

Robert G Striegl

List of Publications by Year in descending order

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93
papers

16,219
citations

38742

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docs citations

112
times ranked

12693
citing authors

#	ARTICLE	IF	CITATIONS
1	Anthropogenic landcover impacts fluvial dissolved organic matter composition in the Upper Mississippi River Basin. <i>Biogeochemistry</i> , 2023, 164, 117-141.	3.5	16
2	Heterogeneous Patterns of Aged Organic Carbon Export Driven by Hydrologic Flow Paths, Soil Texture, Fire, and Thaw in Discontinuous Permafrost Headwaters. <i>Global Biogeochemical Cycles</i> , 2022, 36, .	4.9	5
3	The Importance of Lake Emergent Aquatic Vegetation for Estimating Arcticâ€Boreal Methane Emissions. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2022, 127, .	3.0	11
4	Stormâ€Scale and Seasonal Dynamics of Carbon Export From a Nested Subarctic Watershed Underlain by Permafrost. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2021JG006268.	3.0	2
5	Spatiotemporal Dynamics of CO ₂ Gas Exchange From Headwater Mountain Streams. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2021JG006509.	3.0	8
6	Complex Vulnerabilities of the Water and Aquatic Carbon Cycles to Permafrost Thaw. <i>Frontiers in Climate</i> , 2021, 3, .	2.8	14
7	Potential impacts of mercury released from thawing permafrost. <i>Nature Communications</i> , 2020, 11, 4650.	12.8	77
8	Satellite and airborne remote sensing of gross primary productivity in boreal Alaskan lakes. <i>Environmental Research Letters</i> , 2020, 15, 105001.	5.2	20
9	Hydrologic connectivity determines dissolved organic matter biogeochemistry in northern highâ€latitude lakes. <i>Limnology and Oceanography</i> , 2020, 65, 1764-1780.	3.1	37
10	Patterns and isotopic composition of greenhouse gases under ice in lakes of interior Alaska. <i>Environmental Research Letters</i> , 2020, 15, 105016.	5.2	3
11	Thermokarst amplifies fluvial inorganic carbon cycling and export across watershed scales on the Peel Plateau, Canada. <i>Biogeosciences</i> , 2020, 17, 5163-5182.	3.3	13
12	Carbon Dioxide and Methane Flux in a Dynamic Arctic Tundra Landscape: Decadalâ€Scale Impacts of Ice Wedge Degradation and Stabilization. <i>Geophysical Research Letters</i> , 2020, 47, .	4.0	16
13	Extreme rates and diel variability of planktonic respiration in a shallow sub-arctic lake. <i>Aquatic Sciences</i> , 2019, 81, 1.	1.5	10
14	Thermokarst Effects on Carbon Dioxide and Methane Fluxes in Streams on the Peel Plateau (NWT,) Tj ETQqO 0 0 rgBT /Overlock 10 Tf 50	3.0	33
15	Negligible cycling of terrestrial carbon in many lakes of the arid circumpolar landscape. <i>Nature Geoscience</i> , 2019, 12, 180-185.	12.9	60
16	Constraining dissolved organic matter sources and temporal variability in a model sub-Arctic lake. <i>Biogeochemistry</i> , 2019, 146, 271-292.	3.5	22
17	Spatial patterns of enzymatic activity in large water bodies: Ship-borne measurements of beta-D-glucuronidase activity as a rapid indicator of microbial water quality. <i>Science of the Total Environment</i> , 2019, 651, 1742-1752.	8.0	10
18	Permafrost Stores a Globally Significant Amount of Mercury. <i>Geophysical Research Letters</i> , 2018, 45, 1463-1471.	4.0	245

