Nandita B Basu

List of Publications by Year
in descending order

68 papers	4,893 citations	117625 34 h-index	95266 68 g-index
69 all docs	69 docs citations	69 times ranked	4758 citing authors

#	Article	IF	Citations
1	The future of hydrology: An evolving science for a changing world. Water Resources Research, 2010, 46, .	4.2	487
2	Nutrient loads exported from managed catchments reveal emergent biogeochemical stationarity. Geophysical Research Letters, 2010, 37, .	4.0	338
3	Do geographically isolated wetlands influence landscape functions?. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1978-1986.	7.1	297
4	Legacy nitrogen may prevent achievement of water quality goals in the Gulf of Mexico. Science, 2018, 360, 427-430.	12.6	262
5	The nitrogen legacy: emerging evidence of nitrogen accumulation in anthropogenic landscapes. Environmental Research Letters, 2016, 11, 035014.	5.2	249
6	Relative dominance of hydrologic versus biogeochemical factors on solute export across impact gradients. Water Resources Research, 2011, 47, .	4.2	217
7	Wetlands as large-scale nature-based solutions: Status and challenges for research, engineering and management. Ecological Engineering, 2017, 108, 489-497.	3.6	217
8	Two centuries of nitrogen dynamics: Legacy sources and sinks in the Mississippi and Susquehanna River Basins. Global Biogeochemical Cycles, 2017, 31, 2-23.	4.9	199
9	Geographically Isolated Wetlands are Important Biogeochemical Reactors on the Landscape. BioScience, 2015, 65, 408-418.	4.9	163
10	Biogeochemical hotspots: Role of small water bodies in landscape nutrient processing. Water Resources Research, 2017, 53, 5038-5056.	4.2	154
11	Hydrologic and biogeochemical functioning of intensively managed catchments: A synthesis of topâ€down analyses. Water Resources Research, 2011, 47, .	4.2	143
12	Enhancing protection for vulnerable waters. Nature Geoscience, 2017, 10, 809-815.	12.9	141
13	Signatures of human impact: size distributions and spatial organization of wetlands in the Prairie Pothole landscape. Ecological Applications, 2015, 25, 451-465.	3.8	122
14	Maximizing US nitrate removal through wetland protection and restoration. Nature, 2020, 588, 625-630.	27.8	113
15	Time lags in watershed-scale nutrient transport: an exploration of dominant controls. Environmental Research Letters, 2017, 12, 084017.	5.2	112
16	Managing nitrogen legacies to accelerate water quality improvement. Nature Geoscience, 2022, 15, 97-105.	12.9	112
17	Catchment Legacies and Time Lags: A Parsimonious Watershed Model to Predict the Effects of Legacy Storage on Nitrogen Export. PLoS ONE, 2015, 10, e0125971.	2.5	104
18	Integrating geographically isolated wetlands into land management decisions. Frontiers in Ecology and the Environment, 2017, 15, 319-327.	4.0	92

#	Article	IF	Citations
19	Spatiotemporal scaling of hydrological and agrochemical export dynamics in a tileâ€drained Midwestern watershed. Water Resources Research, 2011, 47, .	4.2	79
20	Impact of artificial subsurface drainage on groundwater travel times and baseflow discharge in an agricultural watershed, Iowa (USA). Hydrological Processes, 2012, 26, 3092-3100.	2.6	63
21	Disparities in publication patterns by gender, race and ethnicity based on a survey of a random sample of authors. Scientometrics, 2013, 96, 515-534.	3.0	60
22	Parsimonious modeling of hydrologic responses in engineered watersheds: Structural heterogeneity versus functional homogeneity. Water Resources Research, 2010, 46, .	4.2	56
23	Evaluation of analytical and numerical approaches for the estimation of groundwater travel time distribution. Journal of Hydrology, 2012, 475, 65-73.	5.4	56
24	Review: the environmental status and implications of the nitrate time lag in Europe and North America. Hydrogeology Journal, 2018, 26, 7-22.	2.1	53
25	Climate, soil, and vegetation controls on the temporal variability of vadose zone transport. Water Resources Research, 2011, 47, .	4.2	49
26	Temporal evolution of DNAPL source and contaminant flux distribution: Impacts of source mass depletion. Journal of Contaminant Hydrology, 2008, 95, 93-109.	3.3	48
27	Spatiotemporal averaging of inâ€stream solute removal dynamics. Water Resources Research, 2011, 47, .	4.2	47
28	Water cycle dynamics in a changing environment: Improving predictability through synthesis. Water Resources Research, 2011, 47, .	4.2	45
29	Dissolved nutrient retention dynamics in river networks: A modeling investigation of transient flows and scale effects. Water Resources Research, 2012, 48, .	4.2	45
30	Hydrologic impacts of subsurface drainage at the field scale: Climate, landscape and anthropogenic controls. Agricultural Water Management, 2016, 165, 1-10.	5.6	44
31	A Race Against Time: Modeling Time Lags in Watershed Response. Water Resources Research, 2019, 55, 3941-3959.	4.2	43
32	Homogenization of spatial patterns of hydrologic response in artificially drained agricultural catchments. Hydrological Processes, 2014, 28, 5010-5020.	2.6	38
33	Longâ€Term Shifts in U.S. Nitrogen Sources and Sinks Revealed by the New TRENDâ€Nitrogen Data Set (1930â€“2017). Global Biogeochemical Cycles, 2020, 34, e2020GB006626.	4.9	38
34	Chesapeake legacies: the importance of legacy nitrogen to improving Chesapeake Bay water quality. Environmental Research Letters, 2021, 16, 085002.	5.2	38
35	Integration of traditional and innovative characterization techniques for flux-based assessment of Dense Non-aqueous Phase Liquid (DNAPL) sites. Journal of Contaminant Hydrology, 2009, 105, 161-172.	3.3	34
36	The Groundwater Recovery Paradox in South India. Geophysical Research Letters, 2019, 46, 9602-9611.	4.0	34

