

# Robert M Holmes

## List of Publications by Citations

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76  
papers

8,079  
citations

44  
h-index

79  
g-index

79  
ext. papers

9,018  
ext. citations

6.2  
avg, IF

5.52  
L-index

#	Paper	IF	Citations
76	Increasing river discharge to the Arctic Ocean. <i>Science</i> , <b>2002</b> , 298, 2171-3	33.3	1137
75	A simple and precise method for measuring ammonium in marine and freshwater ecosystems. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , <b>1999</b> , 56, 1801-1808	2.4	919
74	Seasonal and Annual Fluxes of Nutrients and Organic Matter from Large Rivers to the Arctic Ocean and Surrounding Seas. <i>Estuaries and Coasts</i> , <b>2012</b> , 35, 369-382	2.8	412
73	Natural abundance-level measurement of the nitrogen isotopic composition of oceanic nitrate: an adaptation of the ammonia diffusion method. <i>Marine Chemistry</i> , <b>1997</b> , 57, 227-242	3.7	371
72	Trajectory shifts in the Arctic and subarctic freshwater cycle. <i>Science</i> , <b>2006</b> , 313, 1061-6	33.3	287
71	Measuring $^{15}\text{N}\text{NH}_4^+$ in marine, estuarine and fresh waters: An adaptation of the ammonia diffusion method for samples with low ammonium concentrations. <i>Marine Chemistry</i> , <b>1998</b> , 60, 235-243	3.7	285
70	A pan-arctic evaluation of changes in river discharge during the latter half of the 20th century. <i>Geophysical Research Letters</i> , <b>2006</b> , 33,	4.9	261
69	Lability of DOC transported by Alaskan rivers to the Arctic Ocean. <i>Geophysical Research Letters</i> , <b>2008</b> , 35,	4.9	246
68	Detecting the signature of permafrost thaw in Arctic rivers. <i>Geophysical Research Letters</i> , <b>2015</b> , 42, 2830-2835	4.9	211
67	Material Spiraling in Stream Corridors: A Telescoping Ecosystem Model. <i>Ecosystems</i> , <b>1998</b> , 1, 19-34	3.9	210
66	High biolability of ancient permafrost carbon upon thaw. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 2689-2693	4.9	197
65	Denitrification in a nitrogen-limited stream ecosystem. <i>Biogeochemistry</i> , <b>1996</b> , 33, 125-146	3.8	193
64	Surface-subsurface interactions in stream ecosystems. <i>Trends in Ecology and Evolution</i> , <b>1996</b> , 11, 239-42	10.9	170
63	Dissolved organic matter sources in large Arctic rivers. <i>Geochimica Et Cosmochimica Acta</i> , <b>2012</b> , 94, 217-237	3.7	162
62	The arctic freshwater system: Changes and impacts. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		160
61	Utilization of ancient permafrost carbon in headwaters of Arctic fluvial networks. <i>Nature Communications</i> , <b>2015</b> , 6, 7856	17.4	156
60	A circumpolar perspective on fluvial sediment flux to the Arctic ocean. <i>Global Biogeochemical Cycles</i> , <b>2002</b> , 16, 45-1-45-14	5.9	156

