

PUBLICATION LIST

Number of peer-reviewed original articles: 55 (12 lead author)

Total citations: 1711

H-index: 24

i10-index: 42

Source: [Google Scholar Profile](#), accessed January 2024

1. Chen, N.-C., O'Regan, M., Hong, W.-L., Andrén, T., Rodellas, V., Roth, F., et al. (2024). Investigation of submarine groundwater discharge into the Baltic Sea through varved glacial clays. *Continental Shelf Research*, 105337. <https://doi.org/10.1016/j.csr.2024.105337>
2. Gustafsson, E., Gustafsson, B.G., Hermans, M., Humborg, C., **Stranne, C.**, 2024. Methane dynamics in the Baltic Sea: investigating concentration, flux, and isotopic composition patterns using the coupled physical–biogeochemical model BALTSEM-CH₄ v1.0. *Geoscientific Model Development* 17, 7157–7179. <https://doi.org/10.5194/gmd-17-7157-2024>
3. Żygadłowska, O. M., Roth, F., Van Helmond, N. A. G. M., Lenstra, W. K., Venetz, J., Dotsios, N., Röckmann, T., Veraart, A. J., **Stranne, C.**, Humborg, C., Jetten, M. S. M., Slomp, C. P. Eutrophication and Deoxygenation Drive High Methane Emissions from a Brackish Coastal System. *Environ. Sci. Technol.* 2024, 58 (24), 10582–10590. <https://doi.org/10.1021/acs.est.4c00702>
4. Hermans, M., **Stranne, C.**, Broman, E., Sokolov, A., Roth, F., Nascimento, F. J., Mörrh, C.-M., Ten Hietbrink, S., Sun, X., Gustafsson, E. Ebullition Dominates Methane Emissions in Stratified Coastal Waters. *Science of the Total Environment* 2024, 945, 174183.
5. Fredriksson, J. P., Attard, K., **Stranne, C.**, Koszalka, I. M., Glud, R. N., Andersen, T. J., Humborg, C., Brüchert, V. Hidden Seafloor Hypoxia in Coastal Waters. *Limnology & Oceanography* 2024, lno.12607. <https://doi.org/10.1002/lno.12607>.
6. Ketzer, M., **Stranne, C.**, Rahmati-Abkenar, M., Shahabi-Ghahfarokhi, S., Jaeger, L., Pivel, M. A. G., et al. (2024). Near seafloor methane flux in the world's largest human-induced dead zone is regulated by sediment accumulation rate. *Marine Geology*, 468, 107220.
7. Nilsson, J., van Dongen, E., Jakobsson, M., O'Regan, M., & **Stranne, C.** (2023). Hydraulic suppression of basal glacier melt in sill fjords. *The Cryosphere*, 17(6), 2455–2476. <https://doi.org/10.5194/tc-17-2455-2023>
8. *Muchowski, Julia, Jakobsson, M., Umlauf, L., Arneborg, L., Gustafsson, B., Holtermann, P., **Stranne, C.** (2023). Observations of strong turbulence and mixing impacting water exchange between two basins in the Baltic Sea. *Ocean Science*, 19(6), 1809–1825. <https://doi.org/10.5194/os-19-1809-2023>
9. *Muchowski, J., Arneborg, L., Umlauf, L., Holtermann, P., Eisbrenner, E., Humborg, C., **Stranne, C.** (2023). Diapycnal Mixing Induced by Rough Small-Scale Bathymetry. *Geophysical Research Letters*, 50(13), e2023GL103514. <https://doi.org/10.1029/2023GL103514>
10. *Akhoudas, C. H., Sallée, J.-B., Reverdin, G., Haumann, F. A., Pauthenet, E., ..., **Stranne C.** (2023). Isotopic evidence for an intensified hydrological cycle in the Indian sector of the Southern Ocean. *Nature Communications*, 14(1), 2763. <https://doi.org/10.1038/s41467-023-38425-5>
11. Detlef, H., O'Regan, M., **Stranne, C.**, Jensen, M. M., Glasius, M., Cronin, T. M., et al. (2023). Seasonal sea-ice in the Arctic's last ice area during the Early Holocene. *Communications Earth & Environment*, 4(1), 1–11. <https://doi.org/10.1038/s43247-023-00720-w>
12. *Muchowski, J., Umlauf, L., Arneborg, L., Holtermann, P., Weidner, E., Humborg, C., & **Stranne, C.** (2022). Potential and Limitations of a Commercial Broadband Echosounder for Remote Observations of Turbulent Mixing. *Journal of Atmospheric and Oceanic Technology*, 1(aop). <https://doi.org/10.1175/JTECH-D-21-0169.1>

