# Hans RÃ¸y

List of Publications by Year
in descending order

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Version: 2024-02-01

| 80 | 3,640 | 117625 | 149698 |
|---|---|---|---|
| papers | citations | 34 h-index | 56 g-index |

| 83 | 83 | 83 | 3831 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Oxygen uptake by aquatic sediments measured with a novel non-invasive eddy-correlation technique. Marine Ecology - Progress Series, 2003, 261, 75-83. | 1.9 | 229 |
| 2 | Aerobic Microbial Respiration in 86-Million-Year-Old Deep-Sea Red Clay. Science, 2012, 336, 922-925. | 12.6 | 190 |
| 3 | Biogeochemistry and Community Composition of Iron- and Sulfur-Precipitating Microbial Mats at the Chefren Mud Volcano (Nile Deep Sea Fan, Eastern Mediterranean). Applied and Environmental Microbiology, 2008, 74, 3198-3215. | 3.1 | 137 |
| 4 | Seasonal dynamics of benthic O<sub>2</sub> uptake in a semienclosed bay: Importance of diffusion and faunal activity. Limnology and Oceanography, 2003, 48, 1265-1276. | 3.1 | 133 |
| 5 | Hydrodynamical impact on biogeochemical processes in aquatic sediments. Hydrobiologia, 2003, 494, 231-236. | 2.0 | 126 |
| 6 | Control on rate and pathway of anaerobic organic carbon degradation in the seabed. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 367-372. | 7.1 | 126 |
| 7 | Eddy correlation flux measurements: The sediment surface area that contributes to the flux. Limnology and Oceanography, 2007, 52, 1672-1684. | 3.1 | 118 |
| 8 | Cryptic CH4 cycling in the sulfateâ€“methane transition of marine sediments apparently mediated by ANME-1 archaea. ISME Journal, 2019, 13, 250-262. | 9.8 | 90 |
| 9 | Oxygen dynamics and transport in the Mediterranean sponge Aplysina aerophoba. Marine Biology, 2008, 153, 1257-1264. | 1.5 | 87 |
| 10 | The Guaymas Basin Hiking Guide to Hydrothermal Mounds, Chimneys, and Microbial Mats: Complex Seafloor Expressions of Subsurface Hydrothermal Circulation. Frontiers in Microbiology, 2016, 7, 75. | 3.5 | 82 |
| 11 | The role of smallâ€scale sediment topography for oxygen flux across the diffusive boundary layer. Limnology and Oceanography, 2002, 47, 837-847. | 3.1 | 80 |
| 12 | Deep-biosphere methane production stimulated by geofluids in the Nankai accretionary complex. Science Advances, 2018, 4, eaao4631. | 10.3 | 79 |
| 13 | Formate, acetate, and propionate as substrates for sulfate reduction in sub-arctic sediments of Southwest Greenland. Frontiers in Microbiology, 2015, 6, 846. | 3.5 | 76 |
| 14 | Coexistence of Microaerophilic, Nitrate-Reducing, and Phototrophic Fe(II) Oxidizers and Fe(III) Reducers in Coastal Marine Sediment. Applied and Environmental Microbiology, 2016, 82, 1433-1447. | 3.1 | 76 |
| 15 | Benthic photosynthesis in submerged Wadden Sea intertidal flats. Estuarine, Coastal and Shelf Science, 2007, 71, 704-716. | 2.1 | 75 |
| 16 | Determination of dissimilatory sulfate reduction rates in marine sediment via radioactive <sup>35</sup>S tracer. Limnology and Oceanography: Methods, 2014, 12, 196-211. | 2.0 | 75 |
| 17 | Endospore abundance and d:l-amino acid modeling of bacterial turnover in holocene marine sediment (Aarhus Bay). Geochimica Et Cosmochimica Acta, 2012, 99, 87-99. | 3.9 | 72 |
| 18 | Evidence for the Existence of Autotrophic Nitrate-Reducing Fe(II)-Oxidizing Bacteria in Marine Coastal Sediment. Applied and Environmental Microbiology, 2016, 82, 6120-6131. | 3.1 | 68 |

