dihub>

[14] Wanner, P., 2020.

Plastic in agricultural soils – A global risk for groundwater systems and drinking water supplies? – A review.

Chemosphere, 264: 128453.

<https://www.sciencedirect.com/science/article/pii/S0045653520326485>

- [13] Filippini, M., Parker, B.L., Dinelli, E., Wanner, P., Chapman, S.W., Gargini, A., 2020. Assessing aquitard integrity in a complex aquifer-aquitard system contaminated by chlorinated hydrocarbons. *Water Research*, 171: 115388.  
<https://www.sciencedirect.com/science/article/abs/pii/S0043135419311625>
- [12] BenIsrael, M., Wanner, P., Fernandes, J., Burken, J.G., Aravena, R., Parker, B.L., Haack, E.A., Tsao, D.T., Dunfield, K., 2020. Quantification of toluene phytoextraction rates and microbial biodegradation functional profiles at a fractured bedrock phytoremediation site. *Science of the Total Environment*, 707, 135890.  
<https://www.sciencedirect.com/science/article/pii/S0048969719358851>
- [11] Wanner, P., Hunkeler, D., 2019. Molecular Dynamic Simulations of Carbon and Chlorine Isotopologue Fractionation of Chlorohydrocarbons During Diffusion in Liquid Water. *Environmental Science and Technology Letters*, 6: 681 – 686.  
<https://pubs.acs.org/doi/10.1021/acs.estlett.9b00640>
- [10] Wanner, P., Aravena, R., Fernandes, J., BenIsrael, M., Haack, E.A., Tsao, D.T., Dunfield, K., Parker, B.L., 2019. Assessing toluene biodegradation under temporally varying redox conditions in a fractured bedrock aquifer using stable isotope methods. *Water Research*, 165: 114986.  
<https://www.sciencedirect.com/science/article/pii/S0043135419307602>
- [9] BenIsrael, M., Wanner, P., Aravena, R., Parker, B.L., Haack, E.A., Tsao, D.T., Dunfield, K., 2018. Toluene biodegradation in the vadose zone of a poplar phytoremediation system identified using metagenomics and toluene-specific stable carbon isotope analysis. *International Journal of Phytoremediation*, 21: 1- 10.  
<https://www.tandfonline.com/doi/abs/10.1080/15226514.2018.1523873>
- [8] Wanner, P., Hunkeler, D., 2018. Isotope fractionation due to aqueous phase diffusion—What do diffusion models and experiments tell? – A review. *Chemosphere*, 219: 1032 – 1043.  
<https://www.sciencedirect.com/science/article/pii/S0045653518323609>
- [7] Wanner, P., Parker, B.L., Chapman, S.W., Lima, G., Gilmore, A., Mack, E.E., Aravena, R., 2018. Identification of degradation pathways of chlorohydrocarbons in saturated low permeability sediments using compound-specific isotope analysis. *Environmental Science and Technology*, 52: 7296–7306.  
<https://pubs.acs.org/doi/10.1021/acs.est.5b06330>
- [6] Wanner, P., Parker, B.L., Hunkeler, D., 2018. Assessing the effect of plume persistence in aquifers due to back-diffusion. *Science of the Total Environment*, 633: 1602 – 1612.  
<https://www.sciencedirect.com/science/article/pii/S0048969718309513>

- [5] Bouchard, D, Wanner, P., Luo, H., Henderson, J.K., Pirkle, R.J., Hunkeler, D., 2017. Optimization of the solvent-based dissolution method to sample volatile organic compound vapors for compound-specific isotope analysis. *Journal of Chromatography A*, 1520: 23 – 34.  
<https://www.sciencedirect.com/science/article/pii/S0021967317312402>
- [4] Wanner, P., Parker B.L., Chapman, S.W., Aravena, R., Hunkeler, D., 2017. Does sorption influence isotope ratios of chlorinated hydrocarbons under field conditions? *Applied Geochemistry*, 84: 348 – 359.  
<https://www.sciencedirect.com/science/article/pii/S0883292717300963>
- [3] Wanner, P., Parker B.L., Chapman, S.W., Aravena, R., Hunkeler, D., 2016. Quantification of degradation of chlorinated hydrocarbons in low permeability sediments using compound-specific isotope analysis. *Environmental Science and Technology*, 50 (11): 5622–5630.  
<https://pubs.acs.org/doi/10.1021/acs.est.8b01173>
- [2] Wanner, P., Hunkeler, D., 2015. Carbon and chlorine isotopologue fractionation of chlorinated hydrocarbons during diffusion in water and low permeability sediments. *Geochimica et Cosmochimica Acta*, 157: 198-212.  
<https://www.sciencedirect.com/science/article/pii/S0016703715001271>
- [1] Wanner, P., Al-Sulaimani, M.Y.N., Waber, N., Wanner, C., 2015. Assessing the environmental hazard of using seawater for ore processing at the Lasail mine site in the Sultanate of Oman. *Mine Water and the Environment*, 34(1): 59-74.  
<https://link.springer.com/article/10.1007/s10230-014-0281-9>

## Theses

PhD thesis (2016): Isotope fractionation due to diffusion and sorption of chlorinated hydrocarbons and its implications for identifying reactive processes in aquifer-aquitard systems.

