Mark B David

List of Publications by Year
in descending order

112 papers	9,406 citations	36303 51 h-index	46799 89 g-index
112 all docs	112 docs citations	112 times ranked	6957 citing authors

#	Article	IF	Citations
1	METHODS FOR MEASURING DENITRIFICATION: DIVERSE APPROACHES TO A DIFFICULT PROBLEM. , 2006, 16, 2091-2122.		757
2	Sources of Nitrate Yields in the Mississippi River Basin. Journal of Environmental Quality, 2010, 39, 1657-1667.	2.0	361
3	Timing of Riverine Export of Nitrate and Phosphorus from Agricultural Watersheds in Illinois:â€‰ Implications for Reducing Nutrient Loading to the Mississippi River. Environmental Science & Technology, 2006, 40, 4126-4131.	10.0	358
4	Nitrogen Balance in and Export from an Agricultural Watershed. Journal of Environmental Quality, 1997, 26, 1038-1048.	2.0	323
5	Temperature and moisture effects on the production of dissolved organic carbon in a Spodosol. Soil Biology and Biochemistry, 1996, 28, 1191-1199.	8.8	299
6	Nitrate flux in the Mississippi River. Nature, 2001, 414, 166-167.	27.8	282
7	Effectiveness of Constructed Wetlands in Reducing Nitrogen and Phosphorus Export from Agricultural Tile Drainage. Journal of Environmental Quality, 2000, 29, 1262-1274.	2.0	270
8	Transport and Fate of Nitrate in Headwater Agricultural Streams in Illinois. Journal of Environmental Quality, 2004, 33, 1296-1304.	2.0	259
9	Anthropogenic Inputs of Nitrogen and Phosphorus and Riverine Export for Illinois, USA. Journal of Environmental Quality, 2000, 29, 494-508.	2.0	230
10	Dynamic modeling of nitrogen losses in river networks unravels the coupled effects of hydrological and biogeochemical processes. Biogeochemistry, 2009, 93, 91-116.	3.5	212
11	A new mechanism for calcium loss in forest-floor soils. Nature, 1995, 378, 162-165.	27.8	200
12	Denitrifying Bioreactors for Nitrate Removal: A Meta-Analysis. Journal of Environmental Quality, 2016, 45, 873-881.	2.0	185
13	Reduced Nitrogen Losses after Conversion of Row Crop Agriculture to Perennial Biofuel Crops. Journal of Environmental Quality, 2013, 42, 219-228.	2.0	171
14	Aluminum speciation and equilibria in soil solutions of a Haplorthod in the Adirondack Mountains (New York, U.S.A.). Geoderma, 1984, 33, 297-318.	5.1	170
15	Miscanthus. Advances in Botanical Research, 2010, 56, 75-137.	1.1	169
16	Benthic organic carbon influences denitrification in streams with high nitrate concentration. Freshwater Biology, 2007, 52, 1210-1222.	2.4	168
17	Nutrient uptake in streams draining agricultural catchments of the midwestern United States. Freshwater Biology, 2006, 51, 499-509.	2.4	167
18	Nitrogen balance in and export from agricultural fields associated with controlled drainage systems and denitrifying bioreactors. Ecological Engineering, 2010, 36, 1558-1566.	3.6	163

