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Curriculum Vitae

EDUCATION	1987 Senior Lecturer of Limnology at the Free University Berlin 1975 Dr. rer. nat., Max-Planck-Institute of Limnology, Christian-Albrechts-University, Kiel Dissertation: Recalcitrant nitrogen-containing dissolved organic substances in Lake Schöhsee and in cultures of algae.

EMPLOYMENT RECORD	from Jul. 95 Chairholder of Freshwater Ecology at the Humboldt University, Berlin, additionally from Jan. 95 Director of the Institute of Freshwater and Inland Fisheries, Berlin 1990 to 1994 GSF (National Laboratory of Environment and Health, Munich) - Institute of Ecological Chemistry, Vice Director and Head of the Department of "Biotic Remediation" and "Aquatic Ecotoxicology" 11/89 to 7/90 Fraunhofer Institute of Environmental Chemistry and Ecotoxicology (Schmallenberg), Head of the Department of Applied Ecology 9/75 to 10/89 Bavarian Water Board Munich, Head of the Limnological Department.

FIELDS OF STUDY

Pure and Applied limnology: pollution, acidification (acid rain, open cast mining), eutrophication of lakes and rivers, in-lake measures of rehabilitation, paleolimnology
Aquatic ecotoxicology: physiological and molecular biological biomarkers, bioaccumulation of organic chemicals, effect evaluation of multiple exposure, alteration of adverse effects by aquatic humic substances
Ecosystem health and integrity: Assessment (of adverse effects) on various levels of aggregation (for instance: energy flow systematics), and ecosystem stability.
Development of ecological aims in limnetic restoration ecology and application of ecological restoration measures.
Ecological Role of humic substances: geochemical status of whole lakes, biochemical interactions on organism and sub-organism level.

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Editorship

Member of 5 Editorial or Advisory Boards of Scientific Journals; Major editor of Handbuch Angewandte Limnologieã (Handbook of Applied Limnology).

Publications

SCHÖNFELDER, I., STEINBERG, C.E.W.: How did the nutrient concentrations change in northeastern German lowland rivers during the last four millennia? A paleolimnological study of floodplain sediments. Studia Quarternaria (accepted.)

SCHRENK-BERGT, C., KRAUSE, D., PRAWITT, O., LEWANDOWSKI, J., STEINBERG, C.E.W.: Eutrophication problems and their potential solutions in the artificial shallow Lake Altmühlsee (Germany). Studia Quarternaria (accepted)

STEINBERG, C.E.W., HÖSS, S., KLOAS, W., LUTZ, I. MEINELT, T. PFLUGMACHER, S., WIEGAND, C. (2004): Hormone-like effects of humic substances on fish, amphibs, and invertebrates. Environ. Toxicol. (in press)

TOTSCHE, O., PÖTHIG, R., UHLMANN, W., BÜTTCHER, H., STEINBERG, C.E.W.: Buffering mechanisms in acidic mining lakes – a model-based anaysis. Aquat. Geochem. (in press.)

ZAK, D, GELBRECHT, J. & STEINBERG, C.E.W.: Phosphorus retention at the redox interface of peatlands adjacent to surface waters in Northeast Germany. Biogeochemistry (in press)

VOGT, R.D., AKKANEN, J., ANDERSEN, D.O., BRÜGGEMANN, R., GJESSING, E., KUKKONEN, J., LUSTER, J., PAUL, A., PFLUGMACHER, S., STARR, M., STEINBERG, C.E.W., SCHMITT-KOPPLIN, P., ZSOLNAY, A. (2004): Key site variables governing the functional charcteristics of dissolved (DNOM) in Nordic forested catchments. Aquat. Sci. 66 (in press)

MEINELT, T., SCHRECKENBACH, K., KNOPF, K., WIENKE, A., STÜBER, A., STEINBERG, C.E.W. (2004): Humic substances affect physiological condition and sex ratio of swordtail (Xiphophorus helleri HECKEL). Aquat. Sci. 66 (in press)

FISCHER, R., WOLF, C., PAUL, L., DEPPE, T., STEINBERG, C.E.W. (2004): Fixation of manganese and iron on solid matter through electrochemically initiated processes. I. Principle and laboraty studies. Aquat. Sci. 66: 95–102.

MEINELT, T., KÖRNER, O., STÜBER, A., STEINBERG, C.E.W. (2004): Calcium and natural organic matter influence the toxicity of an organophosphorus insecticide. Fresenius Environ. Bull. 13: 262–267.

