

Curriculum Vitae

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Born: 1967 in Ottobeuren, Germany

Eawag - Swiss Federal Institute
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[Personal Homepage](#)

[Research Group Homepage](#)

[Personal Research Statement](#) (in 'The Analytical Scientist, issue 1215')

Education

1987 - 1991	Studies in Chemistry University of Applied Sciences, Isny, Germany
1991	Diploma in Analytical Chemistry

Professional Experience

	Eawag , Dübendorf, Switzerland
2005 - present	Group Leader of Environmental Analytical Chemistry in the Department of Environmental Chemistry
2000 - 2005	Senior Scientist, Department of Water and Agriculture
1997 - 1999	Scientist, Department of Chemistry
	Research Foundation of the Paper Industry , Munich, Germany
1992 – 1997	Head of Laboratory, Department of Waste Water Management
	Eawag , Dübendorf, Switzerland
1991 - 1992	Research Assistant, Department of Chemistry

Major Research Areas

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| Analytical Chemistry | <ul style="list-style-type: none">▪ Method development for the target, suspect and non-target screening of organic contaminants in ground water, surface water and waste waters by liquid chromatography coupled to high resolution mass spectrometry▪ Development of software workflows for the mining of high resolution mass spectrometry data▪ Hyphenation of gas and liquid chromatography with mass spectrometry (Orbitrap, ToF, TripleQuad instruments) and/or ion mobility spectrometry (IMS) using available atmospheric pressure interfaces (ESI, APCI, APPI, APGC)▪ Advancement of existing active and passive sampling techniques for surface waters▪ Online coupling of sample preparation with LCMS detection for high-throughput measurements of field study samples |
| Environmental Chemistry | <ul style="list-style-type: none">▪ Localization of sources and input pathways of chemicals discharged into surface water by households, agriculture and industry▪ Determination of the occurrence, fate and behavior of emerging contaminants in natural water systems |

Teaching Activities

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| 2007 - present | ETH, Zuerich, Master course on 'Agriculture and Water Quality' |
| 2010 - present | ETH, Zuerich, Master practical course on 'Analysis of Organic Pollutants' |

Major Projects

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| 2016 - 2019 | Waste water of pharmaceutical and chemical industry as sources of contaminants to natural surface waters; Federal Office for the Environment (FOEN), PI |
| 2014 - 2017 | Pesticide monitoring in agricultural headwater catchments in Switzerland (NAWA-SPEZ II), FOEN and Cantons, PI |
| 2009 - 2015 | Identification of unknown compounds at the international monitoring station Basel; FOEN, Canton Basel City, Federal State of Baden-Wuerttemberg LUBW (Germany), PI |
| 2013 - 2014 | Elimination of organic micropollutants in German and Swiss waste water treatment plants with advanced treatment technologies; FOEN, PI |

2011 - 2013	Comprehensive assessment of pesticides in medium sized rivers of the Swiss national river monitoring network (NAWA-Spez I); FOEN and Cantons, PI
2012 - 2013	Identification of the contamination level with organic micropollutants in the river Rhone, FOEN and Cantons, PI
2012 - 2013	Software-supported time series analysis of high resolution mass spectrometer data at the international monitoring station Basel; Canton Basel City, Federal State of Baden-Wuerttemberg LUBW (Germany), PI
2009 - 2011	Mass-flux modeling and multi-compound screening for the integrated assessment of organic micropollutants in the catchment of Lake of Constance; International Commission for the Protection of Lake Constance (IGKB), PI
2005 - 2011	Development of sensitive, fast and reliable methods by fully automated solid phase extraction coupled online to liquid chromatography tandem mass spectrometry (separate methods for pharmaceuticals, pesticides, X-ray contrast media, artificial sweeteners), Cantonal Office for Environment in Schaffhausen (IKL), PI
2005 - 2010	Contributions of agricultural and urban uses to the glyphosate contamination of surface waters studied in a small catchment, FOEN, PI
2007 - 2010	Glyphosate loss following application to railway tracks – contamination risk of surface water and ground water; Swiss Federal Railway (SBB) and FOEN, PI
2005 – 2008	Identification of organic micropollutants in ground wells of the Swiss groundwater monitoring network NAQUA, FOEN, PI
1997 – 2005	Evaluation of mitigation measures to reduce diffuse pesticide loss from agricultural fields (Evaluation der Ökomassnahmen – BLW); Federal Office for Agriculture, PI

