

List of publications

Peer-reviewed articles

Hichens-Bergström, M., **Sannel, A.B.K.**, 2023: Permafrost development in northern Fennoscandian peatlands since the mid-Holocene. *Arctic, Antarctic, and Alpine Research* 55 (1), 2250035, doi:10.1080/15230430.2023.2250035.

Sim, T.G., Swindles, G.T., Morris, P.J., Baird, A.J., Gallego-Sala, A.V., Wang, Y., Blaauw, M., Camill, P., Garneau, M., Hardiman, M., Loisel, J., Välimäki, M., Anderson, L., Apolinarska, K., Augustijns, F., Aunina, L., Beaulne, J., Bobek, P., Borken, W., Broothaerts, N., Cui, Q.-Y., Davies, M.A., Ejarque, A., Farrell, M., Feeser, I., Feurdean, A., Fewster, R.E., Finkelstein, S.A., Gaillard, M.-J., Gałka, M., Heffernan, L., Hoevers, R., Jones, M., Juselius-Rajamäki, T., Karofeld, E., Knorr, K.-H., Korhola, A., Kupriyanov, D., Kylander, M.E., Lacourse, T., Lamentowicz, M., Lavoie, M., Lemdahl, G., Łuców, D., Magnan, G., Maksims, A., Mansilla, C.A., Marcisz, K., Marinova, E., Mathijssen, P.J.H., Mauquoy, D., Mazei, Y.A., Mazei, N., McCarroll, J., McCulloch, R.D., Milner, A.M., Miras, Y., Mitchell, F.J.G., Novenko, E., Pelletier, N., Peros, M.C., Piilo, S.R., Pilote, L.-M., Primeau, G., Rius, D., Robin, V., Robitaille, M., Roland, T.P., Ryberg, E., **Sannel, A.B.K.**, Schittekat, K., Servera-Vives, G., Shotyk, W., Słowinski, M., Stivrins, N., Swinnen, W., Thompson, G., Tiunov, A., Tsyganov, A.N., Tuittila, E.-S., Verstraeten, G., Wallenius, T., Webb, J., Willard, D., Yu, Z., Zaccone, C., Zhang, H., 2023: Regional variability in peatland burning at mid-to high-latitudes during the Holocene. *Quaternary Science Reviews* 305, 108020, doi:10.1016/j.quascirev.2023.108020.

Piilo, S.R., Välimäki, M.M., Amesbury, M.J., Aquino-López, M.A., Charman, D.J., Gallego-Sala, A., Garneau, M., Koroleva, N., Kärppä, M., Laine, A.M., **Sannel, A.B.K.**, Tuittila, E-S., Zhang, H., 2023: Consistent centennial-scale change in European sub-Arctic peatland vegetation toward *Sphagnum* dominance—Implications for carbon sink capacity. *Global Change Biology* 29, 1530–1544, doi:10.1111/gcb.16554.

Larsson, S.A., Kylander, M.E., **Sannel, A.B.K.**, Hammarlund, D., 2022: Synchronous or Not? The Timing of the Younger Dryas and Greenland Stadial-1 Reviewed Using Tephrochronology. *Quaternary* 5 (2), 19, doi:10.3390/quat5020019.

Qiu, C., Ciais, P., Zhu, D., Guenet, B., Chang, J., Chaudhary, N., Kleinen, T., Li, X., Müller, J., Xi, Y., Zhang, W., Ballantyne, A., Brewer, S.C., Brovkin, V., Charman, D.J., Gustafson, A., Gallego-Sala, A.V., Gasser, T., Holden, J., Joos, F., Kwon, M.J., Lauwald, R., Miller, P.A., Peng, S., Page, S., Smith, B., Stocker, B.D., **Sannel, A.B.K.**, Salmon, E., Schurgers, G., Shurpali, N.J., Wårild, D., Westermann, S., 2022: A strong mitigation scenario maintains climate neutrality of northern peatlands. *One Earth* 5, doi:10.1016/j.oneear.2021.12.008.

Välimäki, M., Marushchak, M.E., Tuovinen, J-P., Lohila, A., Biasi, C., Voigt, C., Zhang, H., Piilo, S., Virtanen, T., Räsänen, A., Kaverin, D., Pastukhov, A., **Sannel, A.B.K.**, Tuittila, E-S., Korhola, A., Martikainen, P.J., 2021: Warming radiative forcing impact from of a sub-arctic peatland as a result of late Holocene permafrost aggradation and initiation of bare peat surfaces. *Quaternary Science Reviews* 264, 107022, doi:10.1016/j.quascirev.2021.107022.

