

Full List of Peer-reviewed articles

140. Hager K, Luo Z-H, Monserrat-Diez M, Ponce-Toledo RI, Baur P, Dahlke S, Andrei A-S, Bulzu P-A, Ghai R, Urich T, Glatzel S, Schleper C, Rodrigues-Oliveira T. Diversity and environmental distribution of Asgard archaea in shallow saline sediments. *Frontiers in Microbiology*. 2025 March 18, 16: 1549128. <https://doi.org/10.3389/fmicb.2025.1549128>
139. Klein T, Hodgskiss LH, Dreer M, Murrell JC, Hutchings MI, Schleper C, Lehtovirta-Morley LE. Distinct Patterns of Antibiotic Sensitivities in Ammonia-Oxidising Archaea. *Environ Microbiol*. 2025 Mar;27(3):e70063. doi: 10.1111/1462-2920.70063. PMID: 40070055; PMCID: PMC11897584.
138. Greening C, Cabotaje PR, Valentin Alvarado LE, Leung PM, Land H, Rodrigues-Oliveira T, Ponce-Toledo RI, Senger M, Klamke MA, Milton M, Lappan R, Mullen S, West-Roberts J, Mao J, Song J, Schoelmerich M, Stairs CW, Schleper C, Grinter R, Spang A, Banfield JF, Berggren G. Minimal and hybrid hydrogenases are active from archaea. *Cell*. 2024 Jun 20;187(13):3357-3372.e19. doi: 10.1016/j.cell.2024.05.032. Epub 2024 Jun 11. PMID: 38866018; PMCID: PMC11216029.
137. Bei Q, Reitz T, Schädler M, Hodgskiss LH, Peng J, Schnabel B, Buscot F, Eisenhauer N, Schleper C, Heintz-Buschart A. Metabolic potential of Nitrososphaera-associated clades. *ISME J*. 2024 Jan 8;18(1):wrae086. doi: 10.1093/ismejo/wrae086. PMID: 38742714; PMCID: PMC11131427.
136. Salas E, Gorfer M, Bandian D, Eichorst SA, Schmidt H, Horak J, Rittmann SKR, Schleper C, Reischl B, Pribasniig T, Jansa J, Kaiser C, Wanek W (2024) Reevaluation and novel insights into amino sugar and neutral sugar necromass biomarkers in archaea, bacteria, fungi, and plants. **The Science of the total environment** 906:167463. doi: 10.1016/j.scitotenv.2023.167463. Epub 2023 Oct 2. PMID: 37793447.
135. Melcher M, Hodgskiss LH, Mardini MA, Schleper C, Rittmann SK-MR (2023) Analysis of biomass productivity and physiology of *Nitrososphaera viennensis* grown in continuous culture. **Frontiers in Microbiology** 14:1076342. doi: 10.3389/fmicb.2023.1076342
134. Hodgskiss LH, Melcher M, Kerou M, Chen W, Ponce-Toledo RI, Savvides SN, Wienkoop S, Hartl M, Schleper C (2023) Unexpected complexity of the ammonia monooxygenase in archaea. **The ISME Journal** 17(4):588-599. doi: 10.1038/s41396-023-01367-3. Epub 2023 Jan 31. Erratum in: *ISME J*. 2023 Apr 28; PMID: 36721060; PMCID: PMC10030591.
133. Rodrigues-Oliveira T, Wollweber F, Ponce-Toledo RI, Xu J, Rittmann SKR, Klingl A, Pilhofer M, Schleper C (2023) Actin cytoskeleton and complex cell architecture in an Asgard archaeon. **Nature** 613(7943):332-339. DOI: 10.1038/s41586-022-05550-y.
132. Pfeifer K, Ehmoser EK, Rittmann SKR, Schleper C, Pum D, Sleytr UB, Schuster B (2022) Isolation and Characterization of Cell Envelope Fragments Comprising Archaeal S-Layer Proteins. **Nanomaterials (Basel)** 12(14):2502. DOI: 10.3390/nano12142502.

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130. Wimmer E, Zink I, Schleper C (2022) Reprogramming CRISPR-Mediated RNA Interference for Silencing of Essential Genes in *Sulfolobales*. **Methods in Molecular Biology** 2522:177-201. DOI: 10.1007/978-1-0716-2445-6_11.
129. Zink I, Fouqueau T, Tarrason Risa G, Werner F, Baum B, Bläsi U, Schleper C (2021) Comparative CRISPR type III-based knockdown of essential genes in hyperthermophilic *Sulfolobales* and the evasion of lethal gene silencing. **RNA Biology** 18(3): 421-434. DOI: 10.1080/15476286.2020.1813411.
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. DOI: 10.1128/mSystems.00546-21.
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125. 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.
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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.
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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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