PhD committees

Martin Loos	Department of Environmental Sciences, ETH Zürich, Switzerland
Leendert Vergeynst	Department of Sustainable Organic Chemistry and Technology, Faculty of Bioscience Engineering, Ghent University, Belgium

Supervision

PhD students

Sabine Anliker, '*Detection of contaminant pulses in surface waters by chemical fingerprinting in time series analysis*', ETH, Zürich, ongoing

Martin Loos, '*Mining of High-Resolution Mass Spectrometry Data to Monitor Organic Pollutant Dynamics in Aquatic Systems*', ETH, Zürich, 2012-2015

Co-Supervisor for the analytical developments within the PhD of Stefan Achermann, Nicole Munz, Mechelke Jonas, Michele Stravs, Christoph Moschet, Sebastian Huntscha, Susanne Kern

Master students

Rahel Comte, '*Software-based evaluation of time series for discharges of industrial substances in wastewater effluent measured with LC-HRMS*', ETH, Zürich, 2015

Anna Brunnert, '*Development of a novel online solid phase extraction method with flexible eluent choice coupled to liquid chromatography – high resolution mass spectrometry to screen organic micropollutants in water*', University of Duisburg-Essen, 2014

Bernadette Vogler, '*Development of a Comprehensive Multicomponent Screening Method for Polar Organic Compounds using LC-Orbitrap*', University of Zürich, 2013

Alessandro Piazzoli, '*Development and Application of a Screening Method for Insecticides and Fungicides in Surface Waters by Liquid Chromatography High Resolution Mass*', ETH, Zürich, 2012

Annika Woessner, '*The evaluation of analytical and model-based approaches to assess the exposure of surface waters with human pharmaceuticals*', ETH, Zürich, 2012

Miriam Mueller, '*Polar Organic Micro-pollutants in the River Rhine: Multi-compound Screening and Mass Flux Studies of Selected Substances*', Technical University of Berlin, 2011

Florian Heeb, '*Mass flux study of polar organic micropollutants in the Haihe River System near Beijing.*', ETH, Zürich, 2011

Christoph Moschet, '*Georeferenced mass flux modelling of selected micropollutants in the catchment of lake Constance*', ETH Zürich, 2010

David Pluess, 'Development of a workflow for the non-target screening using a LTQ-Orbitrap mass spectrometer', University of Basel, 2010

Carolin Frank, 'Entwicklung einer online Solid Phase Extraktion- Flüssigkeitschromatographie-Tandem-Massenspektrometrie-Methode zur Bestimmung von Arzneimitteln in Spitalabwasser', University of Applied Sciences, Weihenstephan, 2009

Simone Bischofberger, 'Urban and agricultural sources and input pathways of glyphosate into surface waters', ETH Zürich, 2009

Judith Schenzel, 'Entwicklung einer vollautomatisierten Festphasenanreicherungs-Flüssigkeitschromatographie-Tandem-Massenspektrometrie - Methode zur Quantifizierung ausgewählter Pharmazeutika und Korrosionsschutzmittel in wässrigen Umweltproben', Technical University of Karlsruhe, 2008

Benjamin Bomastyk, 'Entwicklung einer Multikomponenten-Screeningmethode zur Identifizierung von organischen Mikroverunreinigungen in ausgewählten Grundwasservorkommen mittels hochauflösender Hybridmassenspektrometrie', University of Duisburg-Essen, 2007