Tarbier, B., Hugelius, G., **Sannel, A.B.K.**, Baptista-Salazar, C., Jonsson, S., 2021: Permafrost thaw increases methylmercury formation in subarctic Fennoscandia. *Environmental Science & Technology* 55 (10), 6710–6717, doi:10.1021/acs.est.0c04108.

Treat, C.C., Jones, M.C., Alder, J., **Sannel, A.B.K.**, Camill, P., Frolking, S., 2021: Predicted vulnerability of carbon in permafrost peatlands with future climate change and permafrost thaw in Canada. *Journal of Geophysical Research – Biogeosciences* 126 (5), doi:10.1029/2020JG005872.

Åhlén, I., Vigouroux, G., Destouni, G., Pietroń, J., Ghajarnia, N., Anaya, J., Blanco, J., Borja, S., Chalov, S., Chun, K.P., Clerici, N., Desormeaux, A., Girard, P., Gorelits, O., Hansen, A., Jaramillo, F., Kalantari, Z., Labbaci, A., Licero-Villanueva, L., Livsey, J., Maneas, G., McCurley Pisarello, K.L., Moshir Pahani, D., Palomino, S.A., Price, R., Ricaurte-Villota, C., Ricaurte-Villota, L., Rivera-Monroy, V.H., Rodriguez, A., Rodriguez, E., Salgado, J., **Sannel, B.**, Seifollahi-Aghmiuni, S., Simard, M., Sjöberg, Y., Terskii, P., Thorslund, J., Zamora, D.A., Jarsjö, J., 2021: Hydro-climatic changes of wetlandscapes across the world. *Scientific Reports* 11, 2754, doi:10.1038/s41598-021-81137-3.

Kropp, H., Loranty, M.M., Natali, S.M., Kholodov, A.L., Rocha, A.V., Myers-Smith, I.H., Abbott, B.W., Abermann, J., Blanc-Betes, E., Blok, D., Blume-Werry, G., Boike, J., Breen, A.L., Cahoon, S.M.P., Christiansen, C.T., Douglas, T.A., Epstein, H.E., Frost, G.V., Goeckede, M., Høye, T.T., Mamet, S.D., O'Donnell, J.A., Olefeldt, D., Phoenix, G.K., Salmon, V.G., **Sannel, A.B.K.**, Smith, S.L., Sonnentag, O., Vaughn, L., Williams, M., Elberling, B., Gough, L., Hjort, J., Lafleur, P.M., Euskirchen, E.S., Heijmans, M., Humphreys, E.R., Iwata, H., Jones, B.M., Jorgenson, T., Grünberg, I., Kim, Y., Laundre, J., Mauritz, M., Michelsen, A., Schaepman-Strub, G., Tape, K.D., Ueyama, M., Lee, B-Y., Langley, K., Lund, M., 2021: Shallow soils are warmer under trees and tall shrubs across Arctic and Boreal ecosystems. *Environmental Research Letters* 16, 015001, doi:10.1088/1748-9326/abc994.

Loisel, J., Gallego-Sala, A.V., Amesbury, M.J., Magnan, G., Anshari, G., Beilman, D., Benavides, J.C., Blewett, J., Camill, P., Charman, D.J., Chawchai, S., Hedgpeth, A., Kleinen, T., Korhola, A., Large, D., Mansilla, C.A., Müller, J., van Bellen, S., West, J.B., Yu, Z., Bubier, J., Garneau, M., Moore, T., **Sannel, A.B.K.**, Page, S., Välimäki, M., Bechtold, M., Brovkin, V., Cole, L.E.S., Chanton, J.P., Christensen, T.R., Davies, M.A., De Vleeschouwer, F., Finkelstein, S.A., Frolking, S., Gałka, M., Gandois, L., Girkin, N., Harris, L.I., Heinemeyer, A., Hoyt, A.M., Jones, M.C., Joos, F., Juutinen, S., Kaiser, K., Lacourse, T., Lamentowicz, M., Larmola, T., Leifeld, J., Lohila, A., Milner, A.M., Minkkinen, K., Moss, P., Naafs, B.D.A., Nichols, J., O'Donnell, J., Payne, R., Philben, M., Piilo S., Quillet, A., Ratnayake, A.S., Roland, T., Sjögersten, S., Sonnentag, O., Swindles, G.T., Swinnen, W., Talbot, J., Treat, C., Valach, A.C., Wu, J., 2021: Expert assessment of future vulnerability of the global peatland carbon sink. *Nature Climate Change* 11, 70–77, doi:10.1038/s41558-020-00944-0.