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19	Size, age, renewal, and discharge of groundwater carbon. <i>Inland Waters</i> , 2018, 8, 122-127.	2.2	10
20	Dissolved organic carbon and nitrogen release from boreal Holocene permafrost and seasonally frozen soils of Alaska. <i>Environmental Research Letters</i> , 2018, 13, 065011.	5.2	84
21	Assessing historical and projected carbon balance of Alaska: A synthesis of results and policy/management implications. <i>Ecological Applications</i> , 2018, 28, 1396-1412.	3.8	22
22	Ice Wedge Degradation and Stabilization Impact Water Budgets and Nutrient Cycling in Arctic Trough Ponds. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2018, 123, 2604-2616.	3.0	26
23	Limited nitrate retention capacity in the Upper Mississippi River. <i>Environmental Research Letters</i> , 2018, 13, 074030.	5.2	26
24	Spatial heterogeneity of within-stream methane concentrations. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 1036-1048.	3.0	41
25	Inland waters and their role in the carbon cycle of Alaska. <i>Ecological Applications</i> , 2017, 27, 1403-1420.	3.8	78
26	Carbonate buffering and metabolic controls on carbon dioxide in rivers. <i>Global Biogeochemical Cycles</i> , 2017, 31, 663-677.	4.9	92
27	Spatial variability of CO ₂ concentrations and biogeochemistry in the Lower Columbia River. <i>Inland Waters</i> , 2017, 7, 417-427.	2.2	3
28	Biological and land use controls on the isotopic composition of aquatic carbon in the Upper Mississippi River Basin. <i>Global Biogeochemical Cycles</i> , 2017, 31, 1271-1288.	4.9	22
29	Spatial and temporal patterns of dissolved organic matter quantity and quality in the Mississippi River Basin, 1997–2013. <i>Hydrological Processes</i> , 2017, 31, 902-915.	2.6	31
30	CO ₂ time series patterns in contrasting headwater streams of North America. <i>Aquatic Sciences</i> , 2017, 79, 473-486.	1.5	43
31	Multi-decadal increases in dissolved organic carbon and alkalinity flux from the Mackenzie drainage basin to the Arctic Ocean. <i>Environmental Research Letters</i> , 2016, 11, 054015.	5.2	130
32	Basin scale controls on CO ₂ and CH ₄ emissions from the Upper Mississippi River. <i>Geophysical Research Letters</i> , 2016, 43, 1973-1979.	4.0	67
33	Aquatic carbon cycling in the conterminous United States and implications for terrestrial carbon accounting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 58-63.	7.1	175
34	Particulate organic carbon and nitrogen export from major Arctic rivers. <i>Global Biogeochemical Cycles</i> , 2016, 30, 629-643.	4.9	157
35	Multimodel analysis of anisotropic diffusive tracer gas transport in a deep arid unsaturated zone. <i>Water Resources Research</i> , 2015, 51, 6052-6073.	4.2	8
36	Role of ground ice dynamics and ecological feedbacks in recent ice wedge degradation and stabilization. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 2280-2297.	2.8	102

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37	Biodegradability of dissolved organic carbon in permafrost soils and aquatic systems: a meta-analysis. <i>Biogeosciences</i> , 2015, 12, 6915-6930.	3.3	153
38	Uranium isotopes and dissolved organic carbon in loess permafrost: Modeling the age of ancient ice. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 152, 143-165.	3.9	35
39	Switching predominance of organic versus inorganic carbon exports from an intermediate-size subarctic watershed. <i>Geophysical Research Letters</i> , 2015, 42, 386-394.	4.0	20
40	Organic Carbon Burial in Lakes and Reservoirs of the Conterminous United States. <i>Environmental Science & Technology</i> , 2015, 49, 7614-7622.	10.0	78
41	Source limitation of carbon gas emissions in high-elevation mountain streams and lakes. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015, 120, 952-964.	3.0	43
42	Ancient low-molecular-weight organic acids in permafrost fuel rapid carbon dioxide production upon thaw. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13946-13951.	7.1	201
43	The impact of climate and reservoirs on longitudinal riverine carbon fluxes from two major watersheds in the Central and Intermontane West. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014, 119, 848-863.	3.0	13
44	Field-scale Sulfur Hexafluoride Tracer Experiment to Understand Long Distance Gas Transport in the Deep Unsaturated Zone. <i>Vadose Zone Journal</i> , 2014, 13, 1-10.	2.2	6
45	Ebullitive methane emissions from oxygenated wetland streams. <i>Global Change Biology</i> , 2014, 20, 3408-3422.	9.5	69
46	CO ₂ and CH ₄ emissions from streams in a lake-rich landscape: Patterns, controls, and regional significance. <i>Global Biogeochemical Cycles</i> , 2014, 28, 197-210.	4.9	115
47	Influences of glacier melt and permafrost thaw on the age of dissolved organic carbon in the Yukon River basin. <i>Global Biogeochemical Cycles</i> , 2014, 28, 525-537.	4.9	70
48	Global carbon dioxide emissions from inland waters. <i>Nature</i> , 2013, 503, 355-359.	27.8	1,670
49	Inorganic carbon loading as a primary driver of dissolved carbon dioxide concentrations in the lakes and reservoirs of the contiguous United States. <i>Global Biogeochemical Cycles</i> , 2013, 27, 285-295.	4.9	117
50	Rapid runoff via shallow throughflow and deeper preferential flow in a boreal catchment underlain by frozen silt (Alaska, USA). <i>Hydrogeology Journal</i> , 2013, 21, 93-106.	2.1	57
51	Reorganization of vegetation, hydrology and soil carbon after permafrost degradation across heterogeneous boreal landscapes. <i>Environmental Research Letters</i> , 2013, 8, 035017.	5.2	137
52	Emissions of carbon dioxide and methane from a headwater stream network of interior Alaska. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013, 118, 482-494.	3.0	141
53	Hydrologic controls on the transport and cycling of carbon and nitrogen in a boreal catchment underlain by continuous permafrost. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013, 118, 698-712.	3.0	74
54	The regional abundance and size distribution of lakes and reservoirs in the United States and implications for estimates of global lake extent. <i>Limnology and Oceanography</i> , 2012, 57, 597-606.	3.1	123

