

**PLATFORM PRESENTATIONS AND POSTERS  
APPLIED ECOLOGY 2017**



# PLATFORM PRESENTATIONS

## APPLIED ECOLOGY 2017

Arena, M., Auteri, D., Craig, P., De Jong, F. M., Klein, M., Laskowski, R., Manachini, B., Pieper, S., Smith, R., Sousa, J. F., Sundh, I., Tiktak, A., Topping C.:

**Scientific opinion addressing the state of the science on risk assessment of plant protection products for in-soil organisms: specific protection goals and research needs.**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Brüggemann, M., Schlich, K., Hund-Rinke, K., Schäfers, C.:

**Development of a testing method simulating running waters for chronic testing of invertebrate species.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Bücking, M., Kotthoff, M.:

**Food safety – challenges & chances for joint research.** Workshop and Focus Group on “Thai-German Collaboration for Public-Private Partnerships in Food Innovation: Initiation and Establishment of R&D and Technology Transfer”, Bangkok, Thailand, 4.-8.9.2017

Bücking, M., Kotthoff, M., Ho, T.:

**Qualitätskontrolle von grünem Tee mittels verschiedener Extraktions- und Injektionstechniken – welche Probenaufgabe eignet sich am besten?** Gerstel Anwenderseminar 2017, Mülheim a.d.R., 6.10.2017

Bücking, M., Göckener, B., Kotthoff, M.:

**Process control and food safety.** iFood Conference, Köln, 9.10.2017

Bücking, M.:

**Developing solutions for industry, public and regulators: The Fraunhofer story.** Seminar School of Chemistry, Monash University, Melbourne, Australia, 5.12.2017

Bücking, M., Göckener, B., Kotthoff, M.:

**Radiokitchen – unravelling processing-borne ingredients towards increased consumer safety.** Seminar School of Chemistry, Monash University, Melbourne, Australia, 6.12.2017

Derz, K., Hennecke, D., Terytze, K.:

**Revision of the German Standard DIN 19738: Optimization and testing the robustness of the in vitro method.** 9<sup>th</sup> International Workshop on Chemical Bioavailability in the Terrestrial Environment, Warsaw, Poland, 5.-8.11.2017

Eilebrecht, E., Ayobahan, S. U., Schäfers, C.:

**Just liver – proteomic approaches to discriminate hepatotoxicity from endocrine disruption.** SETAC Latin America 12<sup>th</sup> Biennial Meeting, Santos, Sao Paulo, Brazil, 7.9.2017

Fliedner, A., Rüdell, H., Lohmann, N., Buchmeier, G., Koschorreck, J.:

**The German ESB as tool in Water Framework Directive compliance monitoring.** 4<sup>th</sup> International Conference on Environmental Specimen Banks, Bilbao, Spain, 2.-4.10.2017

Göckener, B., Bücking, M., Kotthoff, M.:

**Towards a full understanding of food life: tracing food ingredients using <sup>14</sup>C food processing.** Fi Europe 2017, Frankfurt, 28.-30.11.2017

Harmsen, J., Hennecke, D., Hund-Rinke, K., Lahr, J., Deneer, J.:

**Advances in the development of procedures to establish the toxicity of non-extractable residues (NER) in soil.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Hennecke, D.:

**Verbleib von PAM in landwirtschaftlich genutzten Böden – Ergebnisse der Fraunhofer-Studie zur Abbaubarkeit von Polymeren.** Deutsche Vereinigung für Wasserwirtschaft, Abwasser und Abfall e.V. (DWA), 10. Klärschlammstage, Würzburg, 20.-22.6.2017

Hennecke, D., Bauer, G.:

**Degradation of synthetic polymeric flocculants in land spreading of MWWTP sludge.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

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Hennecke, D., Bauer, G., Wischerhoff, E., Gores, F.:  
**How to investigate the fate of synthetic polymeric flocculants in a complex agricultural matrix – results of an experimental simulation study.** 16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

Hennecke, D., Harmsen, J., Hund-Rinke, K., Derz, K., Lahr, J., Deneer, J.:  
**The development of procedures to establish the toxicity of Non-Extractable Residues (NER) in soil.** 9<sup>th</sup> International Workshop on Chemical Bioavailability in the Terrestrial Environment, Warsaw, Poland, 5.-8.11.2017