Li, H., Välimäki, M., Mäki, M., Kohl, L., **Sannel, A.B.K.**, Pumpanen, J., Koskinen, M., Bäck, J., Bianchi, F., 2020: Overlooked organic vapor emissions from thawing Arctic permafrost. *Environmental Research Letters* 15, 104097, doi:10.1088/1748-9326/abb62d.

Ghajarnia, N., Destouni, G., Thorslund, J., Kalantari, Z., Åhlén, I., Anaya-Acevedo, J.A., Blanco-Libreros, J.F., Borja, S., Chalov, S., Chalova, A., Chun, K.P., Clerici, N., Desormeaux, A., Garfield, B.B., Girard, P., Gorelits, O., Hansen, A., Jaramillo, F., Jarsjö, J., Labbaci, A., Livsey, J., Maneas, G., McCurley Pisarello, K., Palomino-Ángel, S., Pietrón, J., Price, R.M., Rivera-Monroy, V.H., Salgado, J., **Sannel, A.B.K.**, Seifollahi-Aghmiuni, S., Sjöberg, Y., Terskii, P., Vigouroux, G., Licero-Villanueva, L., Zamora, D., 2020: Data for wetlandscapes and their changes around the world. *Earth System Science Data* 12, 1083–1100, doi:10.5194/essd-12-1083-2020.

Chaudhary, N., Westermann, S., Lamba, S., Shurpali, N., **Sannel, A.B.K.**, Schurgers, G., Miller, P.A., Smith, B., 2020: Modelling past and future peatland carbon dynamics across the pan-Arctic. *Global Change Biology* 26, 4119–4133, doi:10.1111/GCB.15099.

Sannel, A.B.K., 2020: Ground temperature and snow depth variability within a subarctic peat plateau landscape. *Permafrost and Periglacial Processes* 31, 255–263, doi:10.1002/ppp.2045.

Turetsky, M.R., Abbott, B.W., Jones, M.C., Walter Anthony, K., Olefeldt, D., Schuur, E.A.G., Grosse, G., Kuhry, P., Hugelius, G., Koven, C., Lawrence, D.M., Gibson, C., **Sannel, A.B.K.**, McGuire, A.D., 2020: Carbon release through abrupt permafrost thaw. *Nature Geoscience* 13, 138–143, doi:10.1038/s41561-019-0526-0.

Jaramillo, F., Desormeaux, A., Hedlund, J., Jawitz, J., Clerici, N., Piemontese, L., Rodriguez, A., Adolfo Anaya, J., Blanco, J.F., Borja, S., Celi, J., Chalov, S., Chun, K.P., Cresso, M., Dahir, L., Destouni, G., Dessu, S., Di Baldassarre, G., Downing, A., Espinosa, L., Ghajarnia, N., Girard, P., Gutiérrez, A.G., Hansen, A., Hu, T., Jarsjö, J., Kalantari, Z., Labbacci, A., Licero-Villanueva, L., Livsey, J., Machotka, E., McCurley, K., Palomino, S., Pietron, J., Price, R., Ramchundar, S.J., Ricaurte, C., Ricaurte, L.F., Rodríguez, E., Salgado, J., **Sannel, A.B.K.**, Santos, A.C., Seifollahi, S., Sjöberg, Y., Sun, L., Thorslund, J., Vigouroux, G., Wang-Erlandsson, L., Xu, D., Zamora, D., Ziegler, A.D., Åhlén, I., 2019: Priorities and interactions of Sustainable Development Goals (SDGs) in Wetlands. *Water* 11, 619, doi:10.3390/w11030619.

Treat, C.C., Kleinen, T., Broothaerts, N., Dalton, A.S., Dommain, R., Douglas, T.A., Drexler, J.Z., Finkelstein, S.A., Grosse, G., Hope, G., Hutchings, J., Jones, M.C., Kuhry, P., Lacourse, T., Lähteenoja, O., Loisel, J., Notebaert, B., Payne, R.J., Peteet, D.M., **Sannel, A.B.K.**, Stelling, J.M., Strauss, J., Swindles, G.T., Talbot, J., Tarnocai, C., Verstraeten, G., Williams, C.J., Xia, Z., Yu, Z., Välimäki, M., Hättestrand, M., Alexanderson, H., Brovkin, V., 2019: Widespread global peatland establishment and persistence over the last 130,000 y. *Proceedings of the National Academy of Sciences* 116 (11), 4822–4827, doi.org/10.1073/pnas.1813305116.

