List of Publications

PD Dr. Steffen Kolb

Journal articels (peer reviewed)

Härtig, C., Kolb, S., Horn, M.A., Inskeep, W.P., and Planer-Friedrich, B. in press. Monothioarsenate as a Hitherto Unknown Electron Donor for Chemolithotrophic Growth of the Aerobic Hyperthermophilic Bacterium Thermocrinis ruber. FEMS Mi-crobiology Ecology

Schmidt, O., Horn, M.A., Kolb, S., and Drake, H.L. in press. Temperature Impacts Differentially on the Methanogenic Food Web of Cellulose-Supplemented Peatland Soil. Environmental Microbiology

Wieczorek, A.S., Hetz, S., Drake, H.L., and Kolb, S. 2014. Microbial Responses to Chitin and Chitosan in Oxic and Anoxic Agricultural Soil Slurries. Biogeosciences 11:3339-3352

Chatzinotas, A., Schellenberger, S., Glaser, K., and Kolb, S. 2013. Assimilation of Cellulose-Derived Carbon by Microeukaryotes in Oxic and Anoxic Slurries of an Aer-ated Soil Applied & Environmental Microbiology 79:5777-5781

Stacheter, A., and Kolb, S. 2013. Prerequisites for Amplicon Pyrosequencing of Mi-crobial Methanol Utilizers in the Environment Frontiers in Microbiology 4: no. 268

Stacheter, A., Noll, M., Lee, C., Glowik, B., Ebertsch, L., Mertel, R., Schulze, D., Lampert, N., Drake, H.L., and Kolb, S. 2013. Methanol Oxidation by Temperate Soils and Environmental Determinants of associated Methylotrophs. The ISME Journal 7: 1051-1064.

Kolb, S., and Horn, M.A. 2012. Microbial CH4 and N2O Consumption in Acidic Wet-lands. Frontiers in Microbiology 3: 1-9

Schellenberger, S., Drake, H.L., and Kolb, S. 2012. Impairment of Cellulose- and Cellobiose-Degrading Soil Bacteria by Two Acidic Herbicides. FEMS Microbiology Letters 327: 60-65

Schellenberger, S., Drake, H.L., and Kolb, S. 2011. Functionally Redundant Cellobi-ose-Degrading Soil Bacteria Respond Differentially to Oxygen. Applied & Environ-mental Microbiology 77(17): 6043-6048

Hunger, S., Schmidt, O., Hilgarth, M., Horn, M.A., Kolb, S., Conrad, R., and Drake, H.L.. 2011. Competing Formate- and carbon dioxide-utilizing prokaryotes in an anoxic methane-emitting fen soil. Applied & Environmental Microbiology 77: 3773-3785

Wieczorek, A., Drake, H.L., and Kolb, S. 2011. Response of Fen Methanotrophs Ca-pable of Atmospheric Methane Consumption to Glucose, Acetate, Propionate and Ethanol. FEMS Microbiology Ecology 77:28-39

Degelmann, D.M., Borken, W., Drake, H.L., and Kolb, S. 2010. Atmospheric me-thane-oxidizing genotypes are affected by tree species. Applied & Environmental Microbiology 76: 3228-3235

Dörr, N., Glaser, B., and Kolb, S. 2010. Methanotrophic communities in Brazilian fer-ralsols from naturally forested, afforested and agricultural sites. Applied & Environ-mental Microbiology 76: 1307-1310

Schellenberger, S., Kolb, S., and Drake, H.L. 2010. Metabolic responses of novel cellulolytic and saccharolytic agricultural soil bacteria to oxygen. Environmental Micro-biology 12 (4): 845-861

Kolb, S. 2009. The Quest for Methane-Oxidizers in Forest Soil. Environmental Mi-crobiology Reports 1(5): 336-346

Kolb, S. 2009. Aerobic Methanol-Oxidizing Bacteria in Soil. FEMS Microbiology Let-ters 300: 1-10

Degelmann, D.M., Kolb, S., Dumont, M.G., Murrell, J.C., and Drake, H.L. 2009. Enterobacteriaceae Facilitate the Anaerobic Degradation of Glucose by a Forest Soil. FEMS Microbiology Ecology 68:312-319

Degelmann, D.M., Borken, W., and Kolb, S. 2009. Methane oxidation kinetics differ in European beech and Norway spruce soils. European Journal of Soil Science 60:499-506

Maurer, D., Kolb, S., Haumaier L., and Borken, W. 2008. Inhibition of atmospheric methane-oxidation by monoterpenes in Norway spruce and European beech soils. Soil Biology & Biochemistry 40: 3014-3020

Kemnitz D., Kolb, S., and Conrad, R. 2007. High Abundance of Crenarchaeota in a Temperate Acidic Forest Soil. FEMS Microbiology Ecology 60(3), 442-448

Knief, C., Kolb S., Bodelier P.L.E., Lipski A., and Dunfield, P. 2006. The active Methanotrophic Community in Hydromorphic Soils Changes in Response to Changing Me-thane Concentration. Environmental Microbiology 8(2): 321-333

Musat, N., Werner, U., Kolb, S., Dodenhof, T., Knittel, K., van Beusekom, J.E.E., Du-bilier, N., and Amann, R. 2006. Microbial Community Structure of Sandy Intertidal Sediments in the North Sea, Sylt-Romo Basin, Wadden Sea. Systematic & Applied Microbiology 29: 333-348

Kolb, S., Cabrera, A., Kammann, C., Kämpfer, P., Conrad, R., and Jäckel, U. 2005. Quantitative Impact of CO2 enriched Atmosphere on Abundances of Methanotrophic Bacteria in a Meadow Soil. Biology & Fertility of Soils 41 (5): 337-342

Kolb, S., Knief, C., Dunfield, P., and Conrad, R.. 2005. Abundance and Activity of Uncultured Methanotrophic Bacteria Involved in the Consumption of Atmospheric Me-thane in Two Forest Soils. Environmental Microbiology 7(8): 1150-1161

Kemnitz, D., Kolb, S., and Conrad, R. 2005. Enrichment of Rice Cluster III Archaea from Soil and Phenotypic Characterization Prior to Isolation by using Real-Time PCR. Environmental Microbiology 7(4): 553-565

Ricke, P., Kolb, S., and Braker, G. 2005. Application of a Newly Developed ARB In-tegrated in silico T-RFLP Tool Reveals the Importance of a Novel pmoA Sequence Cluster in an Upland Soil. Applied & Environmental Microbiology 71(3): 1671-1673

Kolb, S., Knief, C., Stubner, S., and Conrad, R. 2003. Quantitative Detection of Methanotrophs in Soil by Novel pmoA-Targeted Real-Time PCR Assays. Applied & Environmental Microbiology 69(5): 2423-2429

Non-Refereed Scientific Articles

Kolb, S. 2011. Warum verschwindet das Treibhausgas Methan im Waldboden? UBT Spektrum – Sonderheft Waldforschung (Universität Bayreuth).

Kolb, S. 2011. Methanotrophe: Treibhausgas-vernichtende Mikroben in Bio-spektrum, Spektrum Akademischer Verlag, 2, 146-149.