Sebastian Huntscha, 'Eintrags- und Abbauverhalten von Metolachlor-ESA im Oberflächengewässer - Massenbilanzierung im Greifensee', University of Trier, 2007

Dorothea Kujawinski, 'Anwendung und Validierung einer Analysenmethode zur Bestimmung von Glyphosat, Glufosinat und Aminomethylphosphonsäure in wässrigen Umweltmatrices', University of Duisburg-Essen, 2006

Project collaborators	PostDocs, Research Assistants, and Trainees as non-permanent staff members
Technical collaborators	Philipp Longree and Andreas Maccagnan as permanent Eawag staff members

Other Activities

Reviews	Environmental Science and Technology, Water Research, Analytical Chemistry, Journal of Chromatography A, Analytical and Bioanalytical Chemistry, Journal of Hazardous Materials, Science of the Total Environment, Chemosphere, Environmental Pollution, Environmental Science and Pollution Research
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Organizing Committees	Co-Organizer of the international conference Non-target2016 ' <i>Non-target screening of organic chemicals for a comprehensive environmental risk assessment</i> ', Monte Verità, Switzerland, 2016
	Co-Organizer of Norman <i>Non-target collaborative trial workshop and Nontarget screening workshop</i> , Eawag, Dübendorf, Switzerland, 2014
	Main Organizer of PEAK course (practical Eawag course) ' <i>High resolution mass spectrometry</i> ', Eawag, Dübendorf, Switzerland, 2014
	Co-Organizer of the ICCE satellite event ' <i>Non-target screening by liquid chromatography coupled to high resolution mass spectrometry</i> ', ETH, Zürich, Switzerland, 2011
Commissions	IKSR working group SANA, Germany
	Lab'Eaux working group LCMS, Switzerland
	GDCh working group NON-TARGET, Germany

Presentations

2005 - 2016	<i>In total over 50 presentations at national and international conferences</i>
	<i>Selection of personal highlights:</i>
2016	International Conference on Non-target Screening, Conference Centre Monte Verità, Ascona, Switzerland, ' <i>Routine non-target monitoring of river Rhine water quality: A Pandora's box?</i> '
2016	LC/MS/MS Workshop on Environmental Applications, Barcelona, Spain, ' <i>Locating point and diffuse sources in the aquatic environment by time series acquisition using LC-HRMS data</i> '
2015	International Symposium on Pesticide Analysis, Prague, Czech Republic, ' <i>Comprehensive Target and Suspect Screening of Pesticides in Surface Waters - Implications for the Assessment of Surface Water Quality</i> '

- 2015 Langenauer Wasserforum, Langenau, Germany, *'Flüssigkeitschromatographie mit hochauflösender Massenspektrometrie: Target-, Suspect- und Non-Target-Analytik'*
- 2014 ISEAC Symposium EPFL, Lausanne, Switzerland, *'High-resolution mass spectrometry: exploring the contaminant diversity of the aquatic environment'*
- 2014 Mülheimer Wasseranalytisches Seminar, Mülheim, Germany, *'Die hoch auflösende Massenspektrometrie in der Wasseranalytik Erfahrungen, Ergebnisse, methodische Weiterentwicklungen'*
- 2013 ASMS Annual Conference on Mass Spectrometry, Minneapolis, USA, *'Exact mass screening of 1024 pharmaceuticals in wastewater samples using QExactive mass spectrometer'*
- 2012 ASMS Annual Conference on Mass Spectrometry, Vancouver, Canada, *'Characterization of treated wastewater by high resolution mass spectrometry - Extending the boundaries of non-target screening'*
- 2011 Annual LC/MS/MS Workshop on Environmental Applications and Food Safety, Buffalo, USA, *'Target and non-target screening of organic contaminants in environmental samples using the Orbitrap'*
- 2010 Fall Meeting of the Swiss Chemical Society, Zürich, Switzerland, *'Exploring the target and non-target analyte screening capabilities of high resolution mass spectrometry for natural water samples'*
- 2009 American Chemical Society – ACS National Meeting, Washington, USA, *'Exploring the non-target analyte screening capabilities of high resolution mass spectrometry for natural water samples'*
- 2008 Workshop on Sucralose, European Environment Agency, Copenhagen, Denmark, *'Occurrence of sucralose in Swiss surface, waste and ground water'*