13. **Stranne, C.**, O'Regan, M., Hong, W.-L., Brüchert, V., Ketzer, M., Thornton, B. F., & Jakobsson, M. (2022). Anaerobic oxidation has a minor effect on mitigating seafloor methane emissions from gas hydrate dissociation. *Communications Earth & Environment*, 3(1), 1–10. <https://doi.org/10.1038/s43247-022-00490-x>
14. Åkesson, H., Morlighem, M., Nilsson, J., **Stranne, C.**, & Jakobsson, M. (2022). Petermann Ice Shelf may not recover after a future breakup. *Nature Communications*, 13(1), 2519. <https://doi.org/10.1038/s41467-022-29529-5>.
15. **Stranne, C.**, Nilsson, J., Ulfssbo, A., O'Regan, M., Coxall, H. K., Meire, L., et al. (2021). The climate sensitivity of northern Greenland fjords is amplified through sea-ice damming. *Communications Earth & Environment*, 2(1), 1–8. <https://doi.org/10.1038/s43247-021-00140-8>
16. Bradshaw, C., M. Jakobsson, V. Brüchert, S. Bonaglia, C.-M. Mörrth, J. Muchowski, **Stranne, C.** and M. Sköld, (2021). Physical Disturbance by Bottom Trawling Suspends Particulate Matter and Alters Biogeochemical Processes on and Near the Seafloor. *Front. Mar. Sci.*, **8**, 1127, <https://doi.org/10.3389/fmars.2021.68333>
17. Holmes, F. A., Kirchner, N., Prakash, A., **Stranne, C.**, Dijkstra, S., & Jakobsson, M. (2021). Calving at Ryder glacier, Northern Greenland. *Journal of Geophysical Research: Earth Surface*, 126(4), e2020JF005872. <https://doi.org/10.1029/2020JF005872>
18. Snoeijs-Leijonmalm, P., Gjørseter, H., Ingvaldsen, R. B., Knutsen, T., Korneliussen, R., Ona, E., Skjoldal, H. R., **Stranne, C.**, et al. (2021). A deep scattering layer under the North Pole pack ice. *Progress in Oceanography*, 194, 102560. <https://doi.org/10.1016/j.pocean.2021.102560>
19. O'Regan, M., Cronin, T., Reilly, B., Alstrup, A. K. O., Gemery, L., Golub, A., et al. (2021). The Holocene dynamics of Ryder Glacier and ice tongue in north Greenland. *The Cryosphere*, 15(8), 4073–4097. <https://doi.org/10.5194/tc-15-4073-2021>
20. Weidner, E., **Stranne, C.**, Sundberg, J. H., Weber, T. C., Mayer, L., & Jakobsson, M. (2020). Tracking the spatiotemporal variability of the oxic–anoxic interface in the Baltic Sea with broadband acoustics. *ICES Journal of Marine Science*, 77(7–8), 2814–2824. <https://doi.org/10.1093/icesjms/fsaa153>.
21. Shibley, N., Timmermans, M.-L., & **Stranne, C.** (2020). Analysis of acoustic observations of double-diffusive finestructure in the Arctic Ocean. *Geophysical Research Letters*, 47(18), e2020GL089845. <https://doi.org/10.1029/2020GL089845>
22. Jakobsson, M., Mayer, L. A., Nilsson, J., **Stranne, C.**, Calder, B., O'Regan, M., et al. (2020). Ryder Glacier in northwest Greenland is shielded from warm Atlantic water by a bathymetric sill. *Communications Earth & Environment*, 1(1), 1–10. <https://doi.org/10.1038/s43247-020-00043-0>
23. Sayedi, S. S., Abbott, B. W., Thornton, B. F., Frederick, J. M., Vonk, J. E., Overduin, P., et al. (2020). Subsea permafrost carbon stocks and climate change sensitivity estimated by expert assessment. *Environmental Research Letters*, 15(12), 124075. <https://doi.org/10.1088/1748-9326/abcc29>
24. Broman, E., Sun, X., **Stranne, C.**, Salgado, M. G., Bonaglia, S., Geibel, M., et al. (2020). Low Abundance of Methanotrophs in Sediments of Shallow Boreal Coastal Zones With High Water Methane Concentrations. *Frontiers in Microbiology*, 11. <https://doi.org/10.3389/fmicb.2020.01536>
25. Hogan, K. A., Jakobsson, M., Mayer, L., Reilly, B. T., Jennings, A. E., Stoner, J. S., et al. (2020). Glacial sedimentation, fluxes and erosion rates associated with ice retreat in Petermann Fjord and Nares Strait, north-west Greenland. *Cryosphere*, 14(1), 261–286.

