CURRICULUM VITAE

Name:	Søren Rysgaard
Personal:	Born September 23, 1965 in Snedsted, Denmark
Address, work:	Arctic Research Centre, Aarhus University, Ole Worms Allé 1, bldg. 1134, DK-8000, Aarhus C, Denmark. Phone: +45 2464 3206, Email: rysgaard@au.dk Centre for Earth Observation Science (CEOS) Clayton H. Riddell Faculty of Environment Earth and Resources, Dysart Rd, 440 Wallace Building, Fort Gary Campus University of Manitoba, Winnipeg, MB, CA. R3T 2N2, Phone +001 (204) 891-4972, Email: rysgaard@umanitoba.ca Greenland Institute of Natural Resources. Kivioq 2, Box 570, 3900 Nuuk, Greenland. Phone: +299 36 12 00, Fax: +299 36 12 12, Email: rysgaard@au.dk
Education:	At Aarhus University, Denmark. Ph.D. (15.07.1995) M. Sc. in biology (18.12.1991)
Publications:	231 peer reviewed publications Web of Science citations 10,400, h-index 56 Google scholar citations 16,000, h-index 65 Research Gate citations 14,600, RG Score 45 ORCID iD (orcid.org/0000-0003-1726-2958)
Research areas:	Marine microbiology and biogeochemistry Benthic-pelagic coupling Carbon and nutrient cycling in Arctic waters Structure and function of Arctic marine ecosystems Sea ice processes Glacier-fjord-ocean interactions Global change
Student-supervision:	Bachelor students: 15, Master students: 20, PhD students: 18, Post docs: 22
Referee activities:	Limnology and Oceanography, Estuarine, Coastal and Shelf Science, FEMS Microbial Ecology, Applied Environmental Microbiology, Marine Ecology Progress Series, Polar Biology, Marine Biology, Aquatic Microbial Ecology, Science, Journal of Geophysical Research, Tellus, Annals of Glaciology, Nature, Marine Chemistry Geophysical Research Letters, Progress in Oceanography, The Cryosphere, Biogeosciences, Chemical Geology, Nature Communications, Scientific Reports, Frontiers, Global Biogeochemical Cycles
Referee for Councils:	The Research Council of Norway National Environmental Research Council, UK

National Science Foundation, USA
Canada Foundation of Innovation
Comision Nacional de Investigation Cientifica y Tecnologica, Chile

Most significant contributions:
Prof. Rysgaard has contributed significantly to fundamental understanding how, where, and when settling organic matter is degraded in temperate and arctic sediments. The work includes biogeochemical pathways and the cycling of redox elements in marine sediments and sea ice. New knowledge has been achieved on degradation pathways in various sediments, including those inhabited by bioturbating benthic animals and/or colonised by microalgae/macroalgae. His scientific achievements count initiating and raising funds for comprehensive marine system studies in the Arctic. These studies still continue and comprise several sub-research projects and two long-term monitoring programs in Greenland. They are the most comprehensive decadal studies of carbon and nutrient cycles ever made in the Arctic. His is behind many new discoveries from physical to chemical and biological processes related to sea ice formation and melt and how sea ice affects greenhouse-gas exchange between the atmosphere and ocean. Another road of his achievements relates to ocean-glacier interactions. Some of his recent discoveries is a new heat sources for glacial melt in fjords in contact with the Greenland ice sheet, and that melt water plumes in front of calving marine glaciers greatly affects physical, chemical and biological processes in fjords and coastal waters.

SELECTED INTERNATIONALLY REVIEWED JOURNAL ARTICLES

Campbell K, Mundy CJ, Juhl AR, Dalman LA, Michel C, Galley RJ, Else BE, Geilfus N.X, Rysgaard S (2019) Melt procedure affects the photosynthetic response of sea ice algae. Frontiers in Earth Science. 7:21. doi: 10.3389/feart.2019.00021.

Søgaard DH, Deming JW, Meire L, Rysgaard S (2019) Effect of microbial processes and CaCO3 dynamics on inorganic carbon cycling in snow-covered Arctic winter sea ice. Marine Ecology Progress Series 611:31-44. doi:10.3354/meps12868.

Crabeck O, Galley RJ, Mercury L, Delile B, Tison J-L, Rysgaard S (2019) Evidence of freezing pressure in sea ice discrete brine inclusions and its impact on aqueous-gaseous equilibrium. Journal of Geophysical Research: Oceans. 124, doi:10.1029/2018jc014597.

