

## Dagmar Woebken, Dr. rer. nat.

### Complete list of all scientific publications

Until now Dagmar Woebken has published 32 papers in peer-reviewed journals, which were cited 3720 times (current “h-index” of 25, ResearcherID, April 2018). She was amongst the most cited scientists publishing in the field of marine and freshwater biology in the German-speaking area in the years 2006 - 2009 (Laborjournal, 4/2012).

#### **PhD thesis:**

**Woebken D.** Diversity and ecology of marine Planctomycetes with focus on anammox bacteria. 2008. University of Bremen, Bremen, Germany.

#### **Peer-reviewed publications:**

1. Angel R, Nepel M, Panhölzl C, Schmidt H, Herbold CW, Eichorst SA, **Woebken D.** 2018. Evaluation of primers targeting the diazotroph functional gene and development of NifMAP – a bioinformatics pipeline for analyzing *nifH* amplicon data. *Frontiers Microbiology*. <https://doi.org/10.3389/fmicb.2018.00703>
2. Hausmann B, Pelikan C, Herbold CW, Köstlbacher S, Albertsen M, Eichorst SA, Glavina Del Rio T, Huemer M, Nielsen PH, Rattei T, Stingl U, Tringe SG, Trojan D, Wentrup C, **Woebken D,** Pester M, Loy A. *The ISME Journal*. doi: 10.1038/s41396-018-0077-1.
3. Eichorst SA, Trojan D, Roux S, Herbold C, Rattei T, **Woebken D.** 2018. Genomic insights into the Acidobacteria reveal strategies for their success in terrestrial environments. *Environmental Microbiology*. 20:1041-1063.
4. Angel R, Panhölzl C, Gabriel R, Herbold C, Wanek W, Richter A, Eichorst SA, **Woebken D.** 2018. Application of stable-isotope labeling techniques for the detection of active diazotrophs. *Environmental Microbiology*. 20:44-61.
5. Everroad RC, Stuart RK, Bebout BM, Detweiler AM, Lee JZ, **Woebken D,** Prufert-Bebout L, Pett-Ridge J. 2016. Permanent draft genome of strain ESFC-1: ecological genomics of a newly discovered lineage of filamentous diazotrophic cyanobacteria. *Standards in Genome Science*. 11:53. (cited 2x)
6. Spohn M, Pötsch EM, Eichorst SA, **Woebken D,** Wanek W, Richter A. 2016. Soil microbial carbon use efficiency and biomass turnover in a long-term fertilization experiment in a temperate grassland. *Soil Biology and Biochemistry*. 97:168-175. (cited 21x)
7. Eichorst SA, Strasser F, Woyke T, Schintlmeister A, Wagner M, **Woebken D**<sup>§</sup>. 2015. Advancements in the application of NanoSIMS and Raman microspectroscopy to investigate the activity of microbial cells in soils. *FEMS Microbiology Ecology*. 91: fiv106 (cited 29x)
8. **Woebken D**<sup>§</sup>, Burow LC, Behnam F, Mayali X, Schintlmeister A, Fleming ED, Prufert-Bebout L, Singer SW, López Cortés A, Hoehler TM, Pett-Ridge J, Spormann AM, Wagner M, Weber PK, Bebout BM<sup>§</sup>. 2015. Revisiting N<sub>2</sub> fixation in Guerrero Negro intertidal microbial mats with a functional single-cell approach. *The ISME Journal*. 9:485-496. (°corresponding authors) (cited 27x)
9. Berry D, Mader E, Lee TK, **Woebken D,** Wang Y, Zhu D, Palatinszky M, Schintlmeister A, Schmid MC, Hanson BT, Shterzer N, Mizrahi I, Rauch I, Decker T, Bocklitz T, Popp J, Gibson CM, Fowler PW, Huang WE, Wagner M. 2015. Tracking heavy water (D<sub>2</sub>O) incorporation for identifying and sorting active microbial cells. *Proceedings of the National Academy of Sciences of the United States of America*, 112: E194-203. (cited 89x)

