James B Shanley

List of Publications by Year
in descending order

101 papers	5,010 citations	101543 36 h-index	98798 67 g-index
106 all docs	106 docs citations	106 times ranked	5160 citing authors

#	Article	IF	Citations
1	Who needs environmental monitoring?. Frontiers in Ecology and the Environment, 2007, 5, 253-260.	4.0	403
2	Taking the pulse of snowmelt: in situ sensors reveal seasonal, event and diurnal patterns of nitrate and dissolved organic matter variability in an upland forest stream. Biogeochemistry, 2012, 108, 183-198.	3.5	226
3	Carbon isotope fractionation of dissolved inorganic carbon (DIC) due to outgassing of carbon dioxide from a headwater stream. Hydrological Processes, 2008, 22, 2410-2423.	2.6	214
4	Dissolved organic nitrogen budgets for upland, forested ecosystems in New England. Biogeochemistry, 2000, 49, 123-142.	3.5	200
5	Highâ€frequency dissolved organic carbon and nitrate measurements reveal differences in storm hysteresis and loading in relation to land cover and seasonality. Water Resources Research, 2017, 53, 5345-5363.	4.2	159
6	The effect of frozen soil on snowmelt runoff at Sleepers River, Vermont. Hydrological Processes, 1999, 13, 1843-1857.	2.6	157
7	Sources, transformations, and hydrological processes that control stream nitrate and dissolved organic matter concentrations during snowmelt in an upland forest. Water Resources Research, 2008, 44, .	4.2	155
8	Controls on old and new water contributions to stream flow at some nested catchments in Vermont, USA. Hydrological Processes, 2002, 16, 589-609.	2.6	133
9	A hydrometric and geochemical approach to test the transmissivity feedback hypothesis during snowmelt. Journal of Hydrology, 1999, 219, 188-205.	5.4	131
10	Input-Output Budgets of Inorganic Nitrogen for 24 Forest Watersheds in the Northeastern United States: A Review. Water, Air, and Soil Pollution, 2004, 151, 373-396.	2.4	131
11	Riparian zone flowpath dynamics during snowmelt in a small headwater catchment. Journal of Hydrology, 1999, 222, 75-92.	5.4	129
12	Mercury and Organic Carbon Dynamics During Runoff Episodes from a Northeastern USA Watershed. Water, Air, and Soil Pollution, 2007, 187, 89-108.	2.4	107
13	Mercury dynamics in relation to dissolved organic carbon concentration and quality during high flow events in three northeastern U.S. streams. Water Resources Research, 2010, 46, .	4.2	105
14	Factors Controlling Mercury Transport in an Upland Forested Catchment. Water, Air, and Soil Pollution, 1998, 105, 427-438.	2.4	97
15	Comparison of total mercury and methylmercury cycling at five sites using the small watershed approach. Environmental Pollution, 2008, 154, 143-154.	7.5	96
16	Tracing sources of nitrate in snowmelt runoff using a high-resolution isotopic technique. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	93
17	Quantity is Nothing without Quality: Automated QA/QC for Streaming Environmental Sensor Data. BioScience, 2013, 63, 574-585.	4.9	91
18	Recent advances in understanding and measurement of mercury in the environment: Terrestrial Hg cycling. Science of the Total Environment, 2020, 721, 137647.	8.0	91