56 publications in peer-reviewed journals

[Web of Science](#) (Aug 2016)

- **Citations 3626**
- **H-Index 32**

[GOOGLE Scholar](#) (Aug 2016)

- **Citations 5598**
- **H-Index 37**

Singer H. P.*, Wossner A.E., McArdell C.S., Fenner K., *Rapid Screening for Exposure to "Non-Target" Pharmaceuticals from Wastewater Effluents by Combining HRMS-Based Suspect Screening and Exposure Modeling*. Environ Sci Technol. 2016, 50, 6698-6707.

Stravs M.A., Mechelke J., Ferguson P.L., **Singer H. P.**, Hollender J., *Microvolume trace environmental analysis using peak-focusing online solid-phase extraction-nanoliquid chromatography-high-resolution mass spectrometry*. Anal Bioanal Chem. 2016, 408, 1879-1890.

Ruff, M.; Mueller, M. S.; Loos, M.; **Singer, H. P.***, *Quantitative target and systematic non-target analysis of polar organic micro-pollutants along the river Rhine using high-resolution mass-spectrometry - Identification of unknown sources and compounds*. Water Research 2015, 87, 145-154.

Schymanski, E. L.; **Singer, H. P.**; Slobodnik, J.; Ipolyi, I. M.; Oswald, P.; Krauss, M.; Schulze, T.; Haglund, P.; Letzel, T.; Grosse, S.; Thomaidis, N. S.; Bletsou, A.; Zwiener, C.; Ibáñez, M.; Portolés, T.; De Boer, R.; Reid, M. J.; Onghena, M.; Kunkel, U.; Schulz, W.; Guillon, A.; Noyon, N.; Leroy, G.; Bados, P.; Bogialli, S.; Stipanichev, D.; Rostkowski, P.; Hollender, J., *Non-target screening with high-resolution mass spectrometry: Critical review using a collaborative trial on water analysis*. Analytical and Bioanalytical Chemistry 2015, 407, (21), 6237-6255.

Qi, W.; **Singer, H.**; Berg, M.; Müller, B.; Pernet-Coudrier, B.; Liu, H.; Qu, J., *Elimination of polar micropollutants and anthropogenic markers by wastewater treatment in Beijing, China*. Chemosphere 2015, 119, 1054-1061.

Moschet, C.; Vermeirssen, E. L. M.; **Singer, H.**; Stamm, C.; Hollender, J., *Evaluation of in-situ calibration of chemcatcher passive samplers for 322 micropollutants in agricultural and urban affected rivers*. Water Research 2015, 71, 306-317.

Loos, M.; Gerber, C.; Corona, F.; Hollender, J.; **Singer, H.**, *Accelerated isotope fine structure calculation using pruned transition trees*. Analytical Chemistry 2015, 87, (11), 5738-5744.

Schymanski, E. L.; **Singer, H. P.**; Longree, P.; Loos, M.; Ruff, M.; Stravs, M. A.; Ripolles Vidal, C.; Hollender, J., *Strategies to Characterize Polar Organic Contamination in Wastewater: Exploring the Capability of High Resolution Mass Spectrometry*. Environmental Science & Technology 2014, 48, (3), 1811-1818.

Schymanski, E. L.; Jeon, J.; Gulde, R.; Fenner, K.; Ruff, M.; **Singer, H. P.**; Hollender, J., *Identifying Small Molecules via High Resolution Mass Spectrometry*:

Communicating Confidence. Environmental Science & Technology 2014, 48, (4), 2097-2098.