10. Seedorf H, Griffin NW, Ridaura VK, Reyes A, Cheng J, Rey FE, Smith MI, Simon GM, Scheffran RH, **Woebken D**, et al. 2014. Bacteria from diverse habitats colonize and compete in the mouse gut. *Cell*. 159:253-266. (cited 102x)
11. Burow LC, **Woebken D**, Bebout BM, Marshall IPG, Singer SW, Pett-Ridge J, Prufert-Bebout L, Spormann AM, Weber PK, Hoehler TM. 2014. Identification of *Desulfobacterales* as primary hydrogenotrophs in a complex microbial mat community. *Geobiology* 12: 221-230. (cited 19x)
12. Lee JZ, Burow LC, **Woebken D**, Everroad RC, Kubo MD, Spormann AM, Weber PK, Pett-Ridge J, Bebout BM, Hoehler TM. 2014. Fermentation couples *Chloroflexi* and sulfate-reducing bacteria to *Cyanobacteria* in hypersaline microbial mats. *Frontiers Microbiology* 5:61. doi: 10.3389/fmicb.2014.00061. (cited 28x)
13. Burow LC\*, **Woebken D\***, Marshall IPG, Lindquist EA, Bebout BM, Prufert-Bebout L, Hoehler TM, Tringe SG, Pett-Ridge J, Weber PK, Spormann AM, Singer SW. 2013. Anoxic carbon flux in photosynthetic microbial mats as revealed by metatranscriptomics and NanoSIMS. *The ISME Journal* 7:817-829. (\*co-first authors) (cited 32x)
14. Everroad RC, **Woebken D**, Singer SW, Burow LC, Kyrpides N, Woyke T, Goodwin L, Detweiler A, Prufert-Bebout L, Pett-Ridge J. 2013. Draft genome sequence of an oscillatorian cyanobacterium, strain ESFC-1. *Genome Announc.* 1(4):e00527-13. doi:10.1128/genomeA.00527-13. (cited 6x)
15. van de Vossenberg J, **Woebken D**, Maalcke WJ, Wessels HJCT, Dutilh BE, Kartal B, Janssen-Megens EM, Roeselers G, Yan J, Speth D, Gloerich J, Geerts W, van der Biezen E, Pluk W, Francoijs K-J, Russ L, Lam P, Malfatti SA, Tringe SG, Haaijer SCM, Op den Camp HJM, Stunnenberg HG, Amann R, Kuypers MMM, Jetten MSM. 2013. The metagenome of the marine anammox bacterium '*Candidatus Scalindua profunda*' illustrates the versatility of this globally important nitrogen cycle bacterium. *Environmental Microbiology* 15:1275-1289. (cited 129x)
16. **Woebken D**<sup>§</sup>, Burow LC, Prufert-Bebout L, Bebout BM, Hoehler TM, Pett-Ridge J, Singer SW<sup>§</sup>, Spormann AM, Weber PK. 2012. Identification of a novel cyanobacterial group as active diazotrophs in a coastal microbial mat using NanoSIMS analysis. *The ISME Journal* 6:1427-1439. (§corresponding authors) (cited 47x)
17. Burow LC, **Woebken D**, Bebout BM, McMurdie PJ, Singer SW, Pett-Ridge J, Prufert-Bebout L, Spormann AM, Weber PK, Hoehler TM. 2012. Hydrogen production in photosynthetic microbial mats in the Elkhorn Slough estuary, Monterey Bay. *The ISME Journal* 6:863-874. (cited 40x)
18. Musat F, Wilkes H, Behrends A, **Woebken D**, Widdel F. 2010. Microbial nitrate-dependent cyclohexane degradation coupled with anaerobic ammonium oxidation. *The ISME Journal* 4:1290-1301. (cited 39x)
19. Hamersley MR, **Woebken D**, Boehrer B, Schulze M, Lavik G, Kuypers MMM. 2009. Water column anammox and denitrification in a temperate permanently-stratified lake (Lake Rassnitzer, Germany). *Systematic and Applied Microbiology* 32:571-582. (cited 90x)
20. Hoffmann F, Radax R, **Woebken D**, Holtappels M, Lavik G, Rapp HT, Schläppy M-L, Schleper C, Kuypers MMM. 2009. Complex nitrogen cycling in the sponge *Geodia barretti*. *Environmental Microbiology* 11:2228-2243. (cited 178x)
21. Galan A, Molina V, Thamdrup B, **Woebken D**, Lavik G, Kuypers MMM, Ulloa O. 2009. Anammox bacteria and the anaerobic oxidation of ammonium in the oxygen minimum zone off northern Chile. *Deep-Sea Research II* 56:1021-1031. (cited 117x)