Biskaborn, B.K., Smith, S.L., Noetzli, J., Matthes, H., Vieira, G., Streletschi, D., Schoeneich, P., Romanovsky, V.E., Lewkowicz, A.G., Abramov, A., Allard, M., Boike, J., Cable, W.L., Christiansen, H.H., Delaloye, R., Diekmann, B., Drozdov, D., Etzelmüller, B., Grosse, G., Guglielmin, M., Ingeman-Nielsen, T., Isaksen, K., Ishikawa, M., Johansson, M., Johannsson, H., Joo, A., Kaverin, D., Kholodov, A., Konstantinov, P., Kröger, T., Lambiel, C., Lanckman, J.-P., Luo, D., Malkova, G., Meiklejohn, I., Moskalenko, N., Oliva, M., Phillips, M., Ramos, M., **Sannel, A.B.K.**, Sergeev, D., Seybold, C., Skryabin, P., Vasiliev, A., Wu, Q., Yoshikawa, K., Zheleznyak, M., Lantuit, H. 2019: Permafrost is warming at a global scale. *Nature Communications* 10 (1), 264, doi:10.1038/s41467-018-08240-4.

Kjellman, S.E., Axelsson, P.E., Etzelmüller, B., Westermann, S., **Sannel, A.B.K.**, 2018: Holocene development of subarctic permafrost peatlands in Finnmark, northern Norway. *The Holocene* 28, 1855–1869, doi:10.1177/0959683618798126.

Gallego-Sala, A.V., Charman, D.J., Brewer, S., Page, S.E., Prentice, I.C., Friedlingstein, P., Moreton, S., Amesbury, M.J., Beilman, D.W., Björck, S., Blyakharchuk, T., Bochicchio, C., Booth, R.K., Bunbury, J., Camill, P., Carless, D., Chimner, R.A., Clifford, M., Cressey, E., Courtney-Mustaphi, E., De Vleeschouwer, F., de Jong, R., Fialkiewicz-Koziel, B., Finkelstein, S.A., Garneau, M., Githumbi, E., Hribjlan, J., Holmquist, J., Hughes, P.D.M., Jones, C., Jones, M.C., Karofeld, E., Klein, E.S., Kokfelt, U., Korhola, A., Lacourse, T., Le Roux, G., Lamentowicz, M., Large, D., Lavoie, M., Loisel, J., Mackay, H., MacDonald, G.M., Mäkilä, M., Magnan, G., Marchant, R., Marcisz, K., Martínez Cortizas, A., Massa, C., Mathijssen, P., Mauquoy, D., Mighall, T., Mitchell, F.J.G., Moss, P., Nichols, J., Oksanen, P.O., Orme, L., Packalen, M.S., Robinson, S., Roland, T.P., Sanderson, N.K., **Sannel, A.B.K.**, Silva-Sánchez, N., Steinberg, N., Swindles, G.T., Turner, T.E., Uglow, J., Välimäki, M., van Bellen, S., van der Linden, M., van Geel, B., Wang, G., Yu, Z., Zaragoza-Castells, J., Zhao, Y.,

2018: Latitudinal limits to the predicted increase of the peatland carbon sink with warming. *Nature Climate Change* 8, 907–913, doi:10.1038/s41558-018-0271-1.

Sannel, A.B.K., Hempel, L., Kessler, A., Preskienis, V., 2018: Holocene development and permafrost history in sub-arctic peatlands in Tavvavuoma, northern Sweden. *Boreas* 47, 454–468, doi:10.1111/bor.12276.

Muster, S., Roth, K., Langer, M., Lange, S., Aleina, F.C., Bartsch, A., Morgenstern, A., Grosse, G., Jones, B., **Sannel, A.B.K.**, Sjöberg, Y., Günther, F., Andresen, C., Veremeeva, A., Lindgren, P.R., Bouchard, F., Lara, M.J., Fortier, D., Charbonneau, S., Virtanen, T.A., Hugelius, G., Palmtag, J., Siewert, M.B., Riley, W.J., Koven, C.D., Boike, J., 2017: PeRL: a circum-Arctic Permafrost Region Pond and Lake database. *Earth System Science Data* 9, 317–348.