Master thesis (2012): Evaluation of salinity and heavy metal contamination in groundwater of Wadi Suq, Oman.

Bachelor thesis (2010): Paleoclimatic evidences in the basal tertiary sediments of the central Jura Mountains, Switzerland.

## Peer reviewed conference proceedings

Haack E., Tsao, D., BenIsrael, M., Wanner, P., Fernandes, J., Aravena, R., Parker, B.L., Dunfield, K., 2021. Key Findings on Phyto-Enhanced Petroleum Hydrocarbon Biodegradation in a Fractured Rock Condition. 37th Annual International Conference on Soils, Sediments, Water, and Energy, October 18-21.

Chapman, S.W., Parker, B.L., Gilmore, A., Wanner, P., Aravena, R., Mack, E.E., 2021.  
Plume persistence following full-scale source zone remediation due to aquitard back diffusion with insights on degradation effects.  
GeoNiagara Conference, Niagara Falls, Canada, September, 26 – 29.

Wanner, P., 2021.

Plastic in agricultural soils – A hazard for groundwater systems and drinking water supplies?  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 1-3.

Waber, H.N., Rufer, D., Wanner, P., Traber, D., 2020.

Differences in provenance and palaeo-hydrogeological evolution of porewater in the Opalinus Clay at Mont Terri and in northern Switzerland as evidenced by porewater  $\delta^{18}\text{O}$  and  $\delta^2\text{H}$  signatures.  
8th International Clay Conference, Nancy, France, June 8-11, 2022. (Conference was postponed from 2020 to 2022 due to Corona)

Maeder, U., Kiczka, M., Jenni, A., Waber, H.N., Wanner, P., Camesi, L., Rufer, D., Traber, D., 2020.

First results on pore water characterization by advective displacement experiments of a thick claystone sequence (including Opalinus Clay) from NAGRA's deep borehole in Bülach, Switzerland.  
8th International Clay Conference, Nancy, France, June 8-11, 2022. (Conference was postponed from 2020 to 2022 due to Corona)

Zimmermann, J., Chapman, S.W., Parker, B.L., Wanner, P., Aravena, R., Isenschmid, F., Hunkeler, D., 2019.

Multi-element compound-specific isotope analysis to evaluate degradation processes at a complex mixture contaminated site.  
Groundwater Quality (GQ) Conference, Liège, Belgium, September 9-12.

Zimmermann, J., Chapman, S.W., Parker, B.L., Wanner, P., Aravena, R., Isenschmid, F., Hunkeler, D., 2019.

Application of multi-element compound-specific isotope analysis to complex contaminant mixtures in sediment samples.  
Isotopes 2019, Raitenhaslach, Germany, July 7-12.

Chapman, S.W., Parker, B.L., Wanner, P., Aravena, R., Mack, E.E., 2019.

Plume persistence following full-scale source zone remediation due to aquitard back diffusion with insights on degradation effects: Florence site cased study.  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 4-6.

Wanner, P., Hunkeler, D., 2019.

Isotope fractionation due to aqueous phase diffusion – What do diffusion models and experiments tell? – A review.  
GAC-MAC-IAH Conference, Quebec City, Canada, May 12-15.



Wanner, P., Parker, B.L., Chapman, S.W., Lima, G., Gilmore, A., Mack, E.E., Aravena, R., 2018.  
Identification of degradation pathways of chlorohydrocarbons in saturated low permeability sediments using compound-specific isotope analysis.  
Goldschmidt Conference, Boston, USA, August 12-17.

BenIsrael, M., Wanner, P., Fernandes, J., Burken, J.G., Aravena, R., Parker, B.L., Tsao, T.T., Haack, E.A., Dunfield, K., 2018.  
Characterization of Processes at Work in Phytoremediation of Toluene in Shallow Bedrock using Hybrid Poplars.  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 5-7.

Wanner, P., Parker, B.L., Chapman, S.W., Lima, G., Gilmore, A., Mack, E.E., Aravena, R., 2018.  
Differentiation of degradation pathways of chlorinated hydrocarbons in saturated low permeability sediments using compound-specific isotope analysis.  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 5-7.

Parker, B. L., Fernandes, J., Chapman, S., Maldaner, C., Wanner, P., Dunfield, K., Aravena, R., Haack, E., Tsao, D., 2018.  
High-resolution characterization of an aged toluene source zone and plume in a dolostone aquifer.  
11<sup>th</sup> Battelle International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Palm Springs, USA, April 8-12.

