

Publications

Journal articles (peer-reviewed)

2014

Höss S, Reiff N, Nguyen H T, Jehle J A, Hermes H, Traunspurger W (2014) Small-scale microcosms to detect chemical induced changes in soil nematode communities – Effects of crystal proteins and Bt-maize plant material. *Sci Total Environ*, 472, 662–671.

2013

Feiler U, Höss S, Ahlf W, Gilberg D, Hammers-Wirtz M, Hollert H, Meller M, Neumann-Hensel H, Ottermanns R, Seiler T-B, Spira D, Heininger P (2013): Sediment contact tests as a tool for the assessment of sediment quality in German waters. *Environ Toxicol Chem* 32:144–155.

Höss S, Menzel R, Gessler F, Nguyen HT, Jehle JA, Traunspurger W (2013) Effects of insecticidal crystal proteins (Cry proteins) produced by genetically modified maize (Bt maize) on the nematode *Caenorhabditis elegans*. *Environ Pollut* 2013, 178:147–151.

Ruf A, Beylich A, Blick T, Buechs W, Glante F, Höss S, Ross-Nikoll M, Ruess L, Russell DJ, Römke J, Seitz H, Theißen B, Toschki A, Weinmann C, Zueghart W (2013) Soil organisms as an essential element of a monitoring plan to identify the effects of GMO cultivation. Requirements – Methodology – Standardisation. *BIORISK – Biodivers Ecosyst Risk Assess* 8:73–87

2012

Höss S, Ahlf W, Bergtold M, Bluebaum-Gronau E, Brinke M, Donnevert G, Menzel R, Möhlenkamp C, Ratte HT, Traunspurger W, von Danwitz B, Pluta HJ (2012) Interlaboratory comparison of a standardized toxicity test using the nematode *Caenorhabditis elegans* (ISO 10872). *Environ Toxicol Chem*, 31:1525–1535.

Traunspurger W, Höss S, Witthöft-Mühlmann A, Wessels M, Güde H (2012): Meiobenthic community patterns of oligotrophic and deep Lake Constance in relation to water depth and nutrients. *Fundam Appl Limnol*, 180:233–248.

Wolfram G, Höss S, Orendt C, Schmitt C, Adamek Z, Bandow N, Großschartner M, Kukkonen JVK, Leloup V, Lopez-Doval J, Munoz I, Traunspurger W, Tuikka A, Van Liefferingen C, Von der Ohe PC, De Deckere E (2012): Assessing the impact of chemical pollution on benthic invertebrates from three different European rivers using a weight-of-evidence approach. *Sci Total Environ*, 438:498–509.

2011

- Franzen J, Menzel R, Höss S, Claus E, Steinberg CEW (2011) Organic carbon source in formulated sediments influences life traits and gene expression of *Caenorhabditis elegans*. *Ecotoxicology* 21:557-568
- Höss S, Claus E, Von der Ohe P, Brinke M, Güde H, Heininger P, Traunspurger W (2011) Nematode species at risk – a metric to assess pollution in soft sediments of freshwaters, *Environ Int* 37:940-949.
- Höss S, Nguyen-Thu H, Menzel R, Pagel-Wieder S, Miethling-Graff R, Tebbe CC, Jehle J, Traunspurger W (2011) Assessing the risk posed to free-living soil nematodes by a genetically modified maize (event Mon88017) expressing an insecticidal protein (Cry3Bb1). *Sci Tot Environ* 409:2674-2684.
- Höss S, Schlottmann K, Traunspurger W (2011) Toxicity of ingested cadmium to the nematode *Caenorhabditis elegans*. *Environ Sci Technol* 45:10219-10225.
- Tuikka A, Schmitt C, Höss S, Bandow N, Von der Ohe P C , De Zwart D, De Deckere E, Streck G, Mothes S, Van Hattum B, Kocan A, Brix R, Brack W, Barcelo D, Sormunen A J, Kukkonen J (2011) Toxicity assessment of sediments from three European river basins using a sediment contact test battery. *Ecotox Environ Saf* 74:123-131.
- Brinke M, Ristau K, Bergtold M, Höss S, Claus E, Heininger P, Traunspurger W (2011) Using meiofauna to assess pollutants in freshwater sediments – a microcosm study with cadmium. *Environ Toxicol Chem* 30:427-438.