Qi, W.; Mueller, B.; Pernet-Coudrier, B.; **Singer, H.**; Liu, H.; Qu, J.; Berg, M., *Organic micropollutants in the Yangtze River: Seasonal occurrence and annual loads*. Science of the Total Environment 2014, 472, 789-799.

Moschet, C.; Wittmer, I.; Simovic, J.; Junghans, M.; Piazzoli, A.; **Singer, H.**; Stamm, C.; Leu, C.; Hollender, J., *How a Complete Pesticide Screening Changes the Assessment of Surface Water Quality*. Environmental Science & Technology 2014, 48, (10), 5423-5432.

Hollender, J.; Bourgin, M.; Fenner, K. B.; Longree, P.; McArdell, C. S.; Moschet, C.; Ruff, M.; Schymanski, E. L.; **Singer, H. P.**, *Exploring the Behaviour of Emerging Contaminants in the Water Cycle using the Capabilities of High Resolution Mass Spectrometry*. Chimia 2014, 68, (11), 793-798.

Gros, M.; Cruz-Morato, C.; Marco-Urrea, E.; Longree, P.; **Singer, H.**; Sarra, M.; Hollender, J.; Vicent, T.; Rodriguez-Mozaz, S.; Barcelo, D., *Biodegradation of the X-ray contrast agent iopromide and the fluoroquinolone antibiotic ofloxacin by the white rot fungus *Trametes versicolor* in hospital wastewaters and identification of degradation products*. Water Research 2014, 60, 228-241.

Chiaia-Hernandez, A. C.; Schymanski, E. L.; Kumar, P.; **Singer, H. P.**; Hollender, J., *Suspect and nontarget screening approaches to identify organic contaminant records in lake sediments*. Analytical and Bioanalytical Chemistry 2014, 406, (28), 7323-7335.

Stravs, M. A.; Schymanski, E. L.; **Singer, H. P.**; Hollender, J., *Automatic recalibration and processing of tandem mass spectra using formula annotation*. Journal of Mass Spectrometry 2013, 48, (1), 89-99.

Moschet, C.; Piazzoli, A.; **Singer, H.***; Hollender, J., *Alleviating the Reference Standard Dilemma Using a Systematic Exact Mass Suspect Screening Approach with Liquid Chromatography-High Resolution Mass Spectrometry*. Analytical Chemistry 2013, 85, (21), 10312-10320.

Moschet, C.; Gotz, C.; Longree, P.; Hollender, J.; **Singer, H.***, *Multi-Level Approach for the Integrated Assessment of Polar Organic Micropollutants in an International Lake Catchment: The Example of Lake Constance*. Environmental Science & Technology 2013, 47, (13), 7028-7036.

Kovalova, L.; Siegrist, H.; **Singer, H.**; Wittmer, A.; McArdell, C. S., *Hospital Wastewater Treatment by Membrane Bioreactor: Performance and Efficiency for Organic Micropollutant Elimination*. Environmental Science & Technology 2012, 46, (3), 1536-1545.

Huntscha, S.; **Singer, H. P.***; McArdell, C. S.; Frank, C. E.; Hollender, J., *Multiresidue analysis of 88 polar organic micropollutants in ground, surface and wastewater using online mixed-bed multilayer solid-phase extraction coupled to high performance liquid chromatography-tandem mass spectrometry*. Journal of Chromatography A 2012, 1268, 74-83.

Heeb, F.; **Singer, H.***; Pernet-Coudrier, B.; Qi, W. X.; Liu, H. J.; Longree, P.; Muller, B.; Berg, M., *Organic Micropollutants in Rivers Downstream of the Megacity Beijing: Sources and Mass Fluxes in a Large-Scale Wastewater Irrigation System*. Environmental Science & Technology 2012, 46, (16), 8680-8688.

Wittmer, I. K.; Scheidegger, R.; Bader, H. P.; **Singer, H.**; Stamm, C., *Loss rates of urban biocides can exceed those of agricultural pesticides*. *Science of the Total Environment* 2011, 409, (5), 920-932.

