

# COMPLETE PUBLICATION LIST K. FENNER

## PUBLICATIONS IN PEER-REVIEWED JOURNALS<sup>1</sup>

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- Wicker, J.; Lorsbach, R.; Gütlein, M.; Schmid, E.; Latino, D.; Kramer, S.; Fenner, K. (2015). enviPath – The Environmental Contaminant Biotransformation Pathway Resource. *Nucleic Acids Research*, accepted.
- Lee, M.; Zimmermann, S.; Arey, J. S.; Fenner, K.; von Gunten, U. (2015). Development of Prediction Models for the Reactivity of Organic Compounds with Ozone in Aqueous Solution by Quantum Chemical Calculations: Role of Delocalized and Localized Molecular Orbitals. *Environmental Science and Technology* **49**, 9925-9935.
- Honti, M.; Fenner, K.\* (2015). Deriving Persistence Indicators from Regulatory Water-sediment Studies – Opportunities and Limitations in OECD 308 Data. *Environmental Science and Technology* **49**, 5879-5886. *Article featured as ACS Editors' Choice.*
- Johnson, D.; Helbling, D.; Men, Y.; Fenner, K.\* (2015). Can Meta-omics Help To Establish Causality between Contaminant Biotransformations and Genes or Gene Products? *Environmental Science: Water Research Technology* **1**, 272-278.
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- Johnson, D. R.; Helbling, D. E.; Lee, T. K.; Park, J.; Fenner, K.; Kohler, H.-P. E.; Ackermann, M. (2015). Biodiversity associates with the rates of micropollutant biotransformations among full-scale wastewater treatment plant communities. *Applied and Environmental Microbiology* **81**(2), 666-675.
- Gulde, R.; Helbling, D. E.; Scheidegger, A.; Fenner, K.\* (2014). pH-dependent Biotransformation of Ionizable Organic Micropollutants in Activated Sludge. *Environmental Science and Technology* **48**, 13760–13768. *2<sup>nd</sup> runner up for ES&T best paper award, category science.*
- Johnson, R. D.; Lee, T. K.; Park, J.; Fenner, K.; Helbling, D. E. (2014). The Functional and Taxonomic Richness of Wastewater Treatment Plant Microbial Communities are Associated with Each Other and with Ambient Nitrogen and Carbon Availability. *Environmental Microbiology*, DOI: 10.1111/1462-2920.12429.
- Fenner, K.\*; Canonica, S., Wackett, L. P., Elsner, M. (2013). Evaluating Pesticide Degradation in the Environment: Blind Spots and Emerging Opportunities. *Science* **341**, 752-758.
- Helbling, D. E.; Johnson, D. R.; Honti, M.; Fenner, K. (2012). Micropollutant Biotransformation Kinetics Associate with WWTP Process Parameters and Microbial Community Characteristics. *Environmental Science and Technology* **46**(19), 10579-10588.
- Loos, M.; Krauss, M.; Fenner, K.\* (2012). Pesticide Non-extractable Residue Formation in Soil – Insights from Inverse Modeling of Degradation Time Series. *Environmental Science and Technology* **46**(18), 9830-9837.
- Helbling, D. E.; Ackermann, M.; Fenner, K.; Kohler, H.-P. K.; Johnson, D. R. (2012). The Activity Level of a Microbial Community Function Can Be Predicted from Its Metatranscriptome. *International Society of Microbial Ecology Journal* **6**(4), 902-904.
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- Kern, S.; Singer, H.; Hollender, J.; Schwarzenbach, R. P.; Fenner, K.\* (2011). Assessing Exposure to Transformation Products of Soil-Applied Organic Contaminants in Surface Water: Comparison of Model Predictions and Field Data. *Environmental Science and Technology* **45**(7), 2833–2841.
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- Kern, S.; Baumgartner, R.; Helbling, D. E.; Hollender J.; Singer, H.; Loos, M.; Schwarzenbach, R.; Fenner K.\* (2010). A Tiered Procedure for Assessing the Formation of Biotransformation Products of Pharmaceuticals and Biocides During Activated Sludge Treatment. *Journal of Environmental Monitoring* **12**(11), 2100 - 2111.
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<sup>1</sup> \* indicates that K. Fenner is the corresponding author of that publication

- Multifunctional Compounds: Experimental Data and Modeling. *Fluid Phase Equilibria* **299**, 207-215.
- Helbling, D.; Hollender J.; Kohler H.-P.; Fenner K.\* (2010). Structure-Based Interpretation of Biotransformation Pathways of Amide-Containing Compounds in Sludge-Seeded Bioreactors. *Environmental Science and Technology* **44**(17), 6628-6635.
- Helbling, D.; Hollender J.; Kohler H.-P.; Singer, H.; Fenner K. (2010). High-Throughput Identification of Microbial Transformation Products of Organic Micropollutants. *Environmental Science and Technology* **44**(17), 6621-6627. Winner of ES&T best paper award, category science.
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#### SUBMITTED MANUSCRIPTS

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- Gulde, R.; Meier, U.; Schymanski, E.; Kohler, H.-P. E.; Helbling, D. E.; Derrer, S.; Rentsch, D.; Fenner, K.\* (2015). Systematic Exploration of Biotransformation Reactions of Amine-containing Micropollutants in Activated Sludge. Submitted to *Environmental Science and Technology*.
- Singer, H. P.; Wössner, A. E.; McArdell, C. S.; Fenner, K. (2015). Rapid screening for exposure to "non-target" pharmaceuticals from wastewater effluents. Submitted to *Environmental Science and Technology*.

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- Fenner, K. *Exposure assessment for organic contaminants – Improving scope and accuracy*. Habilitation thesis. Department of Environmental Science, ETH Zurich, Zürich, Switzerland, 2010.
- Fenner, K. *Transformation Products in Environmental Risk Assessment: Joint and Secondary Persistence as New Indicators for the Overall Hazard of Chemical Pollutants*. Ph.D. thesis. Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland, 2002.

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- Gheorge, A.; Kogelschatz, D.; Fenner, K.; Harder, A.; Kröger, W. (1999). Integrated Risk Assessment Transportation Dangerous Goods: Introducing Hot Spots Concept as a Solution. In *Safety and Reliability*. Proceedings of the ESREL'99 - The Tenth European Conference on Safety and Reliability. G.I. Schuëller et al. (Eds.), Rotterdam.

#### REPORTS/BOOK CHAPTERS

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- Guidance Document on the Use of Multimedia Models for Estimating Overall Environmental Persistence and Long-Range Transport, OECD Series on Testing and Assessment No.45, ENV/JM/MONO(2004)5, Paris, France.