

## IVM/OMK peer-reviewed publications 2017

1. Abdollahi A., Eng A., Jantunen L. M., **Ahrens** L., Shoeib M., Parnis J. M., Harner T. 2017. Characterization of polyurethane foam (PUF) and sorbent impregnated PUF (SIP) disk passive air samplers for measuring organophosphate flame retardants. *Chemosphere* 167, 212–219.
2. Åkerblom S., Negm N., Wu, P., Bishop K., **Ahrens** L. 2017. Variation and accumulation patterns of poly- and perfluoroalkyl substances (PFAS) in European perch (*Perca fluviatilis*) across a gradient of pristine Swedish lakes. *Science of the Total Environment* 599-600, 1685–1692.
3. Baudy P., Zubrod J.P., Kanschak M., Weil M., Schulz R., **Bundschuh** M. 2017. Does long-term fungicide exposure affect the reproductive performance of leaf-shredders? A partial life-cycle study using *Hyaella azteca*. *Environmental Pollution* 222, 458-464.
4. Blum K.M., Andersson P.L., Renman G., **Ahrens** L., **Gros** M., **Wiberg** K., Haglund P. 2017. Non-target screening and prioritization of potentially persistent, bioaccumulating and toxic urban wastewater contaminants and their removal in on-site and large-scale sewage treatment plants. *Science of the Total Environment* 575, 265–75.
5. Brits M., Gorst-Allman P., Rohwer E.R., De Vos J., de Boer J., **Weiss** J.M. 2017. Comprehensive two-dimensional gas chromatography coupled to high resolution time-of-flight mass spectrometry for screening of organohalogenated compounds in cat hair. *Journal of Chromatography A.*, on line. <https://doi.org/10.1016/j.chroma.2017.08.055>
6. **Bundschuh** M., Hahn T., Gessner M.O., Schulz R. 2017. Antibiotic mixture effects on growth of the leaf-shredding stream detritivore *Gammarus fossarum*. *Ecotoxicology* 26, 547-554.
7. **Bundschuh** M., Schulz R., Schäfer R.B., Allen C.R., Angeler D.G. 2017. Resilience in Ecotoxicology - towards a multiple equilibrium concept. *Environmental Toxicology and Chemistry* 36, 2574-2580.
8. Dawoud M., **Bundschuh** M., Goedkoop W., McKie B.G. 2017. Interactive effects of an insecticide and a fungicide on different organism groups and ecosystem functioning in a stream detrital food web. *Aquatic Toxicology* 186, 215-221.
9. Englert D., Bakanov N., Zubrod J.P., Schulz R., **Bundschuh** M. 2017. Modeling remobilization of neonicotinoid residues from tree foliage in streams – a relevant exposure pathway in risk assessment? *Environmental Science & Technology* 51, 1785–1794.
10. Englert D., Zubrod J.P., Link M., Mertins S., Schulz R., **Bundschuh** M. 2017. Does waterborne exposure explain effects caused by neonicotinoid-contaminated plant material in aquatic systems? *Environmental Science & Technology* 51, 5793-5802.
11. Englert D., Zubrod J.P., Pietz S., Stefani S., Krauss M., Schulz R., **Bundschuh** M. 2017. Relative importance of dietary uptake and waterborne exposure for a leaf-shredding amphipod exposed to thiacloprid-contaminated leaves. *Scientific Reports* 7, 16182. DOI:10.1038/s41598-017-16452-9