26. Jakobsson, M., O'Regan, M., Mörrth, C.-M., **Stranne, C.**, Weidner, E., Hansson, J., et al. (2020). Potential links between Baltic Sea submarine terraces and groundwater seeping. *Earth Surface Dynamics*, 8(1), 1–15. <https://doi.org/10.5194/esurf-8-1-2020>
27. **Stranne, C.**, O'Regan, M., Jakobsson, M., Brüchert, V., & Ketzer, M. (2019). Can anaerobic oxidation of methane prevent seafloor gas escape in a warming climate? *Solid Earth*, 10(5), 1541–1554. <https://doi.org/10.5194/se-10-1541-2019>.
28. Preto, P., **Stranne, C.**, Greenwood, S., Jakobsson, M., Näslund, J.-O., Sundberg, J., et al. (2019). Geothermal evidence for groundwater flow through Quaternary sediments overlying bedrock aquifers below Lake Vättern, Sweden. *GFF*, 141(2), 106–120. <https://doi.org/10.1080/11035897.2019.1621368>.
29. Humborg, C., Geibel, M. C., Sun, X., McCrackin, M., Mörrth, C.-M., **Stranne, C.**, et al. (2019). High Emissions of Carbon Dioxide and Methane From the Coastal Baltic Sea at the End of a Summer Heat Wave. *Frontiers in Marine Science*, 6. <https://doi.org/10.3389/fmars.2019.00493>.
30. Jakobsson, M., **Stranne, C.**, O'Regan, M., Greenwood, S. L., Gustafsson, B., Humborg, C., & Weidner, E. (2019). Bathymetric properties of the Baltic Sea. *Ocean Science*, 15(4), 905–924. <https://doi.org/10.5194/os-15-905-2019>.
31. Sohn, R. A., Luttrell, K., Shroyer, E., **Stranne, C.**, Harris, R. N., & Favorito, J. E. (2019). Observations and Modeling of a Hydrothermal Plume in Yellowstone Lake. *Geophysical Research Letters*, 46(12), 6435–6442. <https://doi.org/10.1029/2019GL082523>.
32. Bloemsma, M., Croudace, I., Daly, J. S., Edwards, R. J., Francus, P., Galloway, J. M., et al. (2019). Practical guidelines and recent advances in the Itrax XRF core-scanning procedure. *Quaternary International*. <https://doi.org/10.1016/j.quaint.2018.10.044>.
33. **Stranne, C.**, Mayer, L., Jakobsson, M., Weidner, E., Jerram, K., Weber, T. C., et al. (2018). Acoustic mapping of mixed layer depth. *Ocean Sci.*, 14(3), 503–514. <https://doi.org/10.5194/os-14-503-2018>.
34. Jakobsson, M., Hogan, K. A., Mayer, L. A., Mix, A., Jennings, A., Stoner, J., **Stranne, C.**, et al. (2018). The Holocene retreat dynamics and stability of Petermann Glacier in northwest Greenland. *Nature Communications*, 9(1), 2104. <https://doi.org/10.1038/s41467-018-04573-2>.
35. Barrientos, N., Lear, H. C., Jakobsson, M., **Stranne, C.**, O'Regan, M., Cronin, T. M., Gukov, A. Y., Coxall, H. K. (2018). Arctic Ocean benthic foraminifera Mg/Ca ratios and global Mg/Ca-temperature calibrations: New constraints at low Temperatures. *Geochimica et Cosmochimica Acta*, 236, 240–259. <https://doi.org/10.1016/j.gca.2018.02.036>.
36. Swärd, H., O'Regan, M., Pearce, C., Semiletov, I., **Stranne, C.**, Tarras, H., & Jakobsson, M. (2018). Sedimentary proxies for Pacific water inflow through the Herald Canyon, western Arctic Ocean. *Arktos*, 4(1), 19. <https://doi.org/10.1007/s41063-018-0055->.
37. Björk, G., Jakobsson, M., Assmann, K., Andersson, L. G., Nilsson, J., **Stranne, C.**, & Mayer, L. (2018). Bathymetry and oceanic flow structure at two deep passages crossing the Lomonosov Ridge. *Ocean Science*, 14(1), 1
38. **Stranne, C.**, Mayer, L., Weber, T. C., Ruddick, B. R., Jakobsson, M., Jerram, K., ... Gårdfeldt, K. (2017a). Acoustic Mapping of Thermohaline Staircases in the Arctic Ocean. *Scientific Reports*, 7(1), 15192. <https://doi.org/10.1038/s41598-017-15486-3>.
39. **Stranne, C.**, O'Regan, M., & Jakobsson, M. (2017b). Modeling fracture propagation and seafloor gas release during seafloor warming-induced hydrate dissociation. *Geophysical Research Letters*, 44(16),