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|---|---|---|---|
| 19 | In Situ Oxygen Dynamics in Coral-Algal Interactions. PLoS ONE, 2012, 7, e31192. | 2.5 | 63 |
| 20 | Sulfate Transporters in Dissimilatory Sulfate Reducing Microorganisms: A Comparative Genomics Analysis. Frontiers in Microbiology, 2018, 9, 309. | 3.5 | 63 |
| 21 | Concurrent low- and high-affinity sulfate reduction kinetics in marine sediment. Geochimica Et Cosmochimica Acta, 2011, 75, 2997-3010. | 3.9 | 61 |
| 22 | Microbial turnover times in the deep seabed studied by amino acid racemization modelling. Scientific Reports, 2017, 7, 5680. | 3.3 | 61 |
| 23 | Advective relief of CO<sub>2</sub> limitation in microphytobenthos in highly productive sandy sediments. Limnology and Oceanography, 2006, 51, 1594-1601. | 3.1 | 60 |
| 24 | Oxygen penetration deep into the sediment of the South Pacific gyre. Biogeosciences, 2009, 6, 1467-1478. | 3.3 | 58 |
| 25 | Controls on subsurface methane fluxes and shallow gas formation in Baltic Sea sediment (Aarhus) Tj ETQq1 1 0.784314 rgBT /Overlock | 3.9 | 57 |
| 26 | Hydrodynamical impact on biogeochemical processes in aquatic sediments. , 2003, , 231-236. | | 57 |
| 27 | Organoclastic sulfate reduction in the sulfate-methane transition of marine sediments. Geochimica Et Cosmochimica Acta, 2019, 254, 231-245. | 3.9 | 56 |
| 28 | Marine Deep Biosphere Microbial Communities Assemble in Near-Surface Sediments in Aarhus Bay. Frontiers in Microbiology, 2019, 10, 758. | 3.5 | 54 |
| 29 | Tideâ€driven deep poreâ€water flow in intertidal sand flats. Limnology and Oceanography, 2008, 53, 1521-1530. | 3.1 | 53 |
| 30 | Bacterial sulfur cycling shapes microbial communities in surface sediments of an ultramafic hydrothermal vent field. Environmental Microbiology, 2011, 13, 2633-2648. | 3.8 | 51 |
| 31 | Direct analysis of volatile fatty acids in marine sediment porewater by twoâ€dimensional ion chromatographyâ€mass spectrometry. Limnology and Oceanography: Methods, 2014, 12, 455-468. | 2.0 | 46 |
| 32 | The sulfur cycle below the sulfate-methane transition of marine sediments. Geochimica Et Cosmochimica Acta, 2018, 239, 74-89. | 3.9 | 44 |
| 33 | Methylotrophic methanogenesis fuels cryptic methane cycling in marine surface sediment. Limnology and Oceanography, 2018, 63, 1519-1527. | 3.1 | 42 |
| 34 | Environmental filtering determines family-level structure of sulfate-reducing microbial communities in subsurface marine sediments. ISME Journal, 2019, 13, 1920-1932. | 9.8 | 40 |
| 35 | Macrofaunal control of microbial community structure in continental margin sediments. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15911-15922. | 7.1 | 40 |
| 36 | Controls on volatile fatty acid concentrations in marine sediments (Baltic Sea). Geochimica Et Cosmochimica Acta, 2019, 258, 226-241. | 3.9 | 38 |

