

Full List of Peer-reviewed articles

128. Wang H, Bagnoud A, Ponce-Toledo RI, Kerou M, Weil M, Schleper C, Urich T (2021) Linking 16S rRNA Gene Classification to *amoA* Gene Taxonomy Reveals Environmental Distribution of Ammonia-Oxidizing Archaeal Clades in Peatland Soils. **mSystems** e0054621, [31.08.2021]. DOI: 10.1128/mSystems.00546-21
127. Kerou M, Ponce-Toledo RI, Zhao R, Abby SS, Hirai M, Nomaki H, Takaki Y, Nunoura T, Jørgensen SL, Schleper C (2021) Genomes of Traumarchaeota from deep sea sediments reveal specific adaptations of three independently evolved lineages. **The ISME Journal** 1-17. DOI: 10.1038/s41396-021-00962-6
126. Zhao R, Mogollon JM, Abby S, Schleper C, Biddle JF, Roerdink DL, Thorseth IH, Joergensen SL (2020) Geochemical transition zone powering microbial growth in subsurface sediments. **Proceedings of the National Academy of Sciences of the United States of America** 117(51): 32617-32626. DOI: 10.1073/pnas.2005917117
125. Zink IA, Wimmer E, Schleper C (2020) Heavily Armed Ancestors: CRISPR Immunity and Applications in Archaea with a Comparative Analysis of CRISPR Types in *Sulfolobales*. **Biomolecules** 10(11): 1523. DOI: 10.3390/biom10111523
124. Abby SS, Kerou M, Schleper C (2020) Ancestral Reconstructions Decipher Major Adaptations of Ammonia-Oxidizing Archaea upon Radiation into Moderate Terrestrial and Marine Environments. **mBio** 11(5): e02371-20. DOI: 10.1128/mBio.02371-20
123. Zink I, Fouqueau T, Tarrason Risa G, Werner F, Baum B, Bläsi U, Schleper C (2020) Comparative CRISPR type III-based knockdown of essential genes in hyperthermophilic *Sulfolobales* and the evasion of lethal gene silencing. **RNA Biology** [ePub: 21 Sep 2020]. DOI: 10.1080/15476286.2020.1813411.
122. Reyes C, Hodgskiss L, Kerou M, Pribasniig T, Abby SS, Bayer B, Kraemer S, Schleper C (2020) Genome wide transcriptomic analysis of the soil ammonia oxidizing archaeon *Nitrososphaera viennensis* upon exposure to copper limitation. **The ISME Journal** 14(11): 2659-2674. DOI: 10.1038/s41396-020-0715-2.
121. Reyes C, Hodgskiss L, Baars O, Kerou M, Bayer B, Schleper C, Kraemer S (2020) Copper limiting threshold in the terrestrial ammonia oxidizing archaeon *Nitrososphaera viennensis*. **Research in Microbiology** 171 (3-4): 134-142. DOI: 10.1016/j.resmic.2020.01.003
120. Schleper C, Sousa F (2020) News and views: Meet the relatives of our cellular ancestors. **Nature** 577: 478-479. DOI: 10.1038/d41586-020-00039-y
119. Mooshammer M, Alves RJE, Bayer B, Melcher M, Stieglmeier M, Jochum L, Rittmann S, Watzka M, Schleper C, Herndl G, Wanek W (2020) Nitrogen Isotope Fractionation During Archaeal Ammonia Oxidation: Coupled Estimates From Measurements of Residual Ammonium and Accumulated Nitrite. **Frontiers in Microbiology** 11: 1710. DOI: 10.3389/fmicb.2020.01710
118. Milojevic T, Kölbl D, Ferrière L, Albu M, Kish A, Flemming RL, Koeberl C, Blazevic A, Zebec Z, Rittmann SKR, Schleper C, Pignitter M, Somoza V, Schimak MP, Rupert AN (2019) Exploring the microbial biotransformation of extraterrestrial material on nanometer scale. **Scientific reports** 9: 18028. DOI: 10.1038/s41598-019-54482-7.
117. Zink IA, Pfeifer K, Wimmer E, Sleytr UB, Schuster B, Schleper C (2019) CRISPR-mediated gene silencing reveals involvement of the archaeal S-layer in cell division and virus infection. **Nature Communications** 10: 4797. DOI: 10.1038/s41467-019-12745-x.

116. Siljanen HMP, Alves RJE, Ronkainen JG, Lamprecht RE, Bhattarai HR, Bagnoud A, Marushchak ME, Martikainen PJ, [Schleper C](#), Biasi C (2019) Archaeal nitrification is a key driver of high nitrous oxide emissions from arctic peatlands. **Soil Biology and Biochemistry** 137: 107539. DOI: 10.1016/j.soilbio.2019.107539.
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114. Alves RJE, Kerou M, Zappe A, Bittner R, Abby SS, Schmidt HA, Pfeifer K, [Schleper C](#) (2019) Ammonia Oxidation by the Arctic Terrestrial Thaumarchaeote Candidatus *Nitrosocosmicus arcticus* Is Stimulated by Increasing Temperatures. **Frontiers in Microbiology** 10: 1571. DOI: 10.3389/fmicb.2019.01571.
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111. Kozlowski J, Johnson ME, Ledesma-Vázquez J, Birgel D, Peckmann J, [Schleper C](#) (2018) Microbial diversity of a closed salt lagoon in the Puertecitos area, Upper Gulf of California. **Ciencias Marinas** 44(2): 71-90. doi: 10.7773/cm.v44i2.2825.
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106. Alves RJE, Minh BQ, Urich T, von Haeseler A, [Schleper C](#) (2018) Unifying the global phylogeny and environmental distribution of ammonia-oxidising archaea based on amoA genes. **Nature communications** 9(1): 1517. doi: 10.1038/s41467-018-03861-1.
105. Abby SS, Melcher M, Kerou M, Krupovic M, Stieglmeier M, Rossel C, [Schleper C](#) (2018) Candidatus *Nitrosocaldus cavascurensis*, an Ammonia Oxidizing, Extremely Thermophilic

- Archaeon with a Highly Mobile Genome. **Frontiers in microbiology** 9: 28. doi: 10.3389/fmicb.2018.00028
104. Elling FJ, Könneke M, Nicol GW, Stieglmeier M, Bayer B, Spieck E, de la Torre JR, Becker KW, Thomm M, Prosser JI, Herndl GJ, Schleper C, Hinrichs KU. (2017) Chemotaxonomic characterisation of the thaumarchaeal lipidome. **Environmental Microbiology** 19(7):2681-2700. doi: 10.1111/1462-2920.13759.
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100. Wild B, Gentsch N, Čapek P, Diáková K, Alves RJ, Bárta J, Gittel A, Hugelius G, Knoltsch A, Kuhry P, Lashchinskiy N, Mikutta R, Palmtag J, Schleper C, Schneckner J, Shibistova O, Takriti M, Torsvik VL, Urich T, Watzka M, Šantrůčková H, Guggenberger G, Richter A (2016) Plant-derived compounds stimulate the decomposition of organic matter in arctic permafrost soils. **Scientific Reports** 6:25607. doi: 10.1038/srep25607.
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