12. **Feckler A.**, Goedkoop W., Kanschak M., Bundschuh R., Kenngott K.G.J., Schulz R., Zubrod J.P., **Bundschuh M.** 2017. History matters: heterotrophic microbial community structure and function adapt to multiple stressors. *Global Change Biology* on line. DOI: 10.1111/gcb.13859
13. **Feckler A.**, Schrimpf A., **Bundschuh M.**, Bärlocher F., Baudy P., Cornut J., Schulz R. 2017. Quantitative real-time PCR as a promising tool for the detection and quantification of leaf-associated fungal species – a proof of principle using *Alatospora pulchella*. *PLoS One* 12(4): e0174634.
14. Finotello S., **Feckler A.**, **Bundschuh M.**, Johansson F. 2017. Repeated pulse exposures to lambda-cyhalothrin affect the behavior, physiology, and survival of the damselfly larvae *Ischnura graellsii* (Insecta; Odonata). *Ecotoxicology and Environmental Safety* 144, 107-114.
15. **Gago-Ferrero P.**, Gros M., **Ahrens L.**, **Wiberg K.** 2017. Impact of on-site, small and large scale waste water treatment facilities on levels and fate of pharmaceuticals, personal care products, pesticides, and perfluoroalkyl substances in recipient waters. *Science of the Total Environment* 601-602, 1289–1297.
16. **Gobelius L.**, Lewis J., **Ahrens L.** 2017. Plant uptake of per- and polyfluoroalkyl substances at a contaminated fire training facility to evaluate the phytoremediation potential of various plant species. *Environmental Science & Technology* 51, 12602-12610.
17. **Gros M.**, Blum K.M., **Jernstedt H.**, Renman G., Rodríguez-Mozaz S., Haglund P., Andersson P.L., **Wiberg K.**, **Ahrens L.** 2017. Screening and prioritization of micropollutants in wastewaters from on-site sewage treatment. *Journal of Hazardous Materials* 328, 37-45.
18. **Gustavsson J.**, **Ahrens L.**, **Nguyen M.A.**, **Josefsson S.**, **Wiberg K.** 2017. Development and comparison of gas chromatography–mass spectrometry techniques for analysis of flame retardants. *Journal of Chromatography A* 1481, 116-126.
19. **Gustavsson J.**, **Ahrens L.**, **Nguyen M.A.**, Berggren Kleja D., **Josefsson S.**, **Wiberg K.** 2017. Influence of natural organic matter on the extraction efficiency of flame retardants from surface waters *Journal of Chromatography A* 1524, 74-86.
20. Gustavsson M., **Kreuger J.**, **Bundschuh M.** & Backhaus T. 2017. Pesticide mixtures in the Swedish streams: environmental risks, contributions of individual compounds and consequences of single-substance oriented mitigation. *Science of the Total Environment* 598, 973-983.
21. Hilbeck A., Bundschuh R., **Bundschuh M.**, Hofmann F., Oehen B., Otto M., Schulz R., Trtikova M. 2017. Procedure to select test organisms for environmental risk assessment of genetically modified crops in aquatic systems. *Integrated Environmental Assessment and Management* 13, 974-979.
22. Kalčíkova G., Alič B., Skalar T., **Bundschuh M.**, Žgajnar Gotvajn, A. 2017. Wastewater treatment plant effluents as source of cosmetic polyethylene microbeads to freshwater. *Chemosphere* 88, 25-31.
23. Kothawala D.N., Köhler S.J., Östlund A., **Wiberg K.**, **Ahrens L.** 2017. Influence of dissolved organic matter concentration and composition on the removal efficiency of perfluoroalkyl substances (PFASs) during drinking water treatment. *Water Research*, 121, 320-328.

24. Lidman J., Jonsson M., Burrows R., **Bundschuh** M., Sponseller R.A. 2017. Composition of riparian litter input regulates organic matter decomposition: implications for headwater stream functioning in a managed forest landscape. *Ecology and Evolution* 7, 1068-1077.
25. McCleaf P., Englund S., Östlund A., Lindegren K., **Wiberg** K., **Ahrens** L. 2017. Removal efficiency of multiple perfluoroalkyl substances (PFASs) in drinking water using granular activated carbon (GAC) and anion exchange (AE) column tests. *Water Research* 120, 77-87.
26. Münze R., Hannemann C., Orlinskiy P., Gunold R., Paschke A., Foit K., Becker J., Kaske O., **Paulsson** E., **Peterson** M., **Jernstedt** H., **Kreuger** J., Schüürmann G., Liess, M. 2017. Pesticides from wastewater treatment plants effluents affect invertebrate communities. *Science of the Total Environment* 599-600, 387-399.
27. **Nguyen** M. A., **Wiberg** K., Ribeli E., **Josefsson** S., Futter M., **Gustavsson** J., **Ahrens** L. 2017. Spatial distribution and source tracing of per- and polyfluoroalkyl substances (PFASs) in surface water in Northern Europe. *Environmental Pollution* 220, 1438–1446.
28. Stableski J., Salihovic S., Lind P.M., Lind L., Dunder L., McCleaf P., Eurén K., **Ahrens** L., Svartengren M., van Bavel B., Kärman A. 2017. The effect of drinking water contaminated with perfluoroalkyl substances on a 10-year longitudinal trend of plasma levels in an elderly Uppsala cohort. *Environmental Research* 159, 95–102.
29. Zubrod J.P., Bundschuh R., Englert D., Rohrberg M., Wieczorek M.V., Bakanov N., Schulz R., **Bundschuh** M. 2017. Transient effects following peak exposures towards pesticides – an explanation for the unresponsiveness of in situ measured functional variables *Environmental Pollution* 231, 1393-1397.
30. Zubrod J.P., Englert D., Wolfram J., Rosenfeldt R.R., **Feckler** A., Bundschuh R., Seitz F., Kanschak M., Baudy P., Lüderwald S., Fink P., Lorke A., Schulz R., **Bundschuh** M. 2017. Long-term effects of fungicides on leaf-associated microorganisms and shredder populations – an artificial stream study. *Environmental Toxicology and Chemistry* 36, 2178-2189.
31. Zubrod J.P., Englert D., Lüderwald S., Poganiuch S., Schulz R., **Bundschuh** M. 2017. History matters: pre-exposure to wastewater enhances pesticide toxicity in invertebrates. *Environmental Science & Technology* 51, 9280–9287.