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|---|---|---|---|
| 37 | Microbial Organic Matter Degradation Potential in Baltic Sea Sediments Is Influenced by Depositional Conditions and In Situ Geochemistry. Applied and Environmental Microbiology, 2019, 85, . | 3.1 | 37 |
| 38 | Transmission of oxygen concentration fluctuations through the diffusive boundary layer overlying aquatic sediments. Limnology and Oceanography, 2004, 49, 686-692. | 3.1 | 34 |
| 39 | Early diagenesis of iron and sulfur in Bornholm Basin sediments: The role of near-surface pyrite formation. Geochimica Et Cosmochimica Acta, 2020, 284, 43-60. | 3.9 | 33 |
| 40 | Filamentous sulfur bacteria, Beggiatoa spp., in arctic marine sediments (Svalbard, 79Â°N). FEMS Microbiology Ecology, 2010, 73, no-no. | 2.7 | 31 |
| 41 | Ubiquitous Presence and Novel Diversity of Anaerobic Alkane Degraders in Cold Marine Sediments. Frontiers in Microbiology, 2015, 6, 1414. | 3.5 | 30 |
| 42 | The influence of topography on the functional exchange surface of marine soft sediments, assessed from sediment topography measured in situ. Limnology and Oceanography, 2005, 50, 106-112. | 3.1 | 29 |
| 43 | Identity, Abundance, and Reactivation Kinetics of Thermophilic Fermentative Endospores in Cold Marine Sediment and Seawater. Frontiers in Microbiology, 2017, 8, 131. | 3.5 | 29 |
| 44 | Potentially bioavailable iron produced through benthic cycling in glaciated Arctic fjords of Svalbard. Nature Communications, 2021, 12, 1349. | 12.8 | 26 |
| 45 | Video-supported Analysis of Beggiatoa Filament Growth, Breakage, and Movement. Microbial Ecology, 2008, 56, 484-491. | 2.8 | 25 |
| 46 | Off Limits: Sulfate below the Sulfate-Methane Transition. Frontiers in Earth Science, 2016, 4, . | 1.8 | 25 |
| 47 | The marine sulfate reducer Desulfobacterium autotrophicum HRM2 can switch between low and high apparent half-saturation constants for dissimilatory sulfate reduction. FEMS Microbiology Ecology, 2017, 93, . | 2.7 | 24 |
| 48 | Kinetics of organic carbon mineralization and methane formation in marine sediments (Aarhus Bay,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 | 3.9 | 23 |
| 49 | Oxygen dynamics and flow patterns of Dysidea avara (Porifera: Demospongiae). Journal of the Marine Biological Association of the United Kingdom, 2007, 87, 1677-1682. | 0.8 | 22 |
| 50 | Ammoniaâ€oxidizing B acteria of the N itrosospira cluster 1 dominate over ammoniaâ€oxidizing A rchaea in oligotrophic surface sediments near the S outh A tlantic G yre. Environmental Microbiology Reports, 2015, 7, 404-413. | 2.4 | 22 |
| 51 | Reactivity of Iron Minerals in the Seabed Toward Microbial Reduction â€“ A Comparison of Different Extraction Techniques. Geomicrobiology Journal, 2020, 37, 170-189. | 2.0 | 22 |
| 52 | Role of pelletization in mineralization of fine-grained coastal sediments. Marine Ecology - Progress Series, 2005, 291, 23-33. | 1.9 | 22 |
| 53 | Wave-induced H<sup>2</sup> S flux sustains a chemoautotrophic symbiosis. Limnology and Oceanography, 2005, 50, 128-133. | 3.1 | 21 |
| 54 | Modern applications for a total sulfur reduction distillation method - whatâ€™s old is new again. Geochemical Transactions, 2014, 15, 4. | 0.7 | 21 |