Else BGT, Whitehead JJ, Galindo V, Ferland J, Mundy CJ, Gonski S, Ehn JK, Rysgaard S, Babin M (2019) Response of the Arctic marine inorganic carbon system to ice algae and under-ice phytoplankton blooms: A case study along the fast-ice edge of Baffin Bay. Journal of Geophysical Research: Oceans, 124, 1277-1293. https://doi.org/10.1029/2018JC013899.

Attard KM, Søgaard D, Piontek J, Lange B, Katlein C, Sørensen HL, McGinnis DF, Rovelli L, Rysgaard S, Wenzhöfer F, Glud RN (2018) Oxygen fluxes beneath Arctic sea ice: the influence from biological and physical processes. https://doi.org/10.1007/s00300-018-2350-1. Polar Biology.

Galindo V, Gosselin M, Mundy CJ, Else B, Lavaud J, Claustre H, Ehn J, Rysgaard S (2017) Pigment composition and photoprotection of Arctic sea ice algae during spring. Marine Ecology Progress Series, 585:49-69. https://doi.org/10.3354/meps12398.

Campbell K, Mundy CJ, Gosselin M, Landy JC, Delaforge A, Rysgaard S (2017) Net community production in the bottom of first-year sea ice over the Arctic spring bloom. Geophysical Research Letters. DOI: 10.1002/2017GL074602.

Sørensen HL, Thamdrup B, Jeppesen E, Rysgaard S, Glud RN (2017) Nutrient availability limits biological production in Arctic sea ice melt ponds. Polar Biology. 40:1593-1606, doi: 10.1007/s00300-017-2082-7.

Crabeck O, Galley R, Delille B, Geilfus N-X, Lemes M, Else B, Tison J-L, Francus P, Rysgaard S (2016) Imaging air volume fraction in sea ice using non-destructive x-ray tomography. The Cryosphere. 10, 1125-1145, doi:10.5194/tc-10-1125-2016.

Else BGT, Rysgaard S, Attard K, Campbell K, Crabeck O, Galley RJ, Geilfus N-X, Lemes M, Lueck R, Papakyriakou T, and Wang F. (2015) Under-ice eddy covariance flux measurements of heat, salt, momentum, and dissolved oxygen in an artificial sea ice pool. Cold Regions Science and Technology, 119:158-169.

Galley RJ, Else BGT, Geilfus N-X, Hare A, Isleifson D, Ryner L, Barber DG, Rysgaard S (2015) Imaged brine inclusions in young sea ice - Shape, distribution and formation timing. Cold Regions Science and Technology. 111:39-48.

Rysgaard S, Wang F, Galley RJ, Grimm R, Notz D, Lemes M, Geilfus N-X, Chaulk A, Hare AA, Crabeck O, Else BGT, Campbell K, Sørensen LL, Sieverts J, Papakyriakou T (2014) Temporal dynamics of ikaite in experimental sea ice. The Cryosphere 8, 1469-1478, doi:10.5194/tc-8-1469-2014.

Glud RN, Rysgaard S, Turner G, McGinnis DF, Leaky RJG (2014) Biological and physical induced oxygen dynamics in melting sea ice of the Fram Strait. Limnology & Oceanography 59(4): 1097-1111.

Rysgaard S, Søgaard D, Cooper M, Pucko M, Lennert K, Papakyriakou TN, Wang F, Geilfus NX, Glud RN, Ehn J, McGinnes D, Attard K, Siverts J, Deming JW, Barber D (2013). Ikaite crystal distribution in Arctic winter sea ice and its implications for CO2 system dynamics. The Cryosphere 7, 1-12 doi:10.5194/tc-7-1-2013.

Long MH, Koopmans D, Berg P, Rysgaard S, Glud RN, Søgaard DH (2012). Oxygen exchange and ice melt measured at the ice-water interface by from eddy correlation. Biogeosciences 9, 1-11. doi:10.5194/bg-9-1-2012

Bowman, JS, Rasmussen S, Blom N, Deming JW, Rysgaard S, Scheritz-Ponten T (2012). Microbial community structure of Arctic multiyear sea ice and surface seawater as determined by 454 sequencing of the 16S RNA gene. Nature ISME Journal, 6, 11-20; doi:10.1038/ismej.2011.76

Søgaard DH, Kristensen M, Rysgaard S, Glud RN (2010). Dynamics of autotrophic and heterotrophic activity in Arctic first-year sea-ice: Case study from Marlene Bight, SW Greenland. Marine Ecology Progress Series. 419: 31-45.

Mikkelsen D, Rysgaard S, Glud RN (2008). Microalgal composition and primary production in Arctic sea ice: a seasonal study from Kobbefjord (Kangerluarsunnguaq), West Greenland. Marine Ecology Progress Series 368:65-74.