59	The Arctic Ocean Estuary. <i>Estuaries and Coasts</i> , <b>2012</b> , 35, 353-368	2.8	147
58	Parafluvial Nitrogen Dynamics in a Desert Stream Ecosystem. <i>Journal of the North American Benthological Society</i> , <b>1994</b> , 13, 468-478		135
57	Circumpolar synchrony in big river bacterioplankton. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 21208-12	11.5	107
56	Linkages among runoff, dissolved organic carbon, and the stable oxygen isotope composition of seawater and other water mass indicators in the Arctic Ocean. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110, n/a-n/a		105
55	Particulate organic carbon and nitrogen export from major Arctic rivers. <i>Global Biogeochemical Cycles</i> , <b>2016</b> , 30, 629-643	5.9	102
54	A land-to-ocean perspective on the magnitude, source and implication of DIC flux from major Arctic rivers to the Arctic Ocean. <i>Global Biogeochemical Cycles</i> , <b>2012</b> , 26, n/a-n/a	5.9	99
53	Impacts of climate warming and permafrost thaw on the riverine transport of nitrogen and phosphorus to the Kara Sea. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		93
52	River export of nutrients and organic matter from the North Slope of Alaska to the Beaufort Sea. <i>Water Resources Research</i> , <b>2014</b> , 50, 1823-1839	5.4	80
51	Flux of nutrients from Russian rivers to the Arctic Ocean: Can we establish a baseline against which to judge future changes?. <i>Water Resources Research</i> , <b>2000</b> , 36, 2309-2320	5.4	78
50	Landscape-level controls on dissolved carbon flux from diverse catchments of the circumboreal. <i>Global Biogeochemical Cycles</i> , <b>2012</b> , 26, n/a-n/a	5.9	69
49	Pan-Arctic Trends in Terrestrial Dissolved Organic Matter from Optical Measurements. <i>Frontiers in Earth Science</i> , <b>2016</b> , 4,	3.5	69
48	Chromophoric dissolved organic matter export from U.S. rivers. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 1575-1579	4.9	68
47	Molecular mapping of sorbent selectivities with respect to isolation of Arctic dissolved organic matter as measured by Fourier transform mass spectrometry. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 7461-8	10.3	67
46	Spatial and interannual variability of dissolved organic matter in the Kolyma River, East Siberia, observed using satellite imagery. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		66
45	Development of a Pan-Arctic Database for River Chemistry. <i>Eos</i> , <b>2008</b> , 89, 217-218	1.5	63
44	Evidence for key enzymatic controls on metabolism of Arctic river organic matter. <i>Global Change Biology</i> , <b>2014</b> , 20, 1089-100	11.4	61
43	The Processing and Impact of Dissolved Riverine Nitrogen in the Arctic Ocean. <i>Estuaries and Coasts</i> , <b>2012</b> , 35, 401-415	2.8	61
42	Inorganic carbon speciation and fluxes in the Congo River. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 511-516	6.9	60

41	Isotopic investigation of denitrification in a riparian ecosystem in western France. <i>Journal of Applied Ecology</i> , <b>2003</b> , 40, 1035-1048	5.8	59
40	Utilizing colored dissolved organic matter to derive dissolved black carbon export by arctic rivers. <i>Frontiers in Earth Science</i> , <b>2015</b> , 3,	3.5	58
39	Quantifying CDOM and DOC in major Arctic rivers during ice-free conditions using Landsat TM and ETM+ data. <i>Remote Sensing of Environment</i> , <b>2018</b> , 209, 395-409	13.2	57
38	NITROGEN FLOW THROUGH THE FOOD WEB IN THE OLIGOHALINE ZONE OF A NEW ENGLAND ESTUARY. <i>Ecology</i> , <b>2000</b> , 81, 433-452	4.6	51
37	The impact of flash floods on microbial distribution and biogeochemistry in the parafluvial zone of a desert stream. <i>Freshwater Biology</i> , <b>1998</b> , 40, 641-654	3.1	50
36	Nutrient chemistry of the ObPand Yenisey Rivers, Siberia: results from June 2000 expedition and evaluation of long-term data sets. <i>Marine Chemistry</i> , <b>2001</b> , 75, 219-227	3.7	50
35	Seasonal and hydrologic drivers of dissolved organic matter and nutrients in the upper Kuparuk River, Alaskan Arctic. <i>Biogeochemistry</i> , <b>2011</b> , 103, 109-124	3.8	49
34	Methanogenesis in Arizona, USA dryland streams. <i>Biogeochemistry</i> , <b>1995</b> , 31, 155-173	3.8	48
33	The biogeochemistry of carbon across a gradient of streams and rivers within the Congo Basin. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2014</b> , 119, 687-702	3.7	44
32	Increasing Alkalinity Export from Large Russian Arctic Rivers. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 8302-8308	10.3	44
31	NITROGEN BIOGEOCHEMISTRY IN THE OLIGOHALINE ZONE OF A NEW ENGLAND ESTUARY. <i>Ecology</i> , <b>2000</b> , 81, 416-432	4.6	40
30	Branched glycerol dialkyl glycerol tetraethers in Arctic lake sediments: Sources and implications for paleothermometry at high latitudes. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2014</b> , 119, 1738-1754	3.7	39
29	Multimolecular tracers of terrestrial carbon transfer across the pan-Arctic: 14C characteristics of sedimentary carbon components and their environmental controls. <i>Global Biogeochemical Cycles</i> , <b>2015</b> , 29, 1855-1873	5.9	38
28	Optical properties and bioavailability of dissolved organic matter along a flow-path continuum from soil pore waters to the Kolyma River mainstem, East Siberia. <i>Biogeosciences</i> , <b>2016</b> , 13, 2279-2290	4.6	38
27	Summer CO2 evasion from streams and rivers in the Kolyma River basin, north-east Siberia. <i>Polar Research</i> , <b>2013</b> , 32, 19704	2	36
26	Climate Change Impacts on the Hydrology and Biogeochemistry of Arctic Rivers1-26		33
25	Mercury Export from Arctic Great Rivers. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 4140-4148	10.3	30
24	Iron isotope systematics in Arctic rivers. <i>Comptes Rendus - Geoscience</i> , <b>2015</b> , 347, 377-385	1.4	27