2010

- Brinke M, Höss S, Fink G, Ternes T A, Heininger P, Traunspurger W (2010) Assessing effects of the pharmaceutical ivermectin on meiobenthic communities using freshwater microcosms. *Aquat Toxicol* 99:126-137.
- Höss S, Ahlf W, Fahnenstich C, Gilberg D, Hollert H, Melbye K, Meller M, Hammers-Wirtz M, Heininger P, Neumann-Hensel H, Ottermanns R, Ratte H T, Seiler T B, Spira D, Weber J, Feiler U (2010) Variability of freshwater sediment contact tests in sediments with low-level anthropogenic contamination – Determination of toxicity thresholds. *Environ Poll* 158:2999-3010.
- Lopez-Doval J, Großschartner M, Höss S, Orendt C, Traunspurger W, Wolfram G, Munoz I, 2010. Invertebrate communities in soft sediments along a pollution gradient in a Mediterranean river (Llobregat, NE Spain). *Limnetica* 29:311-322.
- Wolfram G, Orendt C, Höss S, Großschartner M, Adamek Z, Jurajda P, Traunspurger W, De Deckere E, Van Liefferingen C. (2010) The macroinvertebrate and nematode community from soft sediments in impounded sections of the river Elbe near Pardubice, Czech Republic. *Lauterbornia* 69:87-105.

2007-2009

- Heininger P, Höss S, Claus C, Pelzer J, Traunspurger W (2007) Nematode communities in contaminated river sediments. *Environ Poll*, 146, 64-76

- Höss S, Weltje, L (2007) Endocrine disruption in nematodes – A review of effects and mechanisms. *Ecotoxicology* 16, 15-28.
- Comber S D W, Rule, K L, Conrad A U, Höss S, Webb S, Marshall S (2008) Bioaccumulation and toxicity of a cationic surfactant (DODMAC) in sediment dwelling freshwater invertebrates. *Environ Pollut* 153:184-191
- Höss S, Arndt M, Baumgarte S, Tebbe C, Nguyen-Thu H, Jehle J (2008) Effects of transgenic corn and Cry1Ab toxin on the nematode *Caenorhabditis elegans*. *Ecotoxicol Environ Saf* 70, 334-340.
- Höss S, Jänsch S, Junker T, Moser T, Römbke J (2009) Assessing the toxicity of contaminated soils using the nematode *Caenorhabditis elegans* as test organism. *Ecotoxicol Environ Saf*, 72, 1811-1818.
- Menzel, R, Swain S C, Höss S, Claus E, Menzel S., Steinberg, C E W, Reifferscheid G, Stürzenbaum S R (2009) Gene expression profiling to characterize sediment toxicity – a pilot study using *Caenorhabditis elegans* whole genome microarrays. *BMC Genomics*, 10, 160-174.

2004-2006

- Höss S, Traunspurger W, Severin G F, Jüttner I, Pfister G, Schramm K-W (2004) Influence of 4-nonylphenol on the structure of nematode communities in freshwater microcosms. *Environ Toxicol Chem* 23:1268-1275.
- Comber S D W, Conrad A U, Höss S, Webb S, Marshall S (2006) Chronic toxicity of sediment-associated linear alkylbenzene sulphonates (LAS) to freshwater benthic organisms . *Environ Pollut* 144:661-668

2000-2003

- Steinberg C E W, Haitzer M, Höss S, Pflugmacher S, Welker M (2000) Regulatory impact of humic substances in freshwater. *Verh Int Ver Limnol* 27:2488-2491
- Höss S, Bergtold M, Haitzer M, Traunspurger W, Steinberg C E W (2001) Refractory dissolved organic matter can influence the reproduction of *Caenorhabditis elegans* (Nematoda). *Freshw Biol* 46:1-10.
- Höss S, Henschel T, Haitzer M, Traunspurger W, Steinberg C (2001) Toxicity of cadmium to *Caenorhabditis elegans* (Nematoda) in whole sediment and porewater - the ambiguous role of organic matter. *Environ Toxicol Chem* 20:2794-2801
- Gerhardt A, Schmidt S, Höss S (2002) Measurement of movement patterns of *Caenorhabditis elegans* (Nematoda) with the Multispecies Freshwater Biomonitor® (MFB) - a potential new method to study a behavioral toxicity parameter in sediments. *Environ Pollut* 120:513-516
- Höss S, Jüttner I, Traunspurger W, Pfister G, Schramm K-W, Steinberg C (2002) 4-Nonylphenol can enhance the reproduction of *Caenorhabditis elegans* (Nematoda). *Environ Pollut* 120:169-172.