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55	Variation in Soil Carbon Dioxide Efflux at Two Spatial Scales in a Topographically Complex Boreal Forest. <i>Arctic, Antarctic, and Alpine Research</i> , 2012, 44, 457-468.	1.1	22
56	Anthropogenic aerosols as a source of ancient dissolved organic matter in glaciers. <i>Nature Geoscience</i> , 2012, 5, 198-201.	12.9	199
57	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> , 2012, 26, .	4.9	121
58	Carbon dioxide and methane emissions from the Yukon River system. <i>Global Biogeochemical Cycles</i> , 2012, 26, .	4.9	199
59	Biodegradability of dissolved organic carbon in the Yukon River and its tributaries: Seasonality and importance of inorganic nitrogen. <i>Global Biogeochemical Cycles</i> , 2012, 26, .	4.9	191
60	Carbon export by rivers draining the conterminous United States. <i>Inland Waters</i> , 2012, 2, 177-184.	2.2	57
61	Annual estimates of water and solute export from 42 tributaries to the Yukon River. <i>Hydrological Processes</i> , 2012, 26, 1949-1961.	2.6	5
62	Seasonal and Annual Fluxes of Nutrients and Organic Matter from Large Rivers to the Arctic Ocean and Surrounding Seas. <i>Estuaries and Coasts</i> , 2012, 35, 369-382.	2.2	528
63	Vulnerability of high-latitude soil organic carbon in North America to disturbance. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	337
64	Mercury Export from the Yukon River Basin and Potential Response to a Changing Climate. <i>Environmental Science & Technology</i> , 2011, 45, 9262-9267.	10.0	110
65	Lakes and reservoirs as regulators of carbon cycling and climate. <i>Limnology and Oceanography</i> , 2009, 54, 2298-2314.	3.1	1,977
66	Transport of elemental mercury in the unsaturated zone from a waste disposal site in an arid region. <i>Applied Geochemistry</i> , 2008, 23, 572-583.	3.0	30
67	Seasonal and spatial variability in dissolved organic matter quantity and composition from the Yukon River basin, Alaska. <i>Global Biogeochemical Cycles</i> , 2008, 22, .	4.9	268
68	Carbon export and cycling by the Yukon, Tanana, and Porcupine rivers, Alaska, 2001-2005. <i>Water Resources Research</i> , 2007, 43, .	4.2	197
69	Increased groundwater to stream discharge from permafrost thawing in the Yukon River basin: Potential impacts on lateral export of carbon and nitrogen. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	436
70	Plumbing the Global Carbon Cycle: Integrating Inland Waters into the Terrestrial Carbon Budget. <i>Ecosystems</i> , 2007, 10, 172-185.	3.4	2,836
71	Effects of permafrost melting on CO ₂ and CH ₄ exchange of a poorly drained black spruce lowland. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	97
72	Mercury in water and biomass of microbial communities in hot springs of Yellowstone National Park, USA. <i>Applied Geochemistry</i> , 2006, 21, 1868-1879.	3.0	31