23	Multi-molecular tracers of terrestrial carbon transfer across the pan-Arctic: comparison of hydrolyzable components with plant wax lipids and lignin phenols. <i>Biogeosciences</i> , <b>2015</b> , 12, 4841-4860	4.6	21
22	Watershed slope as a predictor of fluvial dissolved organic matter and nitrate concentrations across geographical space and catchment size in the Arctic. <i>Environmental Research Letters</i> , <b>2018</b> , 13, 104015	6.2	21
21	Measurements of Cd, Cu, Pb and Zn in the lower reaches of major Eurasian arctic rivers using trace metal clean techniques. <i>Environmental Pollution</i> , <b>2010</b> , 158, 624-30	9.3	19
20	The Importance of Ground Water to Stream Ecosystem Function <b>2000</b> , 137-148		18
19	Seasonal and Geographic Variation in Dissolved Carbon Biogeochemistry of Rivers Draining to the Canadian Arctic Ocean and Hudson Bay. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2018</b> , 123, 3371-3386	3.7	16
18	Siberian tundra ecosystem vegetation and carbon stocks four decades after wildfire. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2014</b> , 119, 2144-2154	3.7	15
17	The riverine source of CH <sub>4</sub> and N <sub>2</sub> O from the Republic of Congo, western Congo Basin. <i>Biogeosciences</i> , <b>2017</b> , 14, 2267-2281	4.6	14
16	Low and declining mercury in arctic Russian rivers. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 747-52	10.3	11
15	Variation in summer nitrogen and phosphorus uptake among Siberian headwater streams. <i>Polar Research</i> , <b>2016</b> , 35, 24571	2	10
14	An Abrupt Aging of Dissolved Organic Carbon in Large Arctic Rivers. <i>Geophysical Research Letters</i> , <b>2020</b> , 47, e2020GL088823	4.9	10
13	Stream Dissolved Organic Matter in Permafrost Regions Shows Surprising Compositional Similarities but Negative Priming and Nutrient Effects. <i>Global Biogeochemical Cycles</i> , <b>2021</b> , 35, e2020GB006719	5.9	10
12	Temperature-controlled tundra fire severity and frequency during the last millennium in the Yukon-Kuskokwim Delta, Alaska. <i>Holocene</i> , <b>2019</b> , 29, 1223-1233	2.6	9
11	Using radon to quantify groundwater discharge and methane fluxes to a shallow, tundra lake on the Yukon-Kuskokwim Delta, Alaska. <i>Biogeochemistry</i> , <b>2020</b> , 148, 69-89	3.8	9
10	Multidecadal climate-induced changes in Arctic tundra lake geochemistry and geomorphology. <i>Limnology and Oceanography</i> , <b>2019</b> , 64, S179	4.8	9
9	Temporal and Longitudinal Mercury Trends in Burbot ( <i>Lota lota</i> ) in the Russian Arctic. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 13436-13442	10.3	8
8	Arctic Deltaic Lake Sediments As Recorders of Fluvial Organic Matter Deposition. <i>Frontiers in Earth Science</i> , <b>2016</b> , 4,	3.5	7
7	Reply from j.B. Jones and R.m. Holmes. <i>Trends in Ecology and Evolution</i> , <b>1996</b> , 11, 430	10.9	4
6	The Arctic. <i>Bulletin of the American Meteorological Society</i> , <b>2021</b> , 102, S263-S316	6.1	4

5	NITROGEN BIOGEOCHEMISTRY IN THE OLIGOHALINE ZONE OF A NEW ENGLAND ESTUARY <b>2000</b> , 81, 416		3
4	The Pulse of the Amazon: Fluxes of Dissolved Organic Carbon, Nutrients, and Ions From the World's Largest River. <i>Global Biogeochemical Cycles</i> , <b>2021</b> , 35, e2020GB006895	5.9	3
3	NITROGEN FLOW THROUGH THE FOOD WEB IN THE OLIGOHALINE ZONE OF A NEW ENGLAND ESTUARY <b>2000</b> , 81, 433		2
2	Drivers of Organic Molecular Signatures in the Amazon River. <i>Global Biogeochemical Cycles</i> , <b>2021</b> , 35, e2021GB006938	5.9	2
1	Multidecadal declines in particulate mercury and sediment export from Russian rivers in the pan-Arctic basin.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119, e2119857119	11.5	