Steinberg C E W, Höss S, Brüggemann R (2002) Further evidence that humic substances have the potential to modulate the reproduction of the nematode *Caenorhabditis elegans*. Internat Rev Hydrobiol 87:121-133

1997 - 1999

Höss S, Haitzer M, Traunspurger W, Gratzner H, Ahlf W, Steinberg C (1997) Influence of particle size distribution and content of organic matter on the toxicity of copper in bioassays using *Caenorhabditis elegans* (Nematoda). Water Air Soil Pollut 99:689-695

Steinberg C E W, Haitzer M, Höss S, Lorenz R, Brüggemann R, Burnison B K (1997) Change of bioconcentration and effect of pesticides in the presence of humic substances. UWSF-Z Umweltchem Ökotox 9:64-68

Traunspurger W, Haitzer M, Höss S, Beier S, Ahlf W, Steinberg C (1997) Ecotoxicological assessment of aquatic sediments with *Caenorhabditis elegans* (Nematoda) - A method for testing in liquid medium and whole sediment samples. Environ Toxicol Chem 16:245-250

Haitzer M, Höss S, Traunspurger W, Steinberg C E W (1998) Effects of dissolved organic matter (DOM) on the bioconcentration of organic chemicals in aquatic organisms - a review. Chemosphere 37:1335-1362

Haitzer M, Burnison B K, Höss S, Traunspurger W, Steinberg C E W (1999) Effects of quantity, quality, and contact time of dissolved organic matter on bioconcentration of Benzo[a]pyrene in the nematode *Caenorhabditis elegans*. Environ Toxicol Chem 18:459-465

Haitzer M, Höss S, Traunspurger W, Steinberg C (1999) Relationship between concentration of dissolved organic matter (DOM) and the effect of DOM on the bioconcentration of benzo[a]pyrene. Aquat Toxicol 45:147-158

Höss S, Haitzer M, Traunspurger W, Steinberg C E W (1999) Growth and fertility of *Caenorhabditis elegans* (Nematoda) in unpolluted freshwater sediments - response to particle size distribution and organic content. Environ Toxicol Chem 18:2921-2925

Book chapters

Traunspurger, W, Höss, S (2009) Sedimente als Lebensraum. In Hupfer M, Calmano W, Klapper H, Wilken R D (eds) Handbuch Angewandte Limnologie. Wiley-VCH, Weinheim, Germany, Kap. IV.8.2.

Danovaro R, Gambi C, Höss S, Mirto S, Traunspurger W, Zullini A (2009) Case studies using nematode assemblage analysis in aquatic habitats. In Wilson, M A, Kakouli-Duarte, T (eds) Nematodes as Environmental Indicators, CABI Publishing, Cambridge, MA, USA, pp 146-171.

Höss S, Williams, P L (2009) Ecotoxicity testing with nematodes. In Wilson, M A, Kakouli-Duarte, T (eds) Nematodes as Environmental Indicators, CABI Publishing, Cambridge, MA, USA, pp 208-224.

Höss S, Traunspurger W, Zullini A (2006) Freshwater nematodes in environmental science. In Eyualem-Abebe, Traunspurger W, Andrassy I (eds) *Freshwater Nematodes - Ecology and Taxonomy*. CABI Publishing, Cambridge, MA, USA, pp 144-162.

Höss S, Traunspurger W (2003) Nematodes. In Breure A M, Markert B, Zechmeister H (eds) *Bioindicators/Biomonitoring - Principles, Assessments, Concepts*. Elsevier, Amsterdam, The Netherlands, pp 529-554.

Haitzer M, Höss S, Traunspurger W, Kukkonen J, Burnison B K, Steinberg C E W (2002) Biological effects of dissolved organic matter. In Frimmel F H, Abbt-Braun G, Heumann K G, Hock B, Lüdemann H D, Spiteller M (eds) *Refractory Organic Substances In The Environment*. John Wiley and Sons, New York, NY, USA, pp 361-381.

Steinberg C E W, Pflugmacher S, Wiegand C, Paul A, Höss S, Haitzer M (2001) Die vernachlässigte ökologische Regulation in Binnengewässern: Direkte und indirekte Interaktionen von Huminstoffen mit Organismen. In Fränzele, O., Müller, F., Schröder, W. (eds) *Handbuch Umweltwissenschaften*. Ecomed, Landsberg, Germany.