Paul, A., Hackbarth, S., Vogt, R.D., Röder, B., Burnison, B.K. & Steinberg, C.E.W. (2004): Photogeneration of singlet oxygen by humic substances : comparison of humic substances of aquatic and terrestrial origin. Photochem. Photobiol. Sci. 3: 272–280.

MEINELT, T., BURNISON, B.K., STÜBER, A., PIETROCK, M., STEINBERG, C.E.W. (2004): Antagonistic effects of calcium and natural organic matter on the toxicity of metals and xenobiotics to fish – a synopsis. Fresenius Environ. Bull. 13, 47–51.

TIMOFEYEV, M.A., WIEGAND, C., BURNISON, B.K., SHATILINA, Z.M., PFLUGMACHER, S., STEINBERG, C.E.W. (2004): Direct impace of natural organic matter (NOM) on freshwater amphipods. Sci. Total Environ. 319, 115–121.

MEEMS, N., WIEGAND, C., STEINBERG, C.E.W. (2004): Humic substances and the insecticide cypermethrin: Direct and indirect effects on the waterflea (Daphnia magna) Sci. Total Environ. 319, 115–121.

WELKER, M., VON DÖHREN, H., TÄUSCHER, H., STEINBERG, C.E.W., ERHARD, M. (2003): Toxic Microcystis in shallow lake Müggelsee (Germany) – temporal dynamics, spatial distribution, diversity. Arch. Hydrobiol. 157, 227–248.

STEINBERG, C.E.W., PAUL, A., PFLUGMACHER, S., MEINELT, T., KLÖCKING, R., WIEGAND, C. (2003): Pure humic substances have the potential to act as xenobiotic chemicals – A review. Fresenius Environ. Bull. 12, 391–401.

NIXDORF, B., LESSMANN, D., STEINBERG, C.E.W. (2003): The importance of chemical buffering for biological food web structures in acidic waters. Water Air Soil Poll. Focus 3, 27–46.

BEATTIE, K.A., RESSLER, J., WIEGAND, C., KRAUSE, E., CODD, G. A., STEINBERG, C.E.W., PFLUGMACHER, S. (2003): Comparative effects and metabolism of two microcystins and nodularin in the brine shrimp Artemia salina. Aquat. Toxicol. 62, 219–226.

FISCHER, H., SACHSE, A., STEINBERG, C., PUSCH, M. (2002): Differential use of dissolved organic matter by a microbial community in river sediments. Limnol. Oceanogr. 47, 1702–1711.

WEIGERT, B., STEINBERG, C.E.W. (2002): Sustainable development – assessment of water resource management measures. Water Sci. Technol. 46, 55–62.

HÖSS, S., JÜTTNER, I., TRAUNSPURGER, W., PFISTER, G., SCHRAMM, K.W., STEINBERG, C.E.W. (2002): Enhanced growth and reproduction of Caenorhabditis elegans (Nematoda) in the presence of 4-nonylphenol. Environ. Pollution. 120, 169–172.

GEYER, H., SCHRAMM, K.-W., FEICHT, E.A., BEHECHTI, A., STEINBERG, C., BRÜGGEMANN, R., POIGER, H., ZEEMAN, M. & KETTRUP, A. (2002): Half-lives of tetra-, penta, hexa, hepta-, and octa-chlorodibenzo-p-dioxin in rats, monkeys and

humans – a critical review. Chemosphere 48, 631–644.

SCHÖNFELDER, I., GELBRECHT, J., SCHÖNFELDER, J., STEINBERG, C.E.W. (2002): Littoral diatoms and their chemical environment: Relationships in northeastern German lakes and rivers. J. Phycol. 38, 66–82.

STEINBERG, C.E.W., HÖSS, S., BRÜGGEMANN, R. (2002): Further evidence that humic substances have the potential to modulate the fertility of the nematode Caenorhabditis elegans. Intern. Rev. Hydrobiol. 87, 121–133.

STEINBERG, C.E.W., BRÜGGEMANN, R. (2002): Ambiguous ecological control by dissolved humic matter and natural organic matter (NOM): Trade-offs between specific and non-specific effects. Acta hydrochim. hydrobiol. 29, 399–411.

HÖSS, S., HENSCHEL, T., HAITZER, M., TRAUNSPURGER, W., STEINBERG, C. E. W. (2001): Toxicity of cadmium on Caenorhabditis elegans (Nematoda) in whole sediment and porewater – the ambiguous role of organic matter. Environ. Toxicol. Chem. 20, 2794–2801.