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19	<i>Miscanthus</i> and Switchgrass Production in Central Illinois: Impacts on Hydrology and Inorganic Nitrogen Leaching. Journal of Environmental Quality, 2010, 39, 1790-1799.	2.0	160
20	Carbon mobilization from the forest floor under red spruce in the northeastern U.S.A.. Soil Biology and Biochemistry, 1996, 28, 1181-1189.	8.8	146
21	DENITRIFICATION AND THE NITROGEN BUDGET OF A RESERVOIR IN AN AGRICULTURAL LANDSCAPE. , 2006, 16, 2177-2190.		131
22	In Situ Measurements of Denitrification in Constructed Wetlands. Journal of Environmental Quality, 1999, 28, 263-269.	2.0	126
23	Chemical characteristics and acidity of soluble organic substances from a northern hardwood forest floor, central Maine, USA. Geochimica Et Cosmochimica Acta, 1991, 55, 3611-3625.	3.9	124
24	Export of dissolved organic carbon from agricultural streams in Illinois, USA. Aquatic Sciences, 2005, 67, 465-471.	1.5	122
25	SOIL CALCIUM STATUS AND THE RESPONSE OF STREAM CHEMISTRY TO CHANGING ACIDIC DEPOSITION RATES. , 1999, 9, 1059-1072.		118
26	Soil Chemistry in a Loblolly/Longleaf Pine Forest with Interval Burning. , 1992, 2, 157-164.		106
27	Sulfur retention at intensively studied sites in the U.S. and Canada. Water, Air, and Soil Pollution, 1987, 33, 73-83.	2.4	101
28	Nitrogen cycling and tile drainage nitrate loss in a corn/soybean watershed. Agriculture, Ecosystems and Environment, 1998, 68, 85-97.	5.3	100
29	Relating Net Nitrogen Input in the Mississippi River Basin to Nitrate Flux in the Lower Mississippi River. Journal of Environmental Quality, 2002, 31, 1610-1622.	2.0	100
30	Effect of Acid Treatment on Dissolved Organic Carbon Retention by a Spodic Horizon. Soil Science Society of America Journal, 1989, 53, 1242-1247.	2.2	95
31	Modeling denitrification in a tile-drained, corn and soybean agroecosystem of Illinois, USA. Biogeochemistry, 2009, 93, 7-30.	3.5	95
32	Assessment of soil calcium status in red spruce forests in the northeastern United States. Biogeochemistry, 1997, 38, 19-39.	3.5	89
33	Nitrogen Mass Balance of a Tileâ€drained Agricultural Watershed in Eastâ€Central Illinois. Journal of Environmental Quality, 2009, 38, 1841-1847.	2.0	88
34	DISSOLVED ORGANIC CARBON and SULFATE SORPTION BY SPODOSOL MINERAL HORIZONS. Soil Science, 1992, 154, 136-144.	0.9	84
35	Soil Carbon Dioxide Characteristics under Different Forest Types and after Harvest. Soil Science Society of America Journal, 1993, 57, 1115-1121.	2.2	82
36	Denitrification associated with plants and sediments in an agricultural stream. Journal of the North American Benthological Society, 2004, 23, 667-676.	3.1	82

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37	Longâ€Term Changes in Mollisol Organic Carbon and Nitrogen. Journal of Environmental Quality, 2009, 38, 200-211.	2.0	81
38	Chemical character and origin of organic acids in streams and seepage lakes of central Maine. Biogeochemistry, 1991, 12, 17.	3.5	80
39	Application of the DNDC model to tile-drained Illinois agroecosystems: model calibration, validation, and uncertainty analysis. Nutrient Cycling in Agroecosystems, 2007, 78, 51-63.	2.2	80
40	Temperature and Substrate Control Woodchip Bioreactor Performance in Reducing Tile Nitrate Loads in East-Central Illinois. Journal of Environmental Quality, 2016, 45, 822-829.	2.0	77
41	Use of lossâ€onâ€ignition to assess soil organic carbon in forest soils. Communications in Soil Science and Plant Analysis, 1988, 19, 1593-1599.	1.4	74
42	Organic Carbon Fractions in Extracts of O and B Horizons from a New England Spodosol: Effects of Acid Treatment. Journal of Environmental Quality, 1989, 18, 212-217.	2.0	72
43	Acidic Deposition, Cation Mobilization, and Biochemical Indicators of Stress in Healthy Red Spruce. Journal of Environmental Quality, 1997, 26, 871-876.	2.0	72
44	Sulfur constituents and cycling in waters, seston, and sediments of an oligotrophic lake. Limnology and Oceanography, 1985, 30, 1196-1207.	3.1	69
45	Dynamics of extractable organic carbon in Spodosol forest floors. Soil Biology and Biochemistry, 1996, 28, 1171-1179.	8.8	68
46	Nitrogen Fertilizer and Herbicide Transport from Tile Drained Fields. Journal of Environmental Quality, 2000, 29, 232-240.	2.0	68
47	Ionâ€Chromatographic Analysis of Low Molecular Weight Organic Acids in Spodosol Forest Floor Solutions. Soil Science Society of America Journal, 1996, 60, 1565-1571.	2.2	66
48	Characterization of Phosphorus in a Spruceâ€Fir Spodosol by Phosphorusâ€31 Nuclear Magnetic Resonance Spectroscopy. Soil Science Society of America Journal, 1996, 60, 1943-1950.	2.2	62
49	Relationships among Nutrients, Chlorophyll-a , and Dissolved Oxygen in Agricultural Streams in Illinois. Journal of Environmental Quality, 2006, 35, 1110-1117.	2.0	61
50	Greenhouse Gas Emissions, Nitrate Leaching, and Biomass Yields from Production of Miscanthus Ã— giganteus in Illinois, USA. Bioenergy Research, 2012, 5, 801-813.	3.9	59
51	Characterization of solid and dissolved carbon in a spruce-fir Spodosol. Biogeochemistry, 1996, 35, 339-365.	3.5	58
52	Relationships between Benthic Sediments and Water Column Phosphorus in Illinois Streams. Journal of Environmental Quality, 2009, 38, 607-617.	2.0	56
53	Soil nitrogen mineralization in plantations ofJuglans nigra interplanted with actinorhizalElaeagnus umbellata orAlnus glutinosa. Plant and Soil, 1989, 118, 33-42.	3.7	55
54	Influence of Geomorphological Variability in Channel Characteristics on Sediment Denitrification in Agricultural Streams. Journal of Environmental Quality, 2006, 35, 2103-2112.	2.0	52

