

Refereed Journals and Reviews

* Undergraduate, graduate or postdoctoral advisees

1. 2017 Collin R. Edwards, Tullis C. Onstott, Jennifer M. Miller, Jessica B. Wiggins, Wei Wang, Charles K. Lee, S. Craig Cary, Stephen B. Pointing, Maggie C.Y. Lau. Draft Genome Sequence of Uncultured Upland Soil Cluster *Gammaproteobacteria* Gives Molecular Insights into High-Affinity Methanotrophy. *Genome Announcements*, 5 (17), doi: 10.1128/genomeA.00047-17.
2. 2017 Young, E.D., Kohl, I.E., Lollar, B.S., Etiopie, G., Rumble III, D., Li, S., Haghnegahdar, M.A., Schauble, E.A., McCain, K.A., Foustoukos, D.I., Sutcliffe, C., Warr, O., Ballentine, C.J., Onstott, T.C., Hosgormez, H., Neubeck, A., Marques, J.M., Pérez-Rodríguez, I., Rowe, A.R., LaRowe, D.E., Magnabosco, C.*, Yeung, L.Y., Ash, J.L., and Bryndzia, L.T. The relative abundances of resolved $^{12}\text{CH}_2\text{D}_2$ and $^{13}\text{CH}_3\text{D}$ and mechanisms controlling isotopic bond ordering in abiotic and biotic methane gases. *Geochimica Cosmochimica Acta*, 203:235-264.
3. 2016 Tullis C. Onstott, *Deep Life: The Hunt for the Hidden Biology of Earth, Mars and Beyond*. Princeton University Press
4. 2016 Youmi Oh, Brandon Stackhouse, Maggie C.Y. Lau, Jonathan Moch, Tullis C. Onstott, Christian Juncher Jørgensen, Ludovica D'Imperio, Bo Elberling, Craig A. Emmerton, Vincent L. St. Louis and David Medvigy. A scalable model explaining methane consumption in Arctic mineral soils. *Geophysical Research Letters*, 43, 5143--5150, doi: 10.1002/2016GL069049
5. 2016 Maggie C.Y. Lau, Thomas L. Kieft, Olukayode Kuloyo, Borja Linage, Esta van Heerden, Melody R. Lindsay, Cara Magnabosco, Wei Wang, Jessica B. Wiggins, Ling Guo, David H. Perlman, Saw Kyin, Henry H. Shwe, Rachel L. Harris, Youmi Oh, Min Joo Yi and Tullis C. Onstott. An oligotrophic deep subsurface community dependent on syntrophy is dominated by sulfur-driven autotrophic denitrifiers. *Proceedings of the National Academy of Sciences (USA)* 113 (49). doi: 10.1073/pnas.1612244113
6. 2016 Magnabosco C., Timmers P. H. A., Lau M. C. Y., Borgonie G., Linage-Alvarez B., Kuloyo O., Alleva R., Kieft T. L., Slater G. S., van Heerden E., Sherwood Lollar B. and Onstott T. C. The case for a dynamical subsurface ecosystem. *BioRxiv*. doi: 10.1101/040204
7. 2016 B. Stackhouse, M.C.Y. Lau, T. Vishnivetskaya, N. Burton, R. Wang, A. Southworth, L. Whyte, and T. C. Onstott. Atmospheric CH₄ oxidation by Arctic permafrost and mineral cryosols as a function of water saturation and temperature. *Geobiology*. doi: 10.1111/gbi.12193
8. 2016 Y. Chen, Kevin K. Lehmann, Y. Peng, L.M. Pratt, J.R. White, S.B. Cadieux, B. Sherwood Lollar, G. Lacrampe-Couloume and T. C. Onstott. Hydrogen isotopic composition of Arctic and atmospheric CH₄ determined by a portable near-IR cavity ring-down spectrometer with a cryogenic pre-concentrator. *Astrobiology*, 16 (10). doi: 10.1089/ast.2015.1395
9. 2016 Cara Magnabosco, Kathleen Ryan, Maggie C.Y. Lau, Olukayode Kuloyo, Barbara Sherwood Lollar, Thomas L. Kieft, Esta van Heerden, and T. C. Onstott. A Metagenomic Window into Carbon Metabolism at 3 km Depth in Precambrian Continental Crust. *The ISME Journal*. doi: 10.1038/ismej.2015.150
10. 2015 R. L. Sanders*, R. L. Sleighter, P. G. Hatcher, T. C. Onstott, L. G. Whyte, B. Stackhouse*, and S. C. B. Myneni, Strikingly Different Form of Organic Carbon in Soils of Polar Regions, *Env. Sci. Tech.*, *in review*.