STEINBERG, C.E.W., HOPPE, A., JÜTTNER, I., BRUCKMEIER, B., HERTKORN, N. (2001): Changes of humic substance constituents in Großer Arbersee during acidification. Acta hydrochim. hydrobiol. 29, 78–87.

WIEGAND, C., KRAUSE, E., STEINBERG, C.E.W., PFLUGMACHER, S. (2001): Toxicokinetics of atrazine in embryos of the zebrafish (Danio rerio). Ecotoxicol. Environ. Safe. 49, 199–205.

HAITZER, M., AKKANEN, J., STEINBERG, C., KUKKONEN, J.V. (2001): No enhancement in bioconcentration of organic contaminants by low levels of DOM. Chemosphere 44, 165–171.

SACHSE, A., BABENZIEN, D., GINZEL, G., GELBRECHT, J., STEINBERG, C.E.W. (2001): Characterization of dissolved organic carbon (DOC) of a dystrophic lake and an adjacent fen. Biogeochemistry 54, 279–296.

BRÜGGEMANN, R., HALFON, E., VOIGT, K. WELZL, G., STEINBERG, C. (2001): Analysis of partially ordered sets in ranking procedures. J. Chem. Inf. Comp. Sci. 41, 918–925.

MEINELT, T., PLAYLE, R.C., PIETROCK, M., BURNISON, B.K., WIENKE, A., STEINBERG, C.E.W. (2001): Interaction of cadmium toxicity in embryos and larvae of zebrafish (Danio rerio) with calcium and humic substances. Aquat. Toxicol. 54, 205–215.

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substances directly affect freshwater organisms. Acta hydrochim. hydrobiol. 29, 34–40.

PFLUGMACHER, S., WIEGAND, C., BEATTIE, K. A., KRAUSE, E., STEINBERG, C. E. W., CODD, G. A. (2001): Uptake, effects and metabolism of cyanobacterial toxins in the emergent reed plant Phragmites australis (CAV.) TRIN. ex STEUD. Environ. Toxicol. Chem. 20, 846–852.

PIETROCK, M., MEINELT, T., MARCOGLIESE, D.J., STEINBERG, C.E.W. (2001): Influence of aqueous sediment extracts from the Oder River (Germany/Poland) on survival of Diplostomum sp. (Trematoda: Diplostomidae) cercariae. Arch. Environ. Contam. Toxicol. 40, 327–332.

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). Freshwat. Biol. 46, 1–10.

PFLUGMACHER, S., SCHWARZ, S., PACHUR, H.J., STEINBERG, C.E.W. (2000): Effects of tributyltin chloride (TBTCl) on detoxication enzymes in aquatic plants. Environ. Toxicol. 15, 225–233.

WELKER, M., STEINBERG, C. (2000): Rates of humic substances photosensitized degradation of microcystin-LR in natural waters. Environ. Sci. Technol. 34, 3415–3419.

WIEGAND, C., PFLUGMACHER, S., OBEREMM, A., STEINBERG, C.E.W. (2000): Activity development of selected detoxication enzymes during the ontogenesis of the zebrafish (Danio rerio). Int. Rev. Hydrobiol. 85, 413–422.

MEINELT, T., SCHULZ, C., WIRTH, M., KÜRZINGER, H., STEINBERG, C. (2000): Correlation of diets high in n-6 polyunsaturated fatty acids with high growth rates in zebrafish (Danio rerio). Compar. Med. 50, 43–45.

ERNST, M., SACHSE, A., GELBRECHT, J., STEINBERG, C.E.W., JEKEL, M. (2000): Characterization of the DOC in nanofiltration permeates of tertiary effluents. Wat. Res. 34, 2879–2886.

HAITZER, M., LÖHMANNSRÖBEN, H.-G., STEINBERG, C.E.W., ZIMMERMANN, U. (2000): In vivo laser-induced fluorescence detection of pyrene in nematodes and determination of pyrene binding constants for humic substances by fluorescence quenching and bioconcentration experiments. J. Environ. Monitor. 2, 145–149.

STEINBERG, C.E.W., HAITZER, M., BRÜGGEMANN, R., PERMINOVA, I.V., YASHCHENKO, N.YU., PETROSYAN, V.S. (2000): Towards a quantitative structure activity relationship (QSAR) of dissolved humic substances as detoxifying agents in

freshwaters. Internat. Rev. Hydrobiol. 85, 253–266.

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Guest Professorships

Salzburg 1994, 1998, 2001 Introduction to Ecological Chemistry

Scientific Awards

Young Scientists Award of Water Chemistry, German Chemical Society (1985); Paulaner Awards (1985, 1987); Environment Award of Kreissparkasse Calw (1997)

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