Jay P Zarnetske

List of Publications by Year
in descending order

49 papers	2,513 citations	218677 26 h-index	206112 48 g-index
52 all docs	52 docs citations	52 times ranked	2524 citing authors

#	Article	IF	Citations
1	Dynamics of nitrate production and removal as a function of residence time in the hyporheic zone. Journal of Geophysical Research, 2011, 116, .	3.3	370
2	Human domination of the global water cycle absent from depictions and perceptions. Nature Geoscience, 2019, 12, 533-540.	12.9	245
3	Coupled transport and reaction kinetics control the nitrate sourceâ€sink function of hyporheic zones. Water Resources Research, 2012, 48, .	4.2	158
4	Unexpected spatial stability of water chemistry in headwater stream networks. Ecology Letters, 2018, 21, 296-308.	6.4	149
5	Generality of Hydrologic Transport Limitation of Watershed Organic Carbon Flux Across Ecoregions of the United States. Geophysical Research Letters, 2018, 45, 11,702.	4.0	141
6	A physical explanation for the development of redox microzones in hyporheic flow. Geophysical Research Letters, 2015, 42, 4402-4410.	4.0	129
7	Labile dissolved organic carbon supply limits hyporheic denitrification. Journal of Geophysical Research, 2011, 116, .	3.3	128
8	Transient storage as a function of geomorphology, discharge, and permafrost active layer conditions in Arctic tundra streams. Water Resources Research, 2007, 43, .	4.2	80
9	Using in-situ optical sensors to study dissolved organic carbon dynamics of streams and watersheds: A review. Science of the Total Environment, 2017, 575, 713-723.	8.0	77
10	Quantification of metabolically active transient storage (MATS) in two reaches with contrasting transient storage and ecosystem respiration. Journal of Geophysical Research, 2011, 116, .	3.3	61
11	How does rapidly changing discharge during storm events affect transient storage and channel water balance in a headwater mountain stream?. Water Resources Research, 2013, 49, 5473-5486.	4.2	59
12	Profiles of temporal thaw depths beneath two arctic stream types using ground-penetrating radar. Permafrost and Periglacial Processes, 2006, 17, 341-355.	3.4	49
13	Estimating 3D variation in active-layer thickness beneath arctic streams using ground-penetrating radar. Journal of Hydrology, 2009, 373, 479-486.	5.4	48
14	Revealing biogeochemical signatures of Arctic landscapes with river chemistry. Scientific Reports, 2019, 9, 12894.	3.3	47
15	Comparison of instantaneous and constantâ€rate stream tracer experiments through nonâ€parametric analysis of residence time distributions. Water Resources Research, 2008, 44, .	4.2	46
16	A water cycle for the Anthropocene. Hydrological Processes, 2019, 33, 3046-3052.	2.6	44
17	Rapid decline in river icings detected in Arctic Alaska: Implications for a changing hydrologic cycle and river ecosystems. Geophysical Research Letters, 2017, 44, 3228-3235.	4.0	38
18	Stream solute tracer timescales changing with discharge and reach length confound process interpretation. Water Resources Research, 2016, 52, 3227-3245.	4.2	37

