

## Philipp Mayer

dr. (2000) University of Utrecht. **M.Sc. (Eng)** (1995) Technical University of Denmark.  
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### AREAS OF SPECIALIZATION AND INTERESTS

- Partitioning based analytical technology such as "Equilibrium sampling devices (ESDs)"
- Chemical activity measurements for exposure and risk assessments and for (bio)remediation.
- Control of exposure concentrations in toxicity tests and toxicity testing of hydrophobic organics.
- Micro-scale diffusion and enhanced diffusion of non-polar organics.

### RESEARCH EXPERIENCE

**Senior Scientist.** National Environmental Research Institute, Roskilde, University of Aarhus, Denmark, (2001 - ).  
Implementation of novel concepts and measurement methods in environmental monitoring, biodegradation research and bioremediation studies, with emphasis on exposure and the availability of contaminants.  
Research group: "Determining exposure – chemical activity".

**Product manager/Senior study director.** Netherlands Organization for Applied Scientific Research (TNO), Delft, NL, (2000-2001). Environmental testing for Chemical Industries. Supervision of GLP studies. Development and application of new testing strategies, and a large R&D project on all plastic sensors.

**Doctoral study** at Research Institute of Toxicology (RITOX), Utrecht, Netherlands. (1996-2000) "Partitioning based approaches to study exposure and effects of hydrophobic organic substances".

**Fulbright scholar.** Center for Great Lakes Studies, University of Wisconsin, Milwaukee, USA. (1994-1995).

### SCIENTIFIC PUBLICATIONS (2005 - 2007 )

Rein A, Fernqvist M, **Mayer P**, Trapp S, Bittens M and U Karlson. 2007. Degradation of PCB congeners by bacterial strains – Determination of kinetic parameters and considerations for the modelling of rhizoremediation. *Applied Microbiology and Biotechnology* 77: 469-481.

Kwon J, Wüthrich T, **Mayer P**, Escher B. 2007. Dynamic permeation method to determine partition coefficients of highly hydrophobic chemicals between polydimethylsiloxane and water. *Anal Chem*. 79: 6816-6822.

**Mayer P**, Fernqvist MM, Christensen PS, Karlson U and S Trapp. 2007. Enhanced diffusion of PAHs in artificial and natural aqueous solutions. *ES&T*. 41: 6148-6155.

ter Laak TL, **Mayer P**, Klamer HJC and JLM Hermens. 2007. Effects of dilution on the exposure in sediment toxicity tests. *Environ Toxicol Chem*. DOI: 10.1897/07-113.

Liu J-f, Toräng L J, **Mayer P** and JÅ Jönsson. 2007. Passive extraction and clean-up of phenoxy acids herbicides in samples from a groundwater plume using hollow fiber supported liquid membranes. *J Chromatogr A* 1160:5663.

Trapp S, Cammarano A, Capri E, Reichenberg F and **P Mayer**. 2007. Diffusion of PAH in potato and carrot slices and application for a potato model. *ES&T* 41: 3103-3108.

Legind CN, Karlson U, Burken JG, Reichenberg F and **P Mayer**. 2007. Determining chemical activity of (semi)volatile compounds by headspace solid phase microextraction. *Anal Chem* 79: 2869-2876.

Liu Jf, Hu X, Peng J, Jönsson JÅ, **Mayer P**, and G Jiang. 2006. Equilibrium Sampling of Freely Dissolved Alkylphenols into a Thin Film of 1-Octanol Supported on a Hollow Fiber Membrane. *Anal Chem* 78: 8526-8534.

**Mayer P** and F Reichenberg. 2006. Can highly hydrophobic organic substances cause aquatic baseline toxicity, and can they contribute to mixture toxicity? *Environ Toxicol Chem*. 25: 2639-2644.

Reichenberg F and **P Mayer**. 2006. Two complementary sides of bioavailability: accessibility and chemical activity of organic contaminants. *Environ Toxicol Chem* 25:1239-1245

Romero R, Liu J-f, **Mayer P** and JÅ Jönsson: 2005. Equilibrium sampling through membranes (ESTM) of freely dissolved copper concentrations using selective hollow fiber membranes and the spectrophotometric detection of a metal stripping agent. *Anal Chem* 77:7605-7611

**Mayer P**, Karlson U, Christensen PS, Johnsen AR and S Trapp. 2005. Quantifying the effect of medium composition on the diffusive mass transfer of HOCs through unstirred boundary layers. *ES&T* 39: 6123-6129.

Liu J-f, Jönsson JÅ and **P Mayer**. 2005. Equilibrium Sampling through membranes of Freely Dissolved Chlorophenols in Water Samples with Hollow Fiber Supported Liquid Membrane. *Anal Chem* 77: 4800-4809.

ter Laak TL, **Mayer P**, Busser FJM, Klamer HJM and JLM Hermens. 2005. A sediment dilution method to determine sorption coefficients of hydrophobic organic chemicals (HOCs) and the effect of dilution on chemical composition of HOC mixtures. *ES&T* 39 4220-4225.