Gisnås, K., Etzelmüller, B., Lussana, C., Hjort, J., **Sannel, A.B.K.**, Isaksen, K., Westermann, S., Kuhry, P., Christiansen, H.H., Frampton, A., Åkerman, J., 2017: Permafrost map for Norway, Sweden and Finland. *Permafrost and Periglacial Processes* 28, 359–378, doi: 10.1002/ppp.1922.

Olefeldt, D., Goswami, S., Grosse, G., Hayes, D., Hugelius, G., Kuhry, P., McGuire, A.D., Romanovsky, V.E., **Sannel, A.B.K.**, Schuur, E.A.G., Turetsky, M.R., 2016: Circumpolar distribution and carbon storage of thermokarst landscapes. *Nature Communications* 7, doi:10.1038/ncomms13043.

Sjöberg, Y., Coon, E., **Sannel, A.B.K.**, Pannetier, R., Harp, D., Frampton, A., Painter, S.L., Lyon, S.W., 2016: Thermal effects of groundwater flow through subarctic fens – a case study based on field observations and numerical modeling. *Water Resources Research* 52, 1591–1606, doi:10.1002/2015WR017571.

Treat, C.C., Jones, M.C., Camill, P., Gallego-Sala, A., Garneau, M., Harden, J.W., Hugelius, G., Klein, E.S., Kokfelt, U., Kuhry, P., Loisel, J., Mathijssen, P.J.H., O'Donnell, J.A., Oksanen, P.O., Ronkainen, T.M., **Sannel, A.B.K.**, Talbot, J., Tarnocai, C.M., Välimäki, M., 2016: Effects of permafrost aggradation on peat properties as determined from a pan-Arctic synthesis of plant macrofossils. *Journal of Geophysical Research – Biogeosciences* 121, doi:10.1002/2015JG003061.

Sannel, A.B.K., Hugelius, G., Jansson, P., Kuhry, P., 2016: Permafrost warming in a subarctic peatland – which meteorological controls are most important? *Permafrost and Periglacial Processes* 27, 177–188, doi:10.1002/ppp.1862.

Loisel, J., Yu, Z., Beilman, D.W., Camill, P., Alm, J., Amesbury, M.J., Anderson, D., Andersson, S., Bochicchio, C., Barber, K., Belyea, L.R., Bunbury, J., Chambers, F.M., Charman, D.J., De Vleeschouwer, F., Fiałkiewicz-Kozieł, B., Finkelstein, S.A., Gałka, M., Garneau, M., Hammarlund, D., Hinchcliffe, W., Holmquist, J., Hughes, P., Jones, M.C., Klein, E.S., Kokfelt, U., Korhola, A., Kuhry, P., Lamarre, A., Lamentowicz, M., Large, M., Lavoi, M., MacDonald, G., Magnan, G., Makila, M., Mallon, G., Mathijssen, P., Mauquoy, D., McCarroll, J., Moore, T.R., Nichols, J., O'Reilly, B., Oksanen, P., Packalen, M., Peteet, D., Richard, P.J.H., Robinson, S., Ronkainen, T., Rundgren, M., **Sannel, A.B.K.**, Tarnocai, C., Thom, T., Tuittila, E-S., Turetsky, M., Välimäki, M., van der Linden, M., van Geel, B., van Bellen, S., Vitt, D., Zhao, Y., Zhou, W., 2014: A database and synthesis of northern peatland soil properties and Holocene carbon and nitrogen accumulation. *The Holocene* 9, 1028–1042, doi:10.1177/0959683614538073.

Schuur, E.A.G., Abbott, B.W., Bowden, W.B., Brovkin, V., Camill, P., Canadell, J.G., Chanton, J.P., Chapin III, F.S., Christensen, T.R., Ciais, P., Crosby, B.T., Czimczik, C.I.,

Grosse, G., Harden, J., Hayes, D.J., Hugelius, G., Jastrow, J.D., Jones, J.B., Kleinen, T., Koven, C.D., Krinner, G., Kuhry, P., Lawrence, D.M., McGuire, A.D., Natali, S.M., O'Donnell, J.A., Ping, C.L., Riley, W.J., Rinke, A., Romanovsky, V.E., **Sannel, A.B.K.**, Schädel, C., Schaefer, K., Sky, J., Subin, Z.M., Tarnocai, C., Turetsky, M., Waldrop, M., Walter-Anthony, K.M., Wickland, K.P., Wilson, C.J., Zimov, S.A., 2013: Expert assessment of vulnerability of permafrost carbon to climate change. *Climatic Change*, doi:10.1007/s10584-013-0730-7.