Herrchen, M.:  
**Fate studies of VMPs: In between standard test protocols and challenging modifications.** Workshop Environmental Risk Assessment of Veterinary Medicinal Products – Update, Recent Developments and Implications. Fraunhofer ITEM, Hannover, 11.11.2017

Hommen, U., Ebke, K. P., Hammers-Wirtz, M., Schäfers, C., Stegger, P., Strauß, T.:  
**Mesokosmenstudien in der Pflanzenschutzmittelzulassung – Herausforderungen, Kritik und Chancen.** 22. Jahrestagung SETAC GLB, Neustadt an der Weinstraße, 12.-14.11.2017

Hüben, M., Wörmann, M.:  
**Experimental determination of a foliar wash-off coefficient – development of a laboratory procedure.** 16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

Hund-Rinke, K., Kühnel, D., Nickel, C.:  
**Grouping of nanomaterials regarding ecotoxicological testing.** NanoImpact, Monte Verita, Switzerland, 12.-17.5.2017

Hund-Rinke, K., Herrchen, M., Kühnel, D., Kussatz, C., Nickel, C., Schwirn, K., Völker, D.:  
**Grouping of nanomaterials regarding their ecotoxicity – Are the generally discussed physico-chemical parameter suitable and sufficient?** TechConnect World Innovation Conference, Washington, USA, 14.-17.5.2017

Hund-Rinke, K.:  
**Adaptation of OECD test guidelines on ecotoxicity tests – experience gained from the EU project MARINA and further considerations.** Scientific Stakeholder Meeting on Nanomaterials in the Environment, German Environment Agency, Dessau, 10.-11.10.2017

Klein, M.:  
**Modellierung des Eintrags von Wirkstoffen ins Grundwasser im Rahmen europäischer und nationaler Zulassungsverfahren auf Basis der FOCUS Szenarien.** Niedersächsisches Grundwasserkolloquium, Braunschweig, 15.-16.2.2017

Klein, M.:  
**Die Bedeutung von FOCUS-Szenarien für die Bewertung von Wirkstoffen in Europa.** 4. Fachgespräch Pflanzenschutz und Wasserschutz, Elze-Berkhof, 13.12.2017

Kotthoff, M., Rüdell, H., Bücking, M., Friesen, A., Koschorreck, J.:  
**Anticoagulant rodenticides in fish: Spatial and temporal distribution in German freshwater aquatic systems.** 16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

Kotthoff, M., Göckener, B., Bücking, M.:  
**Radiokitchen – Unravelling processing-borne ingredients towards increased consumer safety.** 10 Jahre Fraunhofer-Allianz Food Chain Management, Symposium "FOOD SYSTEMS – FIT FOR THE FUTURE?", München, 13.11.2017

Kraas, M., Kaegi, R., Schlich, K., Terytze, K., Hund-Rinke, K.:  
**Long term toxicity of Ag-NM on soil nitrifying bacteria after biotransformation in WWTPs.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

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## APPLIED ECOLOGY 2017

Kühr, S., Knopf, B., Meisterjahn, B., Hund-Rinke, K., Schneider, S., Schlechtriem, C.:

**Bioaccumulation of silver nanomaterials in benthic organisms.** NANO-Transfer - International Conference & Winter School, RWTH Aachen University, Aachen, 19.-20.10.2017

Neu, S., Schlich, K., Dudel, G. E.:

**Verbleib und Ökotoxizität von SiO<sub>2</sub> und CeO<sub>2</sub>-Nanomaterialien im System Boden – Pflanze.** Deutsche Bodenkundliche Gesellschaft, Jahrestagung 2017, Göttingen, 2.-7.9.2017

Nickel, C., Herrchen, M., Hund-Rinke, K., Kühnel, D., Schwirn, K., Kuhlbusch, T., Asbach, C.:

**Grouping of nanomaterials regarding their behavior and fate in the environment – hypotheses and experimental results.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Radermacher, G., Rüdell, H., Lepom, P., Duffek, A.:

**Mercury burden of German freshwater fish depending on age, size and trophic level.** 16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