2017GL074349. <https://doi.org/10.1002/2017GL074349>.

40. O'Regan, M., Backman, J., Barrientos, N., Cronin, T.M., Gemery, L., Kirchner, N., Mayer, L.A., Nilsson, J., Noormets, R., Pearce, C., Semiletov, I., **Stranne, C.**, Jakobsson, M. (2017). The De Long Trough: a newly discovered glacial trough on the East Siberian continental margin. *Clim Past* 13, 1269–1284.
41. Nilsson, J., Jakobsson, M., Borstad, C., Kirchner, N., Björk, G., Pierrehumbert, R. T., & **Stranne, C.** (2017). Ice-shelf damming in the glacial Arctic Ocean: dynamical regimes of a basin-covering kilometre-thick ice shelf. *The Cryosphere*, 11(4), 1745.
42. Miller, C.M., Dickens, G.R., Jakobsson, M., Johansson, C., Koshurnikov, A., O'Regan, M., Muschitiello, F., **Stranne, C.**, Mörrth, C.-M., 2017. Pore water geochemistry along continental slopes north of the East Siberian Sea: inference of low methane concentrations. *Biogeosciences* 14, 2929.
43. Anderson, L.G., Björk, G., Holby, O., Jutterström, S., Mörrth, C.M., O'Regan, M., Pearce, C., Semiletov, I., **Stranne, C.**, Stöven, T., others (2017). Shelf–Basin interaction along the East Siberian Sea. *Ocean Sci.* 13, 349.
44. Jakobsson, M., Pearce, C., Cronin, T.M., Backman, J., Anderson, L.G., Barrientos, N., Björk, G., Coxall, H., de Boer, A., Mayer, L.A., Mörrth, C.-M., Nilsson, J., Rattray, J.E., **Stranne, C.**, Semiletov, I., O'Regan, M. (2017). Post-glacial flooding of the Bering Land Bridge dated to 11 cal ka BP based on new geophysical and sediment records. *Clim Past* 13, 991–1005.
45. **Stranne, C.**, O'Regan, M., & Jakobsson, M. (2016a). Overestimating climate warming-induced methane gas escape from the seafloor by neglecting multiphase flow dynamics. *Geophysical Research Letters*, 43(16), 2016GL070049. <https://doi.org/10.1002/2016GL070049>.
46. **Stranne, C.**, O'Regan, M., Dickens, G. R., Crill, P., Miller, C., Preto, P., & Jakobsson, M. (2016b). Dynamic simulations of potential methane release from East Siberian continental slope sediments. *Geochemistry, Geophysics, Geosystems*, 17(3), 872–886. <https://doi.org/10.1002/2015GC006119>.