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73	The global abundance and size distribution of lakes, ponds, and impoundments. <i>Limnology and Oceanography</i> , 2006, 51, 2388-2397.	3.1	1,426
74	CO ₂ dynamics in the Amargosa Desert: Fluxes and isotopic speciation in a deep unsaturated zone. <i>Water Resources Research</i> , 2005, 41, .	4.2	45
75	A decrease in discharge-normalized DOC export by the Yukon River during summer through autumn. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	334
76	Constraining the Inferred Paleohydrologic Evolution of a Deep Unsaturated Zone in the Amargosa Desert. <i>Vadose Zone Journal</i> , 2004, 3, 502-512.	2.2	21
77	A Reservoir of Nitrate Beneath Desert Soils. <i>Science</i> , 2003, 302, 1021-1024.	12.6	317
78	Carbon gas exchange at a southern Rocky Mountain wetland, 1996-1998. <i>Global Biogeochemical Cycles</i> , 2001, 15, 321-335.	4.9	91
79	Carbon dioxide partial pressure and ¹³ C content of north temperate and boreal lakes at spring ice melt. <i>Limnology and Oceanography</i> , 2001, 46, 941-945.	3.1	160
80	Soil respiration and photosynthetic uptake of carbon dioxide by ground-cover plants in four ages of jack pine forest. <i>Canadian Journal of Forest Research</i> , 2001, 31, 1540-1550.	1.7	27
81	Estimating lake-atmosphere CO ₂ exchange. <i>Limnology and Oceanography</i> , 1999, 44, 988-1001.	3.1	69
82	Methane flux in subalpine wetland and unsaturated soils in the southern Rocky Mountains. <i>Global Biogeochemical Cycles</i> , 1999, 13, 101-113.	4.9	39
83	Effects of a clear-cut harvest on soil respiration in a jack pine - lichen woodland. <i>Canadian Journal of Forest Research</i> , 1998, 28, 534-539.	1.7	114
84	Hydrologic influence on methane and carbon dioxide dynamics at two north-central Minnesota lakes. <i>Limnology and Oceanography</i> , 1998, 43, 1519-1529.	3.1	173
85	Numerical Evaluation of Static-Chamber Measurements of Soil-Atmosphere Gas Exchange: Identification of Physical Processes. <i>Soil Science Society of America Journal</i> , 1996, 60, 740-747.	2.2	222
86	Potential methane emission from north-temperate lakes following ice melt. <i>Limnology and Oceanography</i> , 1996, 41, 985-991.	3.1	152
87	Carbon budget for a groundwater-fed lake: Calcification supports summer photosynthesis. <i>Limnology and Oceanography</i> , 1994, 39, 1319-1332.	3.1	104
88	Methane consumption and carbon dioxide emission in tallgrass prairie: Effects of biomass burning and conversion to agriculture. <i>Global Biogeochemical Cycles</i> , 1993, 7, 735-748.	4.9	35
89	Consumption of atmospheric methane by desert soils. <i>Nature</i> , 1992, 357, 145-147.	27.8	214
90	Carbon dioxide retention and carbon exchange on unsaturated Quaternary sediments. <i>Geochimica Et Cosmochimica Acta</i> , 1990, 54, 2277-2283.	3.9	20

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91	Diffusion and consumption of methane in an unsaturated zone in north-central Illinois, U.S.A.. Journal of Hydrology, 1989, 111, 133-143.	5.4	20
92	A positive relationship between groundwater velocity and submersed macrophyte biomass in Sparkling Lake Wisconsin. Limnology and Oceanography, 1989, 34, 235-239.	3.1	50
93	SUSPENDED SEDIMENT AND METALS REMOVAL FROM URBAN RUNOFF BY A SMALL LAKE. Journal of the American Water Resources Association, 1987, 23, 985-996.	2.4	27