BenIsrael, M., Fernandes, J., Wanner, P., Haack, E.A., Burken, J.G., Tsao, D., Aravena, R., Parker, B.L., Dunfield, K., 2017.  
Development of a toluene phytoremediation conceptual model in shallow fractured bedrock.  
14<sup>th</sup> International Phytotechnologies Conference, Montreal, Canada, September 25-29.

Wanner, P., Parker, B.L., Hunkeler, D., 2017.  
Assessing the effect of plume persistence in aquifers due to back-diffusion.  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 6-8.

Wanner, P., Parker B.L., Chapman, S.W., Aravena, R., Hunkeler, D., 2016.  
Investigations of sorption effects on isotope ratios during diffusion of chlorinated hydrocarbons in low permeability sediments.  
Meeting of the German Association for Hydrogeology, Karlsruhe, Germany, April 13-17.

Wanner, P., Hunkeler, D., Parker B.L., Chapman, S.W., Aravena, R., 2015.  
Quantification of reactive processes affecting chlorinated hydrocarbons in aquitards using compound-specific isotope analysis.  
Swiss Geoscience Meeting, Basel, Switzerland, November 20-21.

Wanner, P., Parker B.L., Chapman, S.W., Aravena, R., Hunkeler, D., 2015.  
Identification of biodegradation of chlorohydrocarbons in low permeability sediments using stable isotope methods.  
Annual Conference of International Association of Hydrogeologists (IAH), Rome, Italy, September 13-18.

Wanner, P., Hunkeler, D., Parker B.L., Chapman, S.W., Aravena, R., 2014.  
Carbon and Chlorine isotope fractionation of chlorinated ethenes during diffusive transport in low permeability sediments.  
“In-Situ” Remediation Conference London, United Kingdom, September 2-4.

Wanner, P., Hunkeler, D., Parker B.L., Chapman, S.W., Aravena, R., 2014.  
Identification of biodegradation of chlorinated ethenes in low permeability sediments using compound-specific isotope analysis.  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 2-4.

### **Oral contributions to conferences**

Plastic in agricultural soils – A hazard for groundwater systems and drinking water supplies? Platform presentation  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 1-3, 2021.

Plastic and pesticides in agricultural soils – A hazardous combination for groundwater systems and drinking water supplies? Platform presentation  
Faculty Day of the Faculty of Science, University of Gothenburg, Sweden, May 25, 2021.

Plastic and pesticides in agricultural soils – A hazardous combination for groundwater systems and drinking water supplies worldwide? Platform presentation  
Geo Seminar, Earth Science Department, University of Gothenburg, Sweden, March 18, 2021.

Isotope fractionation due to aqueous phase diffusion – What do diffusion models and experiments tell? – A review. Platform presentation **and chair of session** “Diffusion - A Multidisciplinary Perspective”  
GAC-MAC-IAH Conference, Quebec City, Canada May 12-15, 2019.

Identification of degradation pathways of chlorohydrocarbons in saturated low permeability sediments using compound-specific isotope analysis (CSIA). Poster presentation.  
Goldschmidt Conference, Boston, USA, August 12-17, 2018.

Differentiation of degradation pathways of chlorinated hydrocarbons in saturated low permeability sediments using compound-specific isotope analysis. Platform presentation.  
University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 5-7, 2018.

Assessing the effect of plume persistence in aquifers due to back-diffusion. Platform presentation. University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 6-8, 2017.

Investigations of sorption effects on isotope ratios during diffusion of chlorinated hydrocarbons in low permeability sediments. Platform presentation. Meeting of the German Association for Hydrogeology, Karlsruhe, Germany, April 13-17, 2016.

Quantification of reactive processes affecting chlorinated hydrocarbons in aquitards using compound-specific isotope analysis. Platform presentation. Swiss Geoscience Meeting, Basel, Switzerland, November 20-21, 2015.

Identification of biodegradation of chlorohydrocarbons in low permeability sediments using stable isotope methods. Platform presentation. Annual Conference of International Association of Hydrogeologists (IAH), Rome, Italy, September 13-18, 2015.

Identification of biodegradation of chlorinated hydrocarbons in low permeability sediments using compound-specific isotope analysis. Platform presentation. University Consortium for Field-Focused Groundwater Contamination Focus Meeting, Denver, USA, October 30-31, 2014.

Carbon and Chlorine isotope fractionation of chlorinated ethenes during diffusive transport in low permeability sediments. Platform presentation. "In-Situ" Remediation Conference London, United Kingdom, September 2-4, 2014.

Identification of biodegradation of chlorinated ethenes in low permeability sediments using compound-specific isotope analysis. Platform presentation. University Consortium for Field-Focused Groundwater Contamination Research Annual Progress Meeting, University of Guelph, Canada, June 2-4, 2014.