11. 2015 Cara Magnabosco*, Kathleen Ryan*, Maggie C.Y. Lau*, Olukayode Kuloyo, Barbara Sherwood Lollar, Thomas L. Kieft, Esta van Heerden, and T. C. Onstott, A Metagenomic Window into Carbon Metabolism at 3 km Depth in Precambrian Continental Crust. *The ISME Journal*, doi:10.1038/ismej.2015.150.
12. 2015 G. Borgonie, B. Linage-Alvarez, A.O. Ojo, S.O.C Mundle, L.B. Freese, C. Van Rooyen, O. Kuloyo, J. Albertyn, C. Pohl, E.D. Cason, J. Vermeulen, C. Pienaar, D. Litthauer, H. Van Niekerk, J. Van Eeden, B. Sherwood Lollar, T. C. Onstott and E. Van Heerden, Eukaryotic opportunists dominate the deep-subsurface biosphere in South Africa. *Nature Communications* 6:8952, DOI: 10.1038/ncomms9952.
13. 2015 Simkus, D. N., G. F. Slater, B. Sherwood Lollar, K. Wilkie, T. L. Kieft, C. Magnabosco, M.C.Y. Lau, M. J. Pullin, S. B. Hendrickson, K. E. Wommack, E. G. Sakowski, E. van Heerden, O. Kuloyo, B. Linage, G. Borgonie, T. C. Onstott, Variations in microbial carbon sources and cycling in the deep continental subsurface. *Geochim. Cosmochim. Acta*, 173:264–283.
14. 2015 Brandon T. Stackhouse*, Tatiana A. Vishnivetskaya, Alice Layton, Susan Pfiffner, Nadia C. Mykytczuk, Lyle G. Whyte, Nabil Saad, and Tullis C. Onstott, Vertical gas fluxes, geochemical characteristics, and microbial community of polygonal active layer and permafrost during progressive spring thaw. *Journal of Geophysical Research: Biogeosciences* 120: doi:10.1002/2015JG003004.
15. 2015 Borgonie G, Linage-Alvarez B, Ojo A, Shivambu S, Kuloyo O, Cason E, Maphanga S, Vermeulen J, Litthauer D, Ralston C, Onstott TC, Sherwood-Lollar B, van Heerden E, Deep subsurface mine stalactites trap endemic fissure fluid Archaea, Bacteria, and Nematoda possibly originating from ancient seas. *Frontiers in Microbiology*, 6:833.
16. 2015 T. C. Onstott Deep Subsurface Microbiology. In Gargaud M, Irvine W (Eds.) *Encyclopedia of Astrobiology*, Vol. x, pp xx–xxx. Heidelberg New York Dordrecht London.
17. 2015 M.C.Y. Lau*, B.T. Stackhouse*, A.C. Layton, A. Chauhan, T.A. Vishnivetskaya, K. Chourey, N.C.S. Mykytczuk, P.C. Bennett, G. Lamarche-Gagnon, N. Burton, J. Ronholm, W.H. Pollard, C.R. Omelon, D.M. Medvigy, R.L. Hettich, S.M. Pfiffner, L.G. Whyte and T. C. Onstott. An active atmospheric methane sink in high Arctic mineral cryosols. *ISME Journal*, doi:10.1038/ismej.2015.13.
18. 2015 J. Labonté, E. Field, M. Lau, D Chivian, E. van_Heerden, K. E. Wommack, T. L. Kieft, T. C. Onstott and R. Stepanauskas. Single cell genomics indicates horizontal gene transfer and viral infections in a deep subsurface Firmicutes population. *Frontiers in Microbiology* 1-14: doi:10.1038/ismej.2015.48.
19. 2014 Sherwood Lollar, B., Onstott, T.C., Lacrampe-Coulome, G., and Ballentine, C., Continental lithosphere doubles global H₂ flux estimates for the deep biosphere. *Nature* 516:379-382, doi:10.1038/nature14017.
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21. 2014 Magnabosco*, C., C.Y.M. Lau*, T. C. Onstott, T.L. Kieft, M. Tekere, J. Olivier, B. Linage-Alvarez, O. Kuloyo, M. Erasmus, E. Cason, E. van Heerden, and G. Borgonie. Comparisons of the composition and biogeographic distribution of the bacterial communities occupying South African

- thermal springs with those inhabiting deep subsurface fracture water. *Frontiers in Microbiology*, doi: 10.3389/fmicb.2014.00679.
22. 2014 Lau, C.Y. M*, C. Cameron, C. Magnabosco*, C.T. Brown, F., Schilkey, S. Grim, S. Hendrickson, M. Pullin, G. Lacrampe-Couloume, B. Sherwood Lollar, Esta van Heerden, T.L. Kieft and T. C. Onstott, Phylogeny and phylogeography of functional genes shared among seven terrestrial subsurface metagenomes reveal N-cycling and microbial evolutionary relationships. *Frontiers in Microbiology*, doi: 10.3389/fmicb.2014.00531.
 23. 2014 Y. Chen (陈宇衡), P. Mahaffy, V. Holmes, J. Burris, P. Morey, Y. Tang, K.K. Lehmann, B. Sherwood Lollar, G. Lacrampe Couloume and T. C. Onstott, Isotopic Analyses of CH₄ during Planetary Surface Missions Using Near Infrared Cavity Ring-down Spectroscopy. *Planetary and Space Sciences*, 105:117-126, 10.1016/j.pss.2014.11.016.
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 27. 2014 Vishnivetskaya, TA, AC Layton, MCY Lau*, A Chauhan, KR Cheng, AJ Meyers, JR Murphy, AW Rogers, GS Saaranya, DE Williams, SM Pfiffner, L Whyte, JP Biggerstaff, BT Stackhouse*, TJ Phelps, GS Saylor and TC Onstott, Commercial DNA extraction kits impact observed microbial community composition in permafrost samples. *FEMS Microbiol Ecol*. 87:217-230. doi: 10.1111/1574-6941.12219.
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