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19	Ultraviolet absorbance as a proxy for total dissolved mercury in streams. Environmental Pollution, 2009, 157, 1953-1956.	7.5	82
20	Physical Controls on Total and Methylmercury Concentrations in Streams and Lakes of the Northeastern USA. Ecotoxicology, 2005, 14, 125-134.	2.4	73
21	Effects of Ion Exchange on Stream Solute Fluxes in a Basin Receiving Highway Deicing Salts. Journal of Environmental Quality, 1994, 23, 977-986.	2.0	66
22	Longâ€term patterns and shortâ€term dynamics of stream solutes and suspended sediment in a rapidly weathering tropical watershed. Water Resources Research, 2011, 47, .	4.2	66
23	Mercury on the move during snowmelt in Vermont. Eos, 2002, 83, 45-48.	0.1	62
24	The history of mercury pollution near the Spolana chlor-alkali plant (Neratovice, Czech Republic) as recorded by Scots pine tree rings and other bioindicators. Science of the Total Environment, 2017, 586, 1182-1192.	8.0	60
25	Tracing Sources of Streamwater Sulfate During Snowmelt Using S and O Isotope Ratios of Sulfate and 35S Activity. Biogeochemistry, 2005, 76, 161-185.	3.5	58
26	Responses of stream nitrate and DOC loadings to hydrological forcing and climate change in an upland forest of the northeastern United States. Journal of Geophysical Research, 2009, 114, .	3.3	56
27	Coupled hydrological and biogeochemical processes controlling variability of nitrogen species in streamflow during autumn in an upland forest. Water Resources Research, 2014, 50, 1569-1591.	4.2	56
28	Molecular Hysteresis: Hydrologically Driven Changes in Riverine Dissolved Organic Matter Chemistry During a Storm Event. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 759-774.	3.0	55
29	Water's Way at Sleepers River watershed â€“ revisiting flow generation in a postâ€glacial landscape, Vermont USA. Hydrological Processes, 2015, 29, 3447-3459.	2.6	53
30	Preliminary observations of streamflow generation during storms in a forested Piedmont watershed using temperature as a tracer. Journal of Contaminant Hydrology, 1988, 3, 349-365.	3.3	51
31	Water and solute mass balance of five small, relatively undisturbed watersheds in the U.S.. Science of the Total Environment, 2006, 358, 221-242.	8.0	49
32	Streamwater chemistry in three contrasting monolithologic Czech catchments. Applied Geochemistry, 2012, 27, 1854-1863.	3.0	46
33	A Biogeochemical Comparison of Two Well-Buffered Catchments with Contrasting Histories of Acid Deposition. Water, Air and Soil Pollution, 2004, 4, 325-342.	0.8	42
34	Approaches to stream solute load estimation for solutes with varying dynamics from five diverse small watersheds. Ecosphere, 2016, 7, e01298.	2.2	42
35	Streams as Mirrors: Reading Subsurface Water Chemistry From Stream Chemistry. Water Resources Research, 2022, 58, e2021WR029931.	4.2	41
36	Fine Root Dynamics and Forest Production Across a Calcium Gradient in Northern Hardwood and Conifer Ecosystems. Ecosystems, 2008, 11, 325-341.	3.4	39

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37	A Cross-Site Comparison of Factors Influencing Soil Nitrification Rates in Northeastern USA Forested Watersheds. Ecosystems, 2009, 12, 158-178.	3.4	37
38	Mercury mobilization and episodic stream acidification during snowmelt: Role of hydrologic flow paths, source areas, and supply of dissolved organic carbon. Water Resources Research, 2010, 46, .	4.2	37
39	Larch Tree Rings as a Tool for Reconstructing 20th Century Central European Atmospheric Mercury Trends. Environmental Science & Technology, 2018, 52, 11060-11068.	10.0	36
40	Rapid regional recovery from sulfate and nitrate pollution in streams of the western Czech Republic â€" comparison to other recovering areas. Environmental Pollution, 2005, 135, 17-28.	7.5	35
41	Clearing the waters: Evaluating the need for siteâ€specific field fluorescence corrections based on turbidity measurements. Limnology and Oceanography: Methods, 2017, 15, 408-416.	2.0	34
42	Unprocessed Atmospheric Nitrate in Waters of the Northern Forest Region in the U.S. and Canada. Environmental Science & Technology, 2019, 53, 3620-3633.	10.0	34
43	Enhancement of primary production during drought in a temperate watershed is greater in larger rivers than headwater streams. Limnology and Oceanography, 2019, 64, 1458-1472.	3.1	34
44	Variations in aqueous sulfate concentrations at Panola Mountain, Georgia. Journal of Hydrology, 1993, 146, 361-382.	5.4	33
45	Soil mercury distribution in adjacent coniferous and deciduous stands highly impacted by acid rain in the Ore Mountains, Czech Republic. Applied Geochemistry, 2016, 75, 63-75.	3.0	33
46	Factors Influencing Mercury in Freshwater Surface Sediments of Northeastern North America. Ecotoxicology, 2005, 14, 101-111.	2.4	32
47	Mass Balance Assessment for Mercury in Lake Champlain. Environmental Science & Technology, 2006, 40, 82-89.	10.0	32
48	Interactions between lithology and biology drive the long-term response of stream chemistry to major hurricanes in a tropical landscape. Biogeochemistry, 2013, 116, 175-186.	3.5	32
49	Soil Aggregates as a Source of Dissolved Organic Carbon to Streams: An Experimental Study on the Effect of Solution Chemistry on Water Extractable Carbon. Frontiers in Environmental Science, 2019, 7, .	3.3	32
50	Manganese Biogeochemistry in a Central Czech Republic Catchment. Water, Air, and Soil Pollution, 2007, 186, 149-165.	2.4	31
51	Enriched Groundwater Seeps in Two Vermont Headwater Catchments are Hotspots of Nitrate Turnover. Wetlands, 2016, 36, 237-249.	1.5	31
52	SULFATE RETENTION AND RELEASE IN SOILS AT PANOLA MOUNTAIN, GEORGIA. Soil Science, 1992, 153, 499-508.	0.9	30
53	Deposition of mercury in forests across a montane elevation gradient: Elevational and seasonal patterns in methylmercury inputs and production. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 1922-1939.	3.0	30
54	Modeled ecohydrological responses to climate change at seven small watersheds in the northeastern United States. Global Change Biology, 2017, 23, 840-856.	9.5	30