Kern, S.; **Singer, H.**; Hollender, J.; Schwarzenbach, R. P.; Fenner, K., *Assessing Exposure to Transformation Products of Soil-Applied Organic Contaminants in Surface Water: Comparison of Model Predictions and Field Data*. *Environmental Science & Technology* 2011, 45, (7), 2833-2841.

Wittmer, I. K.; Bader, H. P.; Scheidegger, R.; **Singer, H.**; Luck, A.; Hanke, I.; Carlsson, C.; Stamm, C., *Significance of urban and agricultural land use for biocide and pesticide dynamics in surface waters*. *Water Research* 2010, 44, (9), 2850-2862.

Singer, H.; Jaus, S.; Hanke, I.; Luck, A.; Hollender, J.; Alder, A. C., *Determination of biocides and pesticides by on-line solid phase extraction coupled with mass spectrometry and their behaviour in wastewater and surface water*. *Environmental Pollution* 2010, 158, (10), 3054-3064.

Neset, T.-S. S.; **Singer, H.**; Longree, P.; Bader, H.-P.; Scheidegger, R.; Wittmer, A.; Andersson, J. C. M., *Understanding consumption-related sucralose emissions - A conceptual approach combining substance-flow analysis with sampling analysis*. *Science of the Total Environment* 2010, 408, (16), 3261-3269.

Krauss, M.; **Singer, H.***; Hollender, J., *LC-high resolution MS in environmental analysis: from target screening to the identification of unknowns*. *Analytical and Bioanalytical Chemistry* 2010, 397, (3), 943-951.

Knauert, S.; **Singer, H.**; Hollender, J.; Knauer, K., *Phytotoxicity of atrazine, isoproturon, and diuron to submersed macrophytes in outdoor mesocosms*. *Environmental Pollution* 2010, 158, (1), 167-174.

Kern, S.; Baumgartner, R.; Helbling, D. E.; Hollender, J.; **Singer, H.**; Loos, M. J.; Schwarzenbach, R. P.; Fenner, K., *A tiered procedure for assessing the formation of biotransformation products of pharmaceuticals and biocides during activated sludge treatment*. *Journal of Environmental Monitoring* 2010, 12, (11), 2100-2111.

Helbling, D. E.; Hollender, J.; Kohler, H.-P. E.; **Singer, H.**; Fenner, K., *High-Throughput Identification of Microbial Transformation Products of Organic Micropollutants*. *Environmental Science & Technology* 2010, 44, (17), 6621-6627.

Hanke, I.; Wittmer, I.; Bischofberger, S.; Stamm, C.; **Singer, H.***, *Relevance of urban glyphosate use for surface water quality*. *Chemosphere* 2010, 81, (3), 422-429.

Gotz, C. W.; Stamm, C.; Fenner, K.; **Singer, H.**; Scharer, M.; Hollender, J., *Targeting aquatic microcontaminants for monitoring: exposure categorization and application to the Swiss situation*. *Environmental Science and Pollution Research* 2010, 17, (2), 341-354.

Dodd, M. C.; Rentsch, D.; **Singer, H. P.**; Kohler, H.-P. E.; von Gunten, U., *Transformation of beta-Lactam Antibacterial Agents during Aqueous Ozonation: Reaction Pathways and Quantitative Bioassay of Biologically-Active Oxidation Products*. *Environmental Science & Technology* 2010, 44, (15), 5940-5948.

Vermeirssen, E. L. M.; Bramaz, N.; Hollender, J.; **Singer, H.**; Escher, B. I., *Passive sampling combined with ecotoxicological and chemical analysis of pharmaceuticals and biocides - evaluation of three Chemcatcher (TM) configurations*. *Water Research* 2009, 43, (4), 903-914.