Conference Proceedings

2012 and newer

Brinke, M., Claus, E., Reifferscheid, G., Höss, S., Traunspurger, W., & Heininger, P. (2013). Using exclusively endobenthic organisms to derive sediment quality guidelines (SQGs). In *SETAC Europe 23rd Annual Meeting* (p. Abstract No. 502). Glasgow, Scotland: Society of Environmental Toxicology and Chemistry.

Höss, S., Bleick, L., Pilloni, G., Meyer, C., Fritzsche, A., Lüders, T., & Traunspurger, W. (2013). Assessing the risk of artificial iron-(III)-oxide nanoaggregates used for groundwater remediation to microbial and nematode communities. In *SETAC Europe Meeting Glasgow*. Society of Environmental Toxicology and Chemistry.

Höss, S., Reiff, N., Faupel, M., Sauer, A., Dohrmann, A., Pagel-Wieder, S., ... Traunspurger, W. (2012). Effects of insecticidal Cry proteins on nematodes – implications for the ecological risk assessment of a stacked Bt-maize variety (MON89034xMON88017). In *SETAC World 2012*. Berlin, Germany: Society of Environmental Toxicology and Chemistry.

2009 – 2011

Höss, S., Traunspurger, W., Brinke, M., Claus, E., Von der Ohe, P. C., & Heininger, P. (2011). Nematode species at risk - A metric to assess pollution in soft sediments of freshwaters. In *SETAC Europe 21st Annual Meetin*. Milan, Italy: Society of Environmental Toxicology and Chemistry

Höss, S., Traunspurger, W., Brinke, M., Claus, C., Von der Ohe, P.C., Heininger, P., 2010. Nematode species at risk - A new index to assess pollution in soft sediment of rivers. 14th International Meiofauna Conference (FOURTIMCO), Gent, p.42.

Höss, S., Tebbe, C.C., Jehle, J., Pagel-Wieder, S., Reiff, N., Traunspurger, W., 2010. Nematodes as indicators for assessing the risk of a transgenic maize variety (Mon89034xMon88017) with multiple genes for pest resistance. 14th International Meiofauna Conference (FOURTIMCO), Gent, Belgium, p.128.

Brinke M, Höss S, Traunspurger W, Heininger P (2009) Prospects and constraints of model ecosystems in the assessment of the effects of contaminants on benthic freshwater communities. 19th Annual Meeting of SETAC Europe, Göteborg, p.34.

Höss S, Schlottmann K, Traunspurger W (2009) Role of food for Cd toxicity on the nematode *Caenorhabditis elegans*. 19th Annual Meeting of SETAC Europe, Göteborg, p.170.

Höss S, Traunspurger W, Claus E, Heininger P (2009) How does pollution influence freshwater nematode communities? Investigations of German rivers over 8 years. 19th Annual Meeting of SETAC Europe, Göteborg, p.209.

2007 – 2008

Feiler U, et al. (2008) Sediment contact tests as tool for the assessment of sediment quality in German rivers (SeKT-project). 5th SETAC World Congress, Sidney, Australia,

Höss S, Jänsch S, Moser T, Junker T, Römbke J (2008) Assessing the toxicity of contaminated soils using the nematode *Caenorhabditis elegans* as test organism. 18th Annual Meeting of SETAC Europe, Warsaw, p.101.

Höss S, Traunspurger W, Orendt C, Wolfram G, Adamek Z, Munoz I, Liefferinge C, De Deckere E (2008) Nematode communities in river sediments of three different European river basins – Effects of anthropogenic contamination. 18th Annual Meeting of SETAC Europe, Warsaw, p.109.