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55	Hysteretic Response of Solutes and Turbidity at the Event Scale Across Forested Tropical Montane Watersheds. Frontiers in Earth Science, 2019, 7, .	1.8	30
56	A new method of snowmelt sampling for water stable isotopes. Hydrological Processes, 2014, 28, 5637-5644.	2.6	28
57	Systematic variation in evapotranspiration trends and drivers across the Northeastern United States. Hydrological Processes, 2018, 32, 3547-3560.	2.6	28
58	Stable-isotope and solute-chemistry approaches to flow characterization in a forested tropical watershed, Luquillo Mountains, Puerto Rico. Applied Geochemistry, 2015, 63, 484-497.	3.0	26
59	High Mercury Wet Deposition at a â€œClean Airâ€•Site in Puerto Rico. Environmental Science & Technology, 2015, 49, 12474-12482.	10.0	26
60	In the path of the Hurricane: impact of Hurricane Irene and Tropical Storm Lee on watershed hydrology and biogeochemistry from North Carolina to Maine, USA. Biogeochemistry, 2018, 141, 351-364.	3.5	26
61	Influence of land use and hydrologic variability on seasonal dissolved organic carbon and nitrate export: insights from a multi-year regional analysis for the northeastern USA. Biogeochemistry, 2019, 146, 31-49.	3.5	26
62	Geoecology of a Forest Watershed Underlain by Serpentine in Central Europe. Northeastern Naturalist, 2009, 16, 309-328.	0.3	25
63	Tropical river suspended sediment and solute dynamics in storms during an extreme drought. Water Resources Research, 2017, 53, 3695-3712.	4.2	25
64	Decreasing litterfall mercury deposition in central European coniferous forests and effects of bark beetle infestation. Science of the Total Environment, 2019, 682, 213-225.	8.0	24
65	Flushing of distal hillslopes as an alternative source of stream dissolved organic carbon in a headwater catchment. Water Resources Research, 2015, 51, 8114-8128.	4.2	23
66	Hydrology and water quality in two mountain basins of the northeastern US: assessing baseline conditions and effects of ski area development. Hydrological Processes, 2007, 21, 1639-1650.	2.6	22
67	Spatial patterns of soil nitrification and nitrate export from forested headwaters in the northeastern United States. Journal of Geophysical Research, 2012, 117, .	3.3	20
68	Groundwater Level Trends and Drivers in Two Northern New England Glacial Aquifers. Journal of the American Water Resources Association, 2016, 52, 1012-1030.	2.4	20
69	Evaluating sulfur dynamics during storm events for three watersheds in the northeastern USA: a combined hydrological, chemical and isotopic approach. Hydrological Processes, 2008, 22, 4023-4034.	2.6	19
70	Using in situ UVâ€Visible spectrophotometer sensors to quantify riverine phosphorus partitioning and concentration at a high frequency. Limnology and Oceanography: Methods, 2018, 16, 840-855.	2.0	19
71	Mercury Cycling in Terrestrial Watersheds. , 2012, , 119-142.		18
72	Shallow Water Table Fluctuations in Relation to Soil Penetration Resistance. Ground Water, 2003, 41, 964-972.	1.3	17