22. Lam P, Lavik G, Jensen MM, van de Vossenberg J, Schmid M, **Woebken D**, Gutiérrez D, Amann R, Jetten MSM, Kuypers MMM. 2009. Revising the nitrogen cycle in the Peruvian oxygen minimum zone. *Proceedings of the National Academy of Sciences of the United States of America* 106:4752-4757. (cited 508x)
23. **Woebken D**<sup>§</sup>, Lam P, Fuchs BM, Kuypers MMM, Naqvi SWA, Kartal B, Strous M, Jetten MSM, Amann R. 2008. Microdiversity study of marine anammox bacteria reveals a novel *Candidatus Scalindua* phylotype in marine oxygen minimum zones. *Environmental Microbiology* 10:3106-3119. (§corresponding author) (cited 208x)
24. Schmid MC, Hooper AB, Klotz MG, **Woebken D**, Lam P, Kuypers MMM, Pommerening-Roeser A, op den Camp HJM, Jetten MSM. 2008. Environmental detection of octahaem cytochrome chydroxylamine/hydrazine oxidoreductase genes of aerobic and anaerobic ammonium-oxidizing bacteria. *Environmental Microbiology* 10:3140-3149. (cited 116x)
25. **Woebken D**, Teeling H, Dumitriu A, Kostadinov I, Amann R, Glöckner FO. 2007. Fosmids of novel marine *Planctomycetes* from the Namibian and Oregon coast upwelling systems and their cross-comparison with planctomycete genomes. *The ISME Journal* 1:419-435. (cited 87x)
26. **Woebken D**, Fuchs BM, Kuypers MMM, Amann R. 2007. Potential interactions of particle-associated anammox bacteria with bacterial and archaeal partners in the Namibian upwelling system. *Applied and Environmental Microbiology* 73:4648-4657. (cited 178x)
27. Hamersley MR, Lavik G, **Woebken D**, Rattray JE, Lam P, Hopmans EC, Sinninghe Damsté JS, Krüger S, Graco M, Gutiérrez D, Kuypers MMM. 2007. Anaerobic ammonium oxidation in the Peruvian oxygen minimum zone. *Limnology and Oceanography* 52:923-933. (cited 282x)
28. Hannig M, Lavik G, Kuypers MMM, **Woebken D**, Martens-Habbena W, Jürgens K. 2007. Shift from denitrification to anammox after inflow events in the central Baltic Sea. *Limnology and Oceanography* 52:1336-1345. (cited 95x)
29. Wakeham SG, Amann R, Freeman KH, Hopmans EC, Jørgensen BB, Putnam IF, Schouten S, Sinninghe Damsté JS, Talbot HM and **Woebken D**. 2007. Microbial ecology of the stratified water column of the Black Sea as revealed by a comprehensive biomarker study. *Organic Geochemistry* 38: 2070-2097. (cited 146x)
30. Bauer M, Kube M, Teeling H, Richter M, Lombardot T, Allers E, Wurdemann CA, Quast C, Kuhl H, Knaust F, **Woebken D**, Bischof K, Mussmann M, Choudhuri JV, Meyer F, Reinhardt R, Amann R, FO Glöckner. 2006. Whole genome analysis of the marine Bacteroidetes *Gramella forsetii* reveals adaptations to degradation of polymeric organic matter. *Environmental Microbiology* 8: 2201-2213. (cited 244x)
31. Fuchs BM, **Woebken D**, Zubkov MV, Burkhill P, R. Amann. 2005. Molecular identification of picoplankton populations in contrasting waters of the Arabian Sea. *Aquatic Microbial Ecology* 39: 145-157. (cited 114x)
32. Kuypers MMM, Lavik G, **Woebken D**, Schmid M, Fuchs BM, Amann R, Jørgensen BB, Jetten MSM. 2005. Massive nitrogen loss from the Benguela upwelling system through anaerobic ammonium oxidation. *Proceedings of the National Academy of Sciences of the United States of America* 102:6478-6483. (cited 660x)

## Book chapters

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**Eichorst SA**, Trojan D, and **Woebken D**. 2018. *Terriglobus*. In Bergey's Manual of Systematics of Archaea and Bacteria. (eds W.B. Whitman, F. Rainey, P. Kämpfer, M. Trujillo, J. Chun, P. DeVos, B. Hedlund and S. Dedysh). doi:10.1002/9781118960608.gbm00003.pub2

**Eichorst SA and Woebken D**. 2014. Investigation of microorganisms at the single-cell level using Raman Microspectroscopy and Nanometer-scale Secondary Ion Mass Spectrometry. *In* Molecular Methods and Applications in Microbiology, in press. (Skovhus, T.L., Caffrey, S., and Hubert, C.R.J., ed.). Caister Academic Press, Norfolk, UK.