- Kern, S.; Fenner, K.; **Singer, H. P.**; Schwarzenbach, R. P.; Hollender, J., *Identification of Transformation Products of Organic Contaminants in Natural Waters by Computer-Aided Prediction and High-Resolution Mass Spectrometry*. Environmental Science & Technology 2009, 43, (18), 7039-7046.
- Hollender, J.; Zimmermann, S. G.; Koepke, S.; Krauss, M.; McArdell, C. S.; Ort, C.; **Singer, H.**; von Gunten, U.; Siegrist, H., *Elimination of Organic Micropollutants in a Municipal Wastewater Treatment Plant Upgraded with a Full-Scale Post-Ozonation Followed by Sand Filtration*. Environmental Science & Technology 2009, 43, (20), 7862-7869.
- Knauert, S.; Escher, B.; **Singer, H.**; Hollender, J.; Knauer, K., *Mixture toxicity of three photosystem II inhibitors (atrazine, isoproturon, and diuron) toward photosynthesis of freshwater phytoplankton studied in outdoor mesocosms*. Environmental Science & Technology 2008, 42, (17), 6424-6430.
- Huntscha, S.; **Singer, H.**; Canonica, S.; Schwarzenbach, R. P.; Fenner, K., *Input dynamics and fate in surface water of the herbicide metolachlor and of its highly mobile transformation product metolachlor ESA*. Environmental Science & Technology 2008, 42, (15), 5507-5513.
- Hanke, I.; **Singer, H.***; Hollender, J., *Ultratrace-level determination of glyphosate, aminomethylphosphonic acid and glufosinate in natural waters by solid-phase extraction followed by liquid chromatography-tandem mass spectrometry: performance tuning of derivatization, enrichment and detection*. Analytical and Bioanalytical Chemistry 2008, 391, (6), 2265-2276.
- Freitas, L. G.; **Singer, H.**; Muller, S. R.; Schwarzenbach, R. P.; Stamm, C., *Source area effects on herbicide losses to surface waters - A case study in the Swiss Plateau*. Agriculture Ecosystems & Environment 2008, 128, (3), 177-184.
- Stoob, K.; **Singer, H. P.**; Mueller, S. R.; Schwarzenbach, R. P.; Stamm, C. H., *Dissipation and transport of veterinary sulfonamide antibiotics after manure application to grassland in a small catchment*. Environmental Science & Technology 2007, 41, (21), 7349-7355.
- Stoob, K.; **Singer, H. P.**; Stettler, S.; Hartmann, N.; Mueller, S. R.; Stamm, C. H., *Exhaustive extraction of sulfonamide antibiotics from aged agricultural soils using pressurized liquid extraction*. Journal of Chromatography A 2006, 1128, (1-2), 1-9.
- Chevre, N.; Loepppe, C.; **Singer, H.**; Stamm, C.; Fenner, K.; Escher, B. I., *Including mixtures in the determination of water quality criteria for herbicides in surface water*. Environmental Science & Technology 2006, 40, (2), 426-435.
- Stoob, K.; **Singer, H. P.**; Goetz, C. W.; Ruff, M.; Mueller, S. R., *Fully automated online solid phase extraction coupled directly to liquid chromatography-tandem mass spectrometry - Quantification of sulfonamide antibiotics, neutral and acidic pesticides at low concentrations in surface waters*. Journal of Chromatography A 2005, 1097, (1-2), 138-147.
- Leu, C.; **Singer, H.**; Muller, S. R.; Schwarzenbach, R. P.; Stamm, C., *Comparison of atrazine losses in three small headwater catchments*. Journal of Environmental Quality 2005, 34, (5), 1873-1882.
- Burkhardt, M.; Stamm, C.; Waul, C.; **Singer, H.**; Muller, S., *Surface runoff and transport of sulfonamide antibiotics and tracers on manured grassland*. Journal of Environmental Quality 2005, 34, (4), 1363-1371.