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73	Enhancing Water Cycle Measurements for Future Hydrologic Research. Bulletin of the American Meteorological Society, 2007, 88, 669-676.	3.3	17
74	Regional meteorological drivers and long term trends of winter-spring nitrate dynamics across watersheds in northeastern North America. Biogeochemistry, 2016, 130, 247-265.	3.5	16
75	Shining light on the storm: in-stream optics reveal hysteresis of dissolved organic matter character. Biogeochemistry, 2019, 143, 275-291.	3.5	16
76	MERGANSER: An Empirical Model To Predict Fish and Loon Mercury in New England Lakes. Environmental Science & Technology, 2012, 46, 4641-4648.	10.0	14
77	Comparing catchment hydrologic response to a regional storm using specific conductivity sensors. Hydrological Processes, 2017, 31, 1074-1085.	2.6	14
78	Flow-Specific Trends in River-Water Quality Resulting from the Effects of the Clean Air Act in Three Mesoscale, Forested River Basins in the Northeastern United States Through 2002. Environmental Monitoring and Assessment, 2006, 120, 1-25.	2.7	13
79	Streamwater fluxes of total mercury and methylmercury into and out of Lake Champlain. Environmental Pollution, 2012, 161, 311-320.	7.5	13
80	Manganese biogeochemistry in a small Adirondack forested lake watershed. Water Resources Research, 1986, 22, 1647-1656.	4.2	12
81	Seasonal and event variations in Î´34S values of stream sulfate in a Vermont forested catchment: Implications for sulfur sources and cycling. Science of the Total Environment, 2008, 404, 262-268.	8.0	12
82	Does Stream Water Composition at Sleepers River in Vermont Reflect Dynamic Changes in Soils During Recovery From Acidification?. Frontiers in Earth Science, 2019, 6, .	1.8	12
83	Luquillo Experimental Forest: Catchment science in the montane tropics. Hydrological Processes, 2021, 35, e14146.	2.6	12
84	The evolving perceptual model of streamflow generation at the Panola Mountain Research Watershed. Hydrological Processes, 2021, 35, e14127.	2.6	12
85	One-day rate measurements for estimating net nitrification potential in humid forest soils. Forest Ecology and Management, 2006, 230, 91-95.	3.2	11
86	Climate Variability Drives Watersheds Along a Transporterâ€Transformer Continuum. Geophysical Research Letters, 2021, 48, e2021GL094050.	4.0	10
87	Event Scale Relationships of DOC and TDN Fluxes in Throughfall and Stemflow Diverge From Stream Exports in a Forested Catchment. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2021JG006281.	3.0	9
88	Measuring soil frost depth in forest ecosystems with ground penetrating radar. Agricultural and Forest Meteorology, 2014, 192-193, 121-131.	4.8	8
89	Resolving a paradoxâ€"high mercury deposition, but low bioaccumulation in northeastern Puerto Rico. Ecotoxicology, 2020, 29, 1207-1220.	2.4	8
90	Evaluating Streamwater Dissolved Organic Carbon Dynamics in Context of Variable Flowpath Contributions With a Tracerâ€Based Mixing Model. Water Resources Research, 2021, 57, e2021WR030529.	4.2	8

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91	Mercury in the pelagic food web of Lake Champlain. Ecotoxicology, 2012, 21, 705-718.	2.4	7
92	Mercury cycling and transport in the Lake Champlain basin. Water Science and Application, 1999, , 277-299.	0.3	5
93	Mercury cycling during acid rain recovery at the forested LesnÃ-potok catchment, Czech Republic. Hydrological Processes, 2021, 35, e14255.	2.6	5
94	Distribution and pools of mercury in forest soils near recent and historical mercury emission sources in the central Czech Republic. Journal of Geochemical Exploration, 2021, 226, 106782.	3.2	5
95	Hydrology and biogeochemistry datasets from Sleepers River Research Watershed, Danville, Vermont, USA. Hydrological Processes, 0, , .	2.6	3
96	Controls on decadal, annual, and seasonal concentrationâ€discharge relationships in the <scp>Sleepers River Research Watershed</scp>, <scp>Vermont, northeastern United States</scp>. Hydrological Processes, 2022, 36, .	2.6	3
97	A systematic increase in the slope of the concentration discharge relation for dissolved organic carbon in a forested catchment in Vermont, USA. Science of the Total Environment, 2022, 844, 156954.	8.0	3
98	Hydrology on high: Assessing the effect of ski resort expansion and changing climate at the Mount Mansfield pairedâ€catchment study in Vermont, <scp>USA</scp>. Hydrological Processes, 2021, 35, e14378.	2.6	2
99	A Biogeochemical Comparison of Two Well-Buffered Catchments with Contrasting Histories of Acid Deposition. , 2004, , 325-342.		2
100	Using <scp>DOM</scp> fluorescence to predict total mercury and methylmercury in forested headwater streams, Sleepers River, Vermont <scp>USA</scp>. Hydrological Processes, 0, , .	2.6	2
101	Preface for Jake Peters' special issue. Hydrological Processes, 2020, 34, 1680-1681.	2.6	0