Höss S, Baumgarte S, Miethling-Graff R, Tebbe C, Nguyen-Thu H, Jehle J (2007) Effects of the *Bt* toxin Cry3Bb1 on the nematode *Caenorhabditis elegans* – Studies with pure toxin and soil from experimental fields. 17th Annual Meeting of SETAC Europe, Porto, Portugal

Höss S, Spira D, Gilbert D, Melbye K (2007) The SeKT joint research project – TV3: Effects of spiked natural and artificial sediments on the nematode *Caenorhabditis elegans*. 17th Annual Meeting of SETAC Europe, Porto, Portugal

Menzel R, Swain S C, Höss S, Claus E, Rienau S, Stürzenbaum S R, Reifferscheid G (2007) Gene expression profiling as a tool for sediment risk assessment – a pilot study using *Caenorhabditis elegans* whole genome microarrays. 17th Annual Meeting of SETAC Europe, Porto, Portugal

Feiler U, Ahlf W, Fahnenstich C, Gilbert D, Hammers-Wirtz M, Höss S, Hollert H, Meller M, Melbye K, Neumann-Hensel H, Ratte H T, Seiler T B, Spira D, Weber J, Heininger P (2007) The SeKT joint research project: Toxicity comparison of various freshwater sediment contact tests in spiked natural and artificial sediments. 17th Annual Meeting of SETAC Europe, Porto, Portugal

2003 – 2006

- Höss S, Milijeteig C, Weltje L (2006) Mixture toxicity of Abamectin and the solvent DMSO to the nematode *Caenorhabditis elegans*. 16th Annual Meeting of SETAC Europe, Den Haag, The Netherlands
- Höss S, Lemcke C, Neumann-Hensel H (2006) The SeKT joint research project – TV3: Reference conditions and control sediments for a sediment contact test with the nematode *Caenorhabditis elegans*. 16th Annual Meeting of SETAC Europe, Den Haag, The Netherlands
- Feiler U, Ahlf W, Fahnenstich C, Hammers-Wirtz M, Höss S, Hollert H, Meller M, Melbye K, Neumann-Hensel H, Ratte H T, Seiler T B, Spira D, Weber J, Heininger P (2006) The SeKT joint research project: Definition of Reference Conditions, Control Sediments and Toxicity Thresholds for Limnic Sediment Contact Tests. 16th Annual Meeting of SETAC Europe, Den Haag, The Netherlands
- Höss S, Arndt M, Baumgarte S, Tebbe C (2004) Effects of soil from experimental fields with transgenic corn on the nematode *Caenorhabditis elegans*. 14th Annual Meeting of SETAC Europe, Prague, Czech Republic, 110-111
- Höss S, Heininger P, Claus C, Pelzer J, Traunspurger W (2004) Nematode communities in large German rivers and the relation to sediment contamination. 14th Annual Meeting of SETAC Europe, Prague, Czech Republic, 51-52
- Höss S, Krebs F (2003) Dilution of toxic sediments with unpolluted artificial and natural sediment - Effects on *Caenorhabditis elegans* (Nematoda) in a whole sediment bioassay. 13th Annual Meeting of SETAC Europe, Hamburg, Germany, p.148
- Höss S, Heininger P, Claus C, Traunspurger W, Pelzer J (2003) Nematodenlebensgemeinschaften in großen deutschen Flüssen - Beziehung zur Schadstoffbelastung. 8th Annual Meeting of SETAC Europe - German Language Branch, Heidelberg, Germany
- Weltje L, Höss S, van Doormalen J, Markert B, Oehlmann J (2003) Endocrine disruption in the nematode *Caenorhabditis elegans*. 13th Annual Meeting of SETAC Europe, Hamburg, Germany, p.183

Before 2002

- Höss S, Traunspurger W, Severin G F, Jüttner I, Pfister G, Schramm K-W (2002) Effects of 4-nonylphenol on the nematode community structure in a freshwater microcosm study. 12th Annual Meeting of SETAC Europe, Vienna, Austria
- Webb S, Comber S, Marshall S, Höss S (2002) Toxicity of the anionic surfactant Linear Alkylbenzene Sulphonate (LAS) to *Lumbriculus terrestris* and *Caenorhabditis elegans*. 12th Annual Meeting of SETAC Europe, Vienna, Austria
- Höss S, Severin G F, Jaser W, Schramm K-W (2001) A bioassay on the effects of 17 α -Ethinylestradiol and Trenbolone on growth and reproduction of *Caenorhabditis elegans*. Sixth European Conference on Ecotoxicology and Environmental Safety, 254-257

Höss S, Severin G F, Jaser W, Schramm K-W (2001) Effects of 17a-ethinylestradiol and trenbolone on the growth and reproduction of *Caenorhabditis elegans*.
Organohalogen Compounds 53:106-108

Traunspurger W, Haitzer M, Höss S, Beier S, Steinberg C, Henschel T (1995) Toxic effects and bioavailability of heavy metals on *Caenorhabditis elegans* (extended abstract). Nematologica 41:348