47. Jakobsson, M., Nilsson, J., Anderson, L., Backman, J., Björk, G., Cronin, T.M., Kirchner, N., Koshurnikov, A., Mayer, L., Noormets, R., O'Regan, M., **Stranne, C.**, Ananiev, R., Barrientos Macho, N., Cherniykh, D., Coxall, H., Eriksson, B., Flodén, T., Gemery, L., Gustafsson, Ö., Jerram, K., Johansson, C., Khortov, A., Mohammad, R., Semiletov, I. (2016). Evidence for an ice shelf covering the central Arctic Ocean during the penultimate glaciation. *Nature Communications*. 7, 10365.
48. O'Regan, M., Preto, P., **Stranne, C.**, Jakobsson, M., & Koshurnikov, A. (2016). Surface heat flow measurements from the East Siberian continental slope and southern Lomonosov Ridge, Arctic Ocean. *Geochemistry, Geophysics, Geosystems*, 17(5), 1608–162.
49. **Stranne, C.**, & O'Regan, M. (2015). Conductive heat flow and nonlinear geothermal gradients in marine sediments—observations from Ocean Drilling Program boreholes. *Geo-Marine Letters*, 36(1), 25–33. <https://doi.org/10.1007/s00367-015-0425-3>.
50. **Stranne, C.**, Jakobsson, M., & Björk, G. (2014). Arctic Ocean perennial sea ice breakdown during the Early Holocene Insolation Maximum. *Quaternary Science Reviews*, 92, 123–132. <https://doi.org/10.1016/j.quascirev.2013.10.022>.
51. Wählin, A.K., Kalén, O., Arneborg, L., Björk, G., Carvajal, G.K., Ha, H.K., Kim, T.W., Lee, S.H., Lee, J.H., **Stranne, C.** (2013). Variability of Warm Deep Water Inflow in a Submarine Trough on the Amundsen Sea Shelf. *J. Phys. Oceanogr.* 43, 2054–2070. <https://doi.org/10.1175/JPO-D-12-0157.1>.

52. Björk, G., **Stranne, C.**, Borenäs, K. (2012). The Sensitivity of the Arctic Ocean Sea Ice Thickness and Its Dependence on the Surface Albedo Parameterization. *J. Clim.* 26, 1355–1370. <https://doi.org/10.1175/JCLI-D-12-00085.1>.
53. **Stranne, C.**, Björk, G. (2011). On the Arctic Ocean ice thickness response to changes in the external forcing. *Clim. Dyn.* 39, 3007–3018. <https://doi.org/10.1007/s00382-011-1275-y>.
54. **Stranne, C.**, Sohn, R.A., Liljebladh, B., Nakamura, K. (2010). Analysis and modeling of hydrothermal plume data acquired from the 85°E segment of the Gakkel Ridge. *J. Geophys. Res. Oceans* 115, C06028. <https://doi.org/10.1029/2009JC005776>.
55. Sohn, R.A., et al. (2008). Explosive volcanism on the ultraslow-spreading Gakkel ridge, Arctic Ocean. *Nature* 453, 1236–1238.