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Research Projects Completed

- Assessment of micropollutant degradation using multi-element compound-specific isotope analysis (2013)
- Effect of diffusive/dispersive processes on stable isotope ratios of organic contaminants in aquifer systems (2012)
- Isotope fractionation of volatile organic contaminants in porous media under unsaturated conditions: Mechanisms and applications (2011)
- Demonstrating a natural origin of chloroform in groundwater using stable isotope analysis (2010)
- Groundwater resources under changing climatic conditions (2010)
- Isotope fractionation of volatile organic contaminants in porous media under unsaturated conditions: Mechanisms and applications (2008)
- Demonstrating a natural origin of chloroform in groundwater using stable isotope analysis (2008)

Selected Papers

Books and Chapters

- Hunkeler, D., Goldscheider, N., Rossi, P., & Burn, C. (2006). *Biozönosen im Grundwasser: Grundlagen und Methoden der Charakterisierung von mikrobiellen Gemeinschaften*: Bundesamt für Umwelt, BAFU.
- Blum, P., Hunkeler, D., Weede, M., Beyer, C., Grathwohl, P., & Morasch, B. (2007). Quantification of biodegradation for various organic compounds using first-order, Michaelis-Menten kinetics and stable carbon isotopes. In *Geophysical Research Abstracts* (Vol. 9,). Vienna: EGU General Assembly.
- Goldscheider, N., Hunkeler, D., Weede, M., Beyer, C., Grathwohl, P., & Morasch, B. (2007). Heterogeneous aquifers as habitats for microbial biocenoses. In *Proceedings XXXV IAH Congress on Groundwater and Ecosystems, Lisbon* (pp. 302-303).
- Milnes, E., Meilhac, C., Yeo, D., Renard, P., Hunkeler, D., Schnegg, P. A., & Bourret, F. (2006). Hydrogeochemical and hydrogeological investigation in the Akrotiri aquifer: identification of multiple salinisation processes and implementation criteria for monitoring networks. In *Proceedings of the 1st SWIM-SWICA meeting Cagliari*.
- De Weert, J., Van der Zaan, B., Gerritse, J., Langenhoff, A., Tas, N., Van Eekert, M. ., Schraa, G., Smidt, H., Albrechtsen, H. J., Morasch, B., Hoenener, P., & Hunkeler, D. (2005). Biodegradation of organic pollutants and molecular identification of responsible microorganisms in several European river basins. In *Proceedings of the 9th International FZK/TNO Conference on Soil-Water Systems, Bordeaux* (pp. 2837-2838).
- Morasch, B., Höhener, P., & Hunkeler, D. (2005). One method may not be enough: evaluation of intrinsic contaminant degradation. In P. Canepa & F. . Fava (Eds.), *Biomonitoring, Bioavailability and Microbial Transformation of Pollutants in Sediments and Approaches to Stimulate their Biodegradation* (pp. 183-184). Venice: INCA.
- Morasch, B., & Hunkeler, D. (2005). Isotopenfraktionierung zur Bestimmung des natürlichen Abbaus von chlrierten Kohlenwasserstoffen. In *Perspektiven molekularer und isotopischer Methoden zum Nachweis des natürlichen Schadstoffabbaus in Böden* (pp. 31-38). Böden: BMBF Förderschwerpunkt KORA/DECHEMA-IAK.

Journal Articles

- Breider, F., & Hunkeler, D. (2014). Investigating chloroperoxidase-catalyzed formation of chloroform from humic substances using stable chlorine isotope analysis. *Environmental Science and Technology*, 48(3), 1592-1600.
- Breider, F., & Hunkeler, D. (2014). Mechanistic insights into the formation of chloroform from natural organic matter using stable carbon isotope analysis. *Geochimica et Cosmochimica Acta*, 125, 85-95.
- Broholm, M. M., Hunkeler, D., Tuxen, N., Jeannotat, S., & Scheutz, C. (2014). Stable carbon isotope analysis to distinguish biotic and abiotic degradation of 1,1,1-trichloroethane in groundwater sediments. *Chemosphere*.
- Bouchard, D., & Hunkeler, D. (2014). Solvent-based dissolution method to sample gas-phase volatile organic compounds for compound-specific isotope analysis. *Journal of Chromatography A*, 1325, 16-22.
- Wu, Y., & Hunkeler, D. (2013). Hyporheic exchange in a karst conduit and sediment system - A laboratory analog study. *Journal of Hydrology*, 501, 125-132.
- Möck, C., Brunner, P., & Hunkeler, D. (2013). Predictive uncertainty of groundwater recharge rates caused by climate model chain variability and model simplification. *Journal of Hydrology*.
- Jeannotat, S., & Hunkeler, D. (2013). Can soil gas VOCs be related to groundwater plumes based on their isotope signature?. *Environmental Science and Technology*, 47(21), 12115-12122.
- Käser, D., & Hunkeler, D. (2013). Contribution of alluvial groundwater to the outflow of mountainous catchments. *Journal of Hydrology*.
- Ducommun, P., Boutsiadou, X., & Hunkeler, D. (2013). Direct-push multilevel sampling system for unconsolidated aquifers. *Système d'échantillonnage multiports installé par méthode de poussée directe*, 21(8), 1901-1908.
- Damgaard, I., Bjerg, P. L., Bælum, J., Scheutz, C., Hunkeler, D., Jacobsen, C. S., Tuxen, N., & Broholm, M. M. (2013). Identification of chlorinated solvents degradation zones in clay till by high resolution chemical, microbial and compound specific isotope analysis. *Journal of Contaminant Hydrology*, 146, 37-50.