Rüdell, H., Fliedner, A., Lohmann, N., Buchmeier, G., Koschorreck, J.:

**Biota monitoring under the Water Framework Directive: Influence of fish species and tissue choice on levels of priority substances.** 16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

Rüdell, H.:

**Stoffbezogenes Umweltmonitoring und Gewässerbewertung im Kontext der Wasserrahmenrichtlinie.** GDCh-Wissenschaftsforum, Berlin, 13.9.2017

Rüdell, H., Schlechtriem, C., Kosfeld, V., Rauert, C., Koschorreck, J.:

**Using ESB sampling as basis for food web magnification studies for chemicals.** 4<sup>th</sup> International Conference on Environmental Specimen Banks, Bilbao, Spain, 2.-4.10.2017

Rüdell, H., Paulus, M., Lohmann, N., Koschorreck, J.:

**Trends stofflicher Belastung von Silbermöweneiern der Umweltprobenbank.** Workshop "Möglichkeiten zur Interpretation von Langzeitdatenreihen zur Schadstoffbelastung mit Hilfe telemetrischer Methoden bei Seevögeln", Landesvertretung Schleswig-Holstein, Berlin, 19.-20.10.2017

Schäfers, C.:

**Bewertung der Grundwasserbelastung durch Wirkstoffe – was wollen wir schützen?** Niedersächsisches Grundwasserkolloquium, Braunschweig, 15.-16.2.2017

Schäfers, C.:

**Der Zebrabärbling: Modellfisch für chronische (endokrine) und Populationswirkungen.** 2<sup>nd</sup> German Pharm-Tox Summit, Heidelberg, 6.-9.3.2017

Schäfers, C.:

**Prinzipien und Anforderungen der ökotoxikologischen Risikobewertung.** GDCh-Wissenschaftsforum, Berlin, 13.9.2017

Schlechtriem, C.:

**Flow-through fish test (OECD 305) with highly hydrophobic substances.** PBT-Quo vadis Workshop, Umweltbundesamt, Berlin, 20.-21.6.2017

Schlechtriem, C.:

**Fate and effect of manufactured nanomaterials in the aquatic food chain.** Scientific Stakeholder Meeting on Nanomaterials in the Environment, German Environment Agency, Dessau, 10.-11.10.2017

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## APPLIED ECOLOGY 2017

Schlechtriem, C.:

**Phase II Tier B – Chronic aquatic ecotox, bioaccumulation.** Workshop “Environmental Risk Assessment of Veterinary Medicinal Products – update, recent developments and implications”, CRC, Hannover, 9.11.2017

Schlechtriem, C., Knopf, B., Kühn, S., Meisterjahn, B., Hund-Rinke, K.:

**Development of a method to determine the bioaccumulation of manufactured nanomaterials in filtering organisms (Bivalvia).** Scientific Stakeholder Meeting on Nanomaterials in the Environment, German Environment Agency, Dessau, 10.-11.10.2017

Schlich, K., Hoppe, M., Kraas, M., Engelke, M., Rückamp, D., Fries, E., Filser, J., Hund-Rinke, K.:

**Ecotoxicity and fate of nanomaterials in laboratory and outdoor lysimeter experiments – experiences from the BMBF project DENANA.** Scientific Stakeholder Meeting on Nanomaterials in the Environment, German Environment Agency, Dessau, 10.-11.10.2017

Shrestha, P., Meisterjahn, B., Mayer, P., Birch, H., Hennecke, D.:

**Effects of sorption on biodegradation of hydrophobic organic chemicals in soil using standard guidelines (OECD 307).** 9<sup>th</sup> International Workshop on Chemical Bioavailability in the Terrestrial Environment, Warsaw, Poland, 5.-8.11.2017

Zeumer, R., Lopes, I., Galhano, V., Monteiro, M., Loureiro, S., Schlechtriem, C.:

**Fate and effect of manufactured nanomaterials in the aquatic food chain.** SETAC GLB NANO-Transfer International Conference 2017, Aachen, 19.-20.10.2017

Zeumer, R., Lopes, I., Galhano, V., Monteiro, M., Loureiro, S., Schlechtriem, C.:

**Verbleib und Wirkung von synthetischen Nanomaterialien in der aquatischen Nahrungskette.** SETAC GLB, Jahrestagung 2017, Neustadt an der Weinstraße, 12.-14.11.2017

# POSTERS

## APPLIED ECOLOGY 2017

Baxter, L., Finnegan, M., Pickford, D., Embrey, S., Böhmer, W., Maul, J., Hommen, U., Stegger, P., Thompson, H., Hamer, M., Hoekstra, P., Hanson, M.:

**The response of freshwater organisms to the NNI thiamethoxam under laboratory and field conditions.**

SETAC 38<sup>th</sup> Annual Meeting, Minneapolis, Minnesota, USA, 12.-16.11.2017

Bücking, M., Albinus, T., Ho, T., Bruckert, J., MacKenzie, C., Bröckelmann, J., Kotthoff, M.:

**Evaluation of two new techniques for the determination of aroma compounds in green tea.**

Fourth International Conference on Cocoa Coffee and Tea 2017, Centro Congressi Torino Incontra, Turin, Italy, 25.-28.6.2017

Bücking, M., Ho, T., Yang, H., Albinus, T., Kotthoff, M.:

**Evaluation and optimization of sample preparation techniques towards the differentiation – origin of Chinese green tea.**

15<sup>th</sup> Weurman Flavour Research Symposium, Graz, Austria, 18.-22.9.2017

Brüggemann, M., Hund-Rinke, K., Schlich, K., Schäfers, C.:

**Chronic testing of invertebrate species – Development of a testing method simulating running waters.**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Brüggemann, M., Licht, O., Fetter, E., Teigeler, M., Schäfers, C., Eilebrecht, E.:

**The endocrine axes of fish and amphibians share common key events identified using the concept of Adverse Outcome Pathways (AOP).**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Engelhard, C., Mozhayeva, D., Strenge, I., Steinhoff, B., Schönherr, H., Hartmann, S., Witte, K., Kunze, J., Kuhnert, K.-D., Gethmann, C. F., Zeumer, R., Schlechtriem, C., Vogt, R., Lamatsch, D., Wanzenböck, J., Galhano, V., Monteiro, M., Loureiro, Lopes, I.:

**Verbleib und Auswirkungen von synthetischen Nanomaterialien aus Kläranlagenausflüssen auf aquatische Ökosysteme (FENOMENO) aus Sicht der Ultraspurenanalytik mittels ICP-MS.**

NanoCare-Clustertreffen 2017, Karlsruhe, 4.-5.5.2017

Gabbert, S., Hahn, S., Klein, M., Nendza, M., Oosterhuis, F.:

**A benchmark-level approach for evaluating PBT and vPvB chemicals in REACH authorisation and restriction procedures.**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Göckener, B., Buecking, M., Kotthoff, M.:

**Fate of <sup>14</sup>C-labelled agrochemicals in food processing – first results.**

8<sup>th</sup> International Conference on Chemical Reactions in Foods, Prague, Czech Republic, 15.-17.2.2017

Hartmann, S., Louch, R., Zeumer, R., Schlechtriem, C., Witte, K.:

**Multi-generational effects of silver nanoparticles in contaminated algae and from wastewater treatment plant effluent on reproduction and mortality in *Daphnia magna*.**

NanoCare-Clustertreffen 2017, Karlsruhe, 4.-5.5.2017

Hund-Rinke, K., Kühnel, D., Nickel, C., Schlich, K.:

**Grouping of nanomaterials regarding aquatic ecotoxicity – hypotheses for selected NMs and experimental proof.**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Knopf, B., Meisterjahn, B., Schröder, N., Rüdell, H., Koschorreck, J.:

**Development of a method for the analysis of nanoparticles in homogenized biota tissue from the German Environmental Specimen Bank.**

16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

4<sup>th</sup> International Conference on Environmental Specimen Banks, Bilbao, Spain, 2.-4.10.2017

Scientific Stakeholder Meeting on Nanomaterials in the Environment, German Environment Agency, Dessau, 10.-11.10.2017

Kotthoff, M., Rüdell, H., Bücking, M., Friesen, A., Koschorreck, J.:

**Determination of anticoagulant rodenticides in freshwater fish and suspended particulate matter samples from the German Environmental Specimen Bank: Spatial and temporal distribution.**

4<sup>th</sup> International Conference on Environmental Specimen Banks, Bilbao, Spain, 2.-4.10.2017

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## APPLIED ECOLOGY 2017

Kühnel, D., Kussatz, C., Schwirn, K., Hund-Rinke, K.:

**Grouping of nanomaterials regarding their ecotoxicity – are hypotheses based on literature data robust enough?**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Meisterjahn, B., Hüben, M., Tomm, H., Hennecke, D.:

**Experimental approaches for testing the transformation of volatile chemicals on the basis of standard guidelines.**

16<sup>th</sup> International Conference on Chemistry and the Environment (ICCE 2017), Oslo, Norway, 18.-22.6.2017

Pieper, S., Arena, M., Auteri, D., Craig, P., De Jong, F. M., Klein, M., Laskowski, R., Manachini, B., Smith, R., Sousa, J. F., Sundh, I., Tiktak, A., Topping, C.:

**General framework for assessing the risks for in-soil organisms exposed to Plant Protection Products (PPP).**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Radermacher, G., Knopf, B., Paulus, M., Koschorreck, J., Rüdell, H.:

**Retrospective monitoring of butyltin in fish and mussels from German marine and freshwater sites.**

4<sup>th</sup> International Conference on Environmental Specimen Banks, Bilbao, Spain, 2.-4.10.2017

Schlechtriem, C., Knopf, B., Kühr, S., Meisterjahn, B., Hund-Rinke, K.:

**Entwicklung einer Methode zur Untersuchung der Bioakkumulation synthetisch hergestellter Nanomaterialien in filtrierenden Organismen (Bivalvia).**

NanoCare-Clustertreffen 2017, Karlsruhe, 4.-5.5.2017

Schlich, K., Hund-Rinke, K.:

**Effects of pristine and fragmented iron oxide nanomaterials on soil microorganisms – different testing approaches.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Simon, M., Schlechtriem, C., Egeler, P., Weil, M., Römbke, J., Karaoglan, B., Wiemann, A., Drost, W.:

**PBT assessment of substances – Proposal of a trigger value for bioaccumulation in terrestrial oligochaetes.**

SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Wege, F. F., Diaz Navarette, C. A., Böhle, G., Kohler, M., Teigeler, M., Schäfers, C., Rüdell, H., Eilebrecht, E., Koschorreck, J.:

**Metabarcoding of eDNA from suspended particulate matter (SPM) for fish population monitoring.**

DNAqua-Net COST Kick-off Conference, Essen, 6.3.2017  
SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Zeumer, R., Lopes, I., Galhano, V., Monteiro, M., Loureiro, S., Schlechtriem, C.:

**Effekte von Silbernanopartikeln auf Reproduktion und biochemische Marker in *Daphnia magna*.** NanoCare

Cluster-Meeting, Eggenstein-Leopoldshafen, 4.-5.5.2017

Zeumer, R., Lopes, I., Galhano, V., Monteiro, M., Loureiro, S., Schlechtriem, C.:

**Effects of wastewater borne silver nanoparticles on the reproduction and biochemical markers of *Daphnia magna*.** SETAC Europe 27<sup>th</sup> Annual Meeting, Brussels, Belgium, 7.-11.5.2017

Zeumer, R., Lopes, I., Galhano, V., Monteiro, M., Loureiro, S., Schlechtriem, C.:

**Effects of wastewater-borne silver nanomaterials on the growth, bioaccumulation and biochemical markers of *Onchorhynchus mykiss*.** Scientific Stakeholder Meeting on Nanomaterials in the Environment, German Environment Agency, Dessau, 10.-11.10.2017

# CONTACT

**Fraunhofer Institute for Molecular Biology  
and Applied Ecology IME**

**Applied Ecology and Bioresources Division**

Auf dem Aberg 1

57392 Schmallenberg, Germany

Tel +49 2972 302 - 0

Fax +49 2972 302 - 319

**Director**

Prof. Dr. Christoph Schäfers

**[www.ime.fraunhofer.de](http://www.ime.fraunhofer.de)**