Sannel, A.B.K., Kuhry, P., 2011: Warming-induced destabilization of peat plateau/thermokarst lake complexes. *Journal of Geophysical Research – Biogeosciences* 116, G03035, doi:10.1029/2010JG001635.

Christiansen, H.H., Etzelmüller, B., Isaksen, K., Juliussen, H., Humlum, O., Johansson, M., Ingeman-Nielsen, T., Kristensen, L., Hjort, J., Holmlund, P., **Sannel, A.B.K.**, Sigsgaard, C., Åkerman, H.J., Foged, N., Blikra, L., Ødegaard, M., 2010: The thermal state of permafrost in the Nordic area during the International Polar Year 2007–2009. *Permafrost and Periglacial Processes* 21, 156–181.

Kaislahti Tillman, P., Holzkämper, S., Kuhry, P., **Sannel, A.B.K.**, Loader, N.J., Robertson, I., 2010: Stable carbon and oxygen isotopes in Sphagnum fuscum peat from subarctic Canada: implications for palaeoclimate studies. *Chemical Geology* 270, 216–226.

Kaislahti Tillman, P., Holzkämper, S., Kuhry, P., **Sannel, A.B.K.**, Loader, N.J., Robertson, I., 2010: Long-term climate variability in continental subarctic Canada: a 6200-year record derived from stable isotopes in peat. *Palaeogeography, Palaeoclimatology, Palaeoecology* 298, 235–246.

Sannel, A.B.K., Brown, I.A., 2010: High resolution remote sensing identification of thermokarst lake dynamics in a subarctic peat plateau complex. *Canadian Journal of Remote Sensing* 36, S26–S40.

Sannel, A.B.K., Kuhry, P., 2009: Holocene peat growth and decay dynamics in sub-arctic peat plateaus, west-central Canada. *Boreas* 38, 13–24.

Sannel, A.B.K., Kuhry, P., 2008: Long-term stability of permafrost in subarctic peat plateaus, west-central Canada. *The Holocene* 18, 589–601.

Other scientific articles

Välijärvi, M., **Sannel, B.** and Juselius, T. 2021: Fennoskandian ikiroutasoiden kohtalo tulevaisuudessa ja siihen liittyvät ilmakehän takaisinkytkenät. *Geologi* 73, 16–21.

Turetsky, M.R., Abbott, B.W., Jones, M.C., Walter Anthony, K., Olefeldt, D., Schuur, E.A.G., Koven, C., McGuire, A.D., Grosse, G., Kuhry, P., Hugelius, G., Lawrence, D.M., Gibson, C., **Sannel, A.B.K.**, 2019: Permafrost collapse is accelerating carbon release. *Nature* 569, 32–34.

Välijärvi, M., Lohila, A., Minkkinen, K., Ojanen, P., **Sannel, B.**, 2019: Soiden ja turpeen taloudellinen hyödyntäminen ja käyttömuotojen aiheuttama säteilypakote. *Geologi* 71, 141–146.

Schuur E.A.G., Abbott, B.W., Permafrost Carbon Network (Bowden, W.B., Brovkin, V., Camill, P., Canadell, J.P., Chapin III, F.S., Christensen, T.R., Chanton, J.P., Ciais, P., Crill, P.M., Crosby, B.T., Czimczik, C.I., Grosse, G., Hayes, D.J., Hugelius, G., Jastrow, J.D., Kleinen, T., Koven, C.D., Krinner, G., Kuhry, P., Lawrence, D.M., Natali, S.M., Ping, C.L.,

Rinke, A., Riley, W.J., Romanovsky, V.E., **Sannel, A.B.K.**, Schädel, C., Schaefer, K., Subin, Z.M., Tarnocai, C., Turetsky, M., Walter-Anthony, K.M., Wilson, C.J., Zimov, S.A.), 2011: High risk of permafrost thaw. *Nature* 480, 32–33, doi:10.1038/480032a.

Book chapters

Olefeldt, D., Heffernan, L., Jones, M.C., **Sannel, A.B.K.**, Treat, C.C. and Turetsky, M.R., 2021: Permafrost thaw in northern peatlands: Rapid changes in ecosystem and landscape functions, pp. 27-67. In: Canadell, J.G. and Jackson, R.B. (Eds.) 2021: *Ecosystem collapse and climate change*. 364 pp. Springer.