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|---|---|---|---|
| 55 | Glacial influence on the iron and sulfur cycles in Arctic fjord sediments (Svalbard). Geochimica Et Cosmochimica Acta, 2020, 280, 423-440. | 3.9 | 20 |
| 56 | Glacial controls on redox-sensitive trace element cycling in Arctic fjord sediments (Spitsbergen,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70 | 3.9 | 19 |
| 57 | Motility patterns of filamentous sulfur bacteria, Beggiatoa spp.. FEMS Microbiology Ecology, 2011, 77, 176-185. | 2.7 | 18 |
| 58 | Methane fluxes in marine sediments quantified through core analyses and seismo-acoustic mapping (Bornholm Basin, Baltic Sea). Geochimica Et Cosmochimica Acta, 2018, 239, 255-274. | 3.9 | 18 |
| 59 | The Polyextremophilic Bacterium Clostridium paradoxum Attains Piezophilic Traits by Modulating Its Energy Metabolism and Cell Membrane Composition. Applied and Environmental Microbiology, 2019, 85, . | 3.1 | 18 |
| 60 | Nitrite is a more efficient inhibitor of microbial sulfate reduction in oil reservoirs compared to nitrate and perchlorate: A laboratory and field-scale simulation study. International Biodeterioration and Biodegradation, 2021, 157, 105154. | 3.9 | 17 |
| 61 | Optical Sensing of pH and O<sub>2</sub> in the Evaluation of Bioactive Self-Healing Cement. ACS Omega, 2019, 4, 20237-20243. | 3.5 | 16 |
| 62 | Glacial Runoff Promotes Deep Burial of Sulfur Cycling-Associated Microorganisms in Marine Sediments. Frontiers in Microbiology, 2019, 10, 2558. | 3.5 | 16 |
| 63 | Constraints on CaCO3 precipitation in superabsorbent polymer by aerobic bacteria. Applied Microbiology and Biotechnology, 2020, 104, 365-375. | 3.6 | 16 |
| 64 | Redox gradients at the low oxygen boundary of lakes. Aquatic Sciences, 2015, 77, 81-93. | 1.5 | 13 |
| 65 | Meltwater and seasonality influence on Subpolar Gyre circulation during the Holocene. Palaeogeography, Palaeoclimatology, Palaeoecology, 2018, 502, 104-118. | 2.3 | 13 |
| 66 | Carbon oxidation and bioirrigation in sediments along a Skagerrak-Kattegat-Belt Sea depth transect. Marine Ecology - Progress Series, 2018, 604, 33-50. | 1.9 | 13 |
| 67 | Temperature regulation of gliding motility in filamentous sulfur bacteria, Beggiatoa spp.. FEMS Microbiology Ecology, 2010, 73, no-no. | 2.7 | 11 |
| 68 | Estimating the Abundance of Endospores of Sulfate-Reducing Bacteria in Environmental Samples by Inducing Germination and Exponential Growth. Geomicrobiology Journal, 2017, 34, 338-345. | 2.0 | 11 |
| 69 | Insolation vs. meltwater control of productivity and sea surface conditions off SW Greenland during the Holocene. Boreas, 2021, 50, 631-651. | 2.4 | 9 |
| 70 | Quantification of anaerobic thermophilic endospores in marine sediment by microcalorimetry, and its use in bioprospecting for gas and oil. Limnology and Oceanography: Methods, 2017, 15, 519-530. | 2.0 | 8 |
| 71 | Psychrophilic properties of sulfateâ€reducing bacteria in Arctic marine sediments. Limnology and Oceanography, 2021, 66, S293. | 3.1 | 8 |
| 72 | Sulfide assimilation by ectosymbionts of the sessile ciliate, Zoothamnium niveum. Marine Biology, 2009, 156, 669-677. | 1.5 | 7 |

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|---|---|---|---|
| 73 | Physicochemical and biological controls of sulfide accumulation in a high temperature oil reservoir. Applied Microbiology and Biotechnology, 2020, 104, 8467-8478. | 3.6 | 7 |
| 74 | Early diagenesis of sulfur in Bornholm Basin sediments: The role of upward diffusion of isotopically â€œheavyâ€•sulfide. Geochimica Et Cosmochimica Acta, 2021, 313, 359-377. | 3.9 | 7 |
| 75 | Understanding the isotopic composition of sedimentary sulfide: A multiple sulfur isotope diagenetic model for Aarhus Bay. Numerische Mathematik, 2022, 322, 1-27. | 1.4 | 7 |
| 76 | Methane production controls in a young thermokarst lake formed by abrupt permafrost thaw. Global Change Biology, 2022, 28, 3206-3221. | 9.5 | 7 |
| 77 | Holocene sedimentary and environmental development of Aarhus Bay, Denmark â€“ a multiâ€proxy study. Boreas, 2020, 49, 108-128. | 2.4 | 5 |
| 78 | Methanogenesis in sediments of an intertidal sand flat in the Wadden Sea. Estuarine, Coastal and Shelf Science, 2015, 164, 39-45. | 2.1 | 4 |
| 79 | Intracellular nitrate in sediments of an oxygen-deficient marine basin is linked to pelagic diatoms. FEMS Microbiology Ecology, 2018, 94, . | 2.7 | 3 |
| 80 | 14 Experimental assessment of community metabolism in the subsurface. , 0, , . | | 1 |