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55	Early Indications of Soil Recovery from Acidic Deposition in U.S. Red Spruce Forests. Soil Science Society of America Journal, 2012, 76, 1407-1417.	2.2	52
56	The impact of fertilization and hydrology on nitrate fluxes from Mississippi watersheds. Current Opinion in Environmental Sustainability, 2012, 4, 212-218.	6.3	52
57	Nitrogen Removal and Greenhouse Gas Emissions from Constructed Wetlands Receiving Tile Drainage Water. Journal of Environmental Quality, 2015, 44, 1001-1010.	2.0	52
58	FOREST SOIL RESPONSE TO ACID AND SALT ADDITIONS-OF SULFATE. Soil Science, 1991, 151, 297-305.	0.9	51
59	Title is missing!. Plant and Soil, 1997, 191, 109-122.	3.7	51
60	Relationships between Water Quality, Habitat Quality, and Macroinvertebrate Assemblages in Illinois Streams. Journal of Environmental Quality, 2007, 36, 1653-1660.	2.0	50
61	A Spatial Analysis of Phosphorus in the Mississippi River Basin. Journal of Environmental Quality, 2011, 40, 931-941.	2.0	50
62	SOIL AND SOIL SOLUTION CHEMISTRY UNDER RED SPRUCE STANDS ACROSS THE NORTHEASTERN UNITED STATES. Soil Science, 1996, 161, 314-328.	0.9	50
63	The role of seepage in constructed wetlands receiving agricultural tile drainage. Ecological Engineering, 2000, 15, 91-104.	3.6	48
64	Application of the DNDC model to tile-drained Illinois agroecosystems: model comparison of conventional and diversified rotations. Nutrient Cycling in Agroecosystems, 2007, 78, 65-81.	2.2	46
65	Plant Nutrient Uptake and Biomass Accumulation in a Constructed Wetland. Journal of Freshwater Ecology, 2001, 16, 527-540.	1.2	44
66	Importance of biological processes in the sulfur budget of a northern hardwood ecosystem. Biology and Fertility of Soils, 1987, 5, 258.	4.3	43
67	Kinetics and Modeling of Dissolved Phosphorus Export from a Tileâ€Drained Agricultural Watershed. Journal of Environmental Quality, 1998, 27, 917-922.	2.0	43
68	Analysis of sulfur in soil, plant and sediment materials: Sample handling and use of an automated analyzer. Soil Biology and Biochemistry