#	Article	IF	Citations
19	Coupling multiscale observations to evaluate hyporheic nitrate removal at the reach scale. Freshwater Science, 2015, 34, 172-186.	1.8	36
20	We cannot shrug off the shoulder seasons: addressing knowledge and data gaps in an Arctic headwater. Environmental Research Letters, 2020, 15, 104027.	5.2	34
21	Subsea permafrost carbon stocks and climate change sensitivity estimated by expert assessment. Environmental Research Letters, 2020, 15, 124075.	5.2	34
22	Comparison of in-channel mobileâ€"immobile zone exchange during instantaneous and constant rate stream tracer additions: Implications for design and interpretation of non-conservative tracer experiments. Journal of Hydrology, 2008, 357, 112-124.	5.4	31
23	Influence of morphology and permafrost dynamics on hyporheic exchange in arctic headwater streams under warming climate conditions. Geophysical Research Letters, 2008, 35, .	4.0	31
24	Woody debris is related to reachâ€scale hotspots of lowland stream ecosystem respiration under baseflow conditions. Ecohydrology, 2018, 11, e1952.	2.4	31
25	Stream Dissolved Organic Matter in Permafrost Regions Shows Surprising Compositional Similarities but Negative Priming and Nutrient Effects. Global Biogeochemical Cycles, 2021, 35, e2020GB006719.	4.9	30
26	Tundra wildfire triggers sustained lateral nutrient loss in Alaskan Arctic. Global Change Biology, 2021, 27, 1408-1430.	9.5	29
27	Arctic concentrationâ€"discharge relationships for dissolved organic carbon and nitrate vary with landscape and season. Limnology and Oceanography, 2021, 66, S197.	3.1	29
28	Exploring Tracer Information and Model Framework Tradeâ€Offs to Improve Estimation of Stream Transient Storage Processes. Water Resources Research, 2019, 55, 3481-3501.	4.2	26
29	Direct Observations of Hydrologic Exchange Occurring With Lessâ€Mobile Porosity and the Development of Anoxic Microzones in Sandy Lakebed Sediments. Water Resources Research, 2018, 54, 4714-4729.	4.2	25
30	Spatial and temporal variation in river corridor exchange across a 5th-order mountain stream network. Hydrology and Earth System Sciences, 2019, 23, 5199-5225.	4.9	23
31	Impacts of water level on metabolism and transient storage in vegetated lowland rivers: Insights from a mesocosm study. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 628-644.	3.0	22
32	Experimental shifts of hydrologic residence time in a sandy urban stream sedimentâ€"water interface alter nitrate removal and nitrous oxide fluxes. Biogeochemistry, 2020, 149, 195-219.	3.5	22
33	Hyporheic exchange and water chemistry of two arctic tundra streams of contrasting geomorphology. Journal of Geophysical Research, 2008, 113, .	3.3	21
34	Residence Time Controls on the Fate of Nitrogen in Flowâ€Through Lakebed Sediments. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 689-707.	3.0	20
35	Formation Criteria for Hyporheic Anoxic Microzones: Assessing Interactions of Hydraulics, Nutrients, and Biofilms. Water Resources Research, 2020, 56, no.	4.2	17
36	Low flow controls on stream thermal dynamics. Limnologica, 2018, 68, 157-167.	1.5	15

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37	Toward measuring biogeochemistry within the streamâ€groundwater interface at the network scale: An initial assessment of two spatial sampling strategies. Limnology and Oceanography: Methods, 2018, 16, 722-733.	2.0	15
38	Multiâ€offset GPR methods for hyporheic zone investigations. Near Surface Geophysics, 2009, 7, 247-257.	1.2	14
39	Solute Transport and Transformation in an Intermittent, Headwater Mountain Stream with Diurnal Discharge Fluctuations. Water (Switzerland), 2019, 11, 2208.	2.7	14
40	Co-located contemporaneous mapping of morphological, hydrological, chemical, and biological conditions in a 5th-order mountain stream network, Oregon, USA. Earth System Science Data, 2019, 11, 1567-1581.	9.9	14
41	Multi-scale preferential flow processes in an urban streambed under variable hydraulic conditions. Journal of Hydrology, 2019, 573, 168-179.	5.4	11
42	Exploring dissolved organic carbon cycling at the streamâ€“groundwater interface across a third-order, lowland stream network. Biogeochemistry, 2018, 137, 105-126.	3.5	10
43	Multi-year, spatially extensive, watershed-scale synoptic stream chemistry and water quality conditions for six permafrost-underlain Arctic watersheds. Earth System Science Data, 2022, 14, 95-116.	9.9	9
44	We Must Stop Fossil Fuel Emissions to Protect Permafrost Ecosystems. Frontiers in Environmental Science, 0, 10, .	3.3	9
45	Advancing river corridor science beyond disciplinary boundaries with an inductive approach to catalyse hypothesis generation. Hydrological Processes, 2022, 36, .	2.6	7
46	Hot Spots and Hot Moments in the Critical Zone: Identification of and Incorporation into Reactive Transport Models. , 2022, , 9-47.		7
47	An intense precipitation event causes a temperate forested drainage network to shift from <scp>N₂O</scp> source to sink. Limnology and Oceanography, 2022, 67, .	3.1	5
48	Helophyte impacts on the response of hyporheic invertebrate communities to inundation events in intermittent streams. Ecohydrology, 2017, 10, e1857.	2.4	4
49	The method controls the story - Sampling method impacts on the detection of pore-water nitrogen concentrations in streambeds. Science of the Total Environment, 2020, 709, 136075.	8.0	2