Stamm, C.; Waul, C.; Leu, C.; Freitas, L. G.; Popow, G.; **Singer, H.**; Muller, S., *Sorption effects on herbicide losses to surface waters in a small catchment of the Swiss Plateau*. Zeitschrift Fur Pflanzenkrankheiten Und Pflanzenschutz-Journal of Plant Diseases and Protection 2004, 951-958.

Leu, C.; **Singer, H.**; Stamm, C.; Muller, S. R.; Schwarzenbach, R. P., *Variability of herbicide losses from 13 fields to surface water within a small catchment after a controlled herbicide application*. Environmental Science & Technology 2004, 38, (14), 3835-3841.

Leu, C.; **Singer, H.**; Stamm, C.; Muller, S. R.; Schwarzenbach, R. P., *Simultaneous assessment of sources, processes, and factors influencing herbicide losses to surface waters in a small agricultural catchment*. Environmental Science & Technology 2004, 38, (14), 3827-3834.

Freitas, L. G.; Gotz, C. W.; Ruff, M.; **Singer, H. P.**; Muller, S. R., *Quantification of the new triketone herbicides, sulcotrione and mesotrione, and other important herbicides and metabolites, at the ng/l level in surface waters using liquid chromatography-tandem mass spectrometry*. Journal of Chromatography A 2004, 1028, (2), 277-286.

Tixier, C.; **Singer, H. P.**; Oellers, S.; Muller, S. R., *Occurrence and fate of carbamazepine, clofibric acid, diclofenac, ibuprofen, ketoprofen, and naproxen in surface waters*. Environmental Science & Technology 2003, 37, (6), 1061-1068.

Tixier, C.; **Singer, H. P.**; Canonica, S.; Muller, S. R., *Phototransformation of triclosan in surface waters: A relevant elimination process for this widely used biocide - Laboratory studies, field measurements, and modeling*. Environmental Science & Technology 2002, 36, (16), 3482-3489.

Singer, H.; Muller, S.; Tixier, C.; Pillonel, L., *Triclosan: Occurrence and fate of a widely used biocide in the aquatic environment: Field measurements in wastewater treatment plants, surface waters, and lake sediments*. Environmental Science & Technology 2002, 36, (23), 4998-5004.

Gerecke, A. C.; Scharer, M.; **Singer, H. P.**; Muller, S. R.; Schwarzenbach, R. P.; Sagesser, M.; Ochsenbein, U.; Popow, G., *Sources of pesticides in surface waters in Switzerland: pesticide load through waste water treatment plants-current situation and reduction potential*. Chemosphere 2002, 48, (3), 307-315.

Oellers, S.; **Singer, H. P.**; Fassler, P.; Muller, S. R., *Simultaneous quantification of neutral and acidic pharmaceuticals and pesticides at the low-ng/l level in surface and waste water*. Journal of Chromatography A 2001, 911, (2), 225-234.

Mueller, S. R.; **Singer, H. P.**; Canonica, S., *Fate and behavior of the biocide triclosan in the aquatic environment*. Abstracts of Papers of the American Chemical Society 2000, 219, U624-U624.

Ulrich, M. M.; Muller, S. R.; **Singer, H. P.**; Imboden, D. M.; Schwarzenbach, R. P., *Input and Dynamic Behavior of the Organic Pollutants Tetrachloroethene, Atrazine, and NTA in a Lake - a Study Combining Mathematical-Modeling and Field-Measurements*. Environmental Science & Technology 1994, 28, (9), 1674-1685.

* Corresponding author

Publications (not peer-reviewed)

- Moschet C., Wittmer I., Singer H., Stamm C., Hollender J. *Insektizide und Fungizide in Fliessgewässern. Wichtig zur Beurteilung der Gewässerqualität.* Aqua & Gas 2015, 4, 54-65, SVGW.
- Goetz, C., Otto, J.; Singer H., *Überprüfung des Reinigungseffekts – Auswahl geeigneter organischer Spurenstoffe.* Aqua&Gas 2015, 2, 34-40, SVGW.
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