## IVM/OMK REPORTS and POPULAR SCIENCE PUBLICATIONS 2017

1. **Boström G., Gönczi M., Kreuger J.** 2017. Växtskyddsmedel som regelbundet överskrider riktvärden för ytvatten – en undersökning av bakomliggande orsaker. CKB Rapport 2017:2. 38 pp. CKB, Sveriges lantbruksuniversitet, Uppsala. ISBN: 978-91-576-9529-1.
2. **Gustavsson J., Fischer S., Ahrens L., Wiberg K.** 2017. Replacement substances for the brominated flame retardants PBDE, HBCDD, and TBBPA. Report to Swedish EPA. Contract 2219-16-036.
3. **Jonsson O., Kreuger J.** 2017. Studie av växtskyddsmedels stabilitet i honungsbin samt av individvariation i fältexponering. CKB Rapport 2017:1. 21 pp + bilagor. CKB, Sveriges lantbruksuniversitet, Uppsala. ISBN: 978-91-576-9369-3.
4. **Lindström B., Boström G., Gönczi M., Kreuger J.** 2017. Nationell screening av bekämpningsmedel i åar i jordbruksområden 2016. Uppföljning av 2015 års undersökning. IVM Rapport 2017:5. 39 pp + bilagor. Institutionen för vatten och miljö, Sveriges lantbruksuniversitet, Uppsala.
5. **Nanos T., Kreuger J.** 2017. Bekämpningsmedel i tre gotländska vattendrag. Sammanställning och bedömning av resultat från provtagning 2009-2015. IVM Rapport 2017:3. 26 pp + bilagor. Institutionen för vatten och miljö, Sveriges lantbruksuniversitet, Uppsala.

## IVM/OMK peer-reviewed publications 2018

1. Blum K.M., Andersson P.L., **Ahrens L.**, **Wiberg K.**, Haglund P. 2018. Persistence, mobility and bioavailability of emerging organic contaminants discharged from sewage treatment plants. *Science of the Total Environment* 612, 1532-1542.
2. Dalahmeh S., **Ahrens L.**, **Gros M.**, **Wiberg K.**, Pell M. 2018. Potential of biochar filters for onsite sewage treatment: Adsorption and biological degradation of pharmaceuticals in laboratory filters with active, inactive and no biofilm. *Science of the Total Environment* 612, 192-201.
3. Nouhi S., **Ahrens L.**, Campos Pereira H., Hughes A.V., Campana M., Gutfreund P., Palsson G.K., Vorobiev A., Hellsing M.S. 2018. Interactions of perfluoroalkyl substances with a phospholipid bilayer studied by neutron reflectometry. *Journal of Colloid Interface Science* 511, 474–481.
4. Rosenmai A.K., **Ahrens L.**, le Godec T., Lundqvist J., Oskarsson A. 2018. Relationship between peroxisome proliferator-activated receptor alpha activity and cellular concentration of 14 perfluoroalkyl substances in HepG2 cells. *Journal of Applied Toxicology* 38, 219-226.
5. Sandin, M., Piikki, K., Jarvis, N., Larsbo, M., Bishop, K., **Kreuger, J.** 2018. Spatial and temporal patterns of pesticide concentrations in streamflow, drainage and runoff in a small Swedish agricultural catchment. *Science of the Total Environment* 610-611, 623-634.
6. Wieczorek M.V., Bakanov N., Bilancia D., Szöcs E., Stehle S., **Bundschuh M.**, Schulz R. 2018. Structural and functional effects of a short-term pyrethroid pulse exposure on invertebrates in outdoor stream mesocosms. *Science of the Total Environment* 610–611, 810–819.
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