#	Article	IF	Citations
37	Stochastic modeling of nutrient losses in streams: Interactions of climatic, hydrologic, and biogeochemical controls. Water Resources Research, 2010, 46, .	4.2	33
38	The need to integrate legacy nitrogen storage dynamics and time lags into policy and practice. Science of the Total Environment, 2021, 781, 146698.	8.0	31
39	Beyond the Mass Balance: Watershed Phosphorus Legacies and the Evolution of the Current Water Quality Policy Challenge. Water Resources Research, 2021, 57, e2020WR029316.	4.2	29
40	Mechanisms of Basin-Scale Nitrogen Load Reductions under Intensified Irrigated Agriculture. PLoS ONE, 2015, 10, e0120015.	2.5	29
41	Biogeochemical asynchrony: Ecosystem drivers of seasonal concentration regimes across the Great Lakes Basin. Limnology and Oceanography, 2020, 65, 848-862.	3.1	28
42	Is the River a Chemostat?: Scale Versus Land Use Controls on Nitrate Concentrationâ€Discharge Dynamics in the Upper Mississippi River Basin. Geophysical Research Letters, 2020, 47, e2020GL087051.	4.0	28
43	Patterns, puzzles and people: implementing hydrologic synthesis. Hydrological Processes, 2011, 25, 3256-3266.	2.6	22
44	A diagnostic approach to constraining flow partitioning in hydrologic models using a multiobjective optimization framework. Water Resources Research, 2017, 53, 3279-3301.	4.2	22
45	Vulnerable Waters are Essential to Watershed Resilience. Ecosystems, 2023, 26, 1-28.	3.4	21
46	The human factor in seasonal streamflows across natural and managed watersheds of North America. Nature Sustainability, 2022, 5, 397-405.	23.7	21
47	Hydrologic impacts of subsurface drainage from the field to watershed scale. Hydrological Processes, 2017, 31, 3017-3028.	2.6	20
48	Turnover and legacy of sediment-associated PAH in a baseflow-dominated river. Science of the Total Environment, 2019, 671, 754-764.	8.0	19
49	Development and application of a multi-scalar, participant-driven water poverty index in post-tsunami India. International Journal of Water Resources Development, 2017, 33, 955-975.	2.0	17
50	Dominant controls on pesticide transport from tile to catchment scale: Lessons from a minimalist model. Water Resources Research, 2012, 48, .	4.2	16
51	Agricultural phosphorus surplus trajectories for Ontario, Canada (1961â€“2016), and erosional export risk. Science of the Total Environment, 2022, 818, 151717.	8.0	16
52	Synthesis of science: findings on Canadian Prairie wetland drainage. Canadian Water Resources Journal, 2021, 46, 229-241.	1.2	15
53	Contributions of catchment and in-stream processes to suspended sediment transport in a dominantly groundwater-fed catchment. Hydrology and Earth System Sciences, 2018, 22, 3903-3921.	4.9	14
54	Checkered landscapes: hydrologic and biogeochemical nitrogen legacies along the river continuum. Environmental Research Letters, 2021, 16, 115006.	5.2	13

#	Article	IF	Citations
55	Intensive agriculture, nitrogen legacies, and water quality: intersections and implications. Environmental Research Letters, 2022, 17, 035006.	5.2	13
56	Can Improved Flow Partitioning in Hydrologic Models Increase Biogeochemical Predictability?. Water Resources Research, 2019, 55, 2939-2960.	4.2	12
57	Assessing the impacts of anthropogenic and hydro-climatic drivers on estrogen legacies and trajectories. Advances in Water Resources, 2016, 87, 19-28.	3.8	11
58	Modeling the Fate of Pharmaceuticals in a Fourthâ€Order River Under Competing Assumptions of Transient Storage. Water Resources Research, 2020, 56, e2019WR026100.	4.2	10
59	A novel Budyko-based approach to quantify post-forest-fire streamflow response and recovery timescales. Journal of Hydrology, 2022, 608, 127685.	5.4	10
60	Effective denitrification scales predictably with water residence time across diverse systems. Nature Precedings, 2009, , .	0.1	9
61	Crops as sensors: Using crop yield data to increase the robustness of hydrologic and biogeochemical models. Journal of Hydrology, 2021, 592, 125599.	5.4	9
62	Characterizing Catchmentâ€Scale Nitrogen Legacies and Constraining Their Uncertainties. Water Resources Research, 2022, 58, .	4.2	8
63	Curbing the Summer Surge: Permanent Outdoor Water Use Restrictions in Humid and Semiarid Cities. Water Resources Research, 2020, 56, e2019WR026466.	4.2	6
64	Response to Comment on â€œLegacy nitrogen may prevent achievement of water quality goals in the Gulf of Mexicoâ€. Science, 2019, 365, .	12.6	5
65	Windows into the past: lake sediment phosphorus trajectories act as integrated archives of watershed disturbance legacies over centennial scales. Environmental Research Letters, 2022, 17, 034005.	5.2	5
66	Seasonality of inundation in geographically isolated wetlands across the United States. Environmental Research Letters, 2022, 17, 054005.	5.2	5
67	Nitrogen legacies in anthropogenic landscapes: a case study in the Mondego Basin in Portugal. Environmental Science and Pollution Research, 2022, 29, 23919-23935.	5.3	3
68	Nevertheless, They Persisted: Can Hyporheic Zones Increase the Persistence of Estrogens in Streams?. Water Resources Research, 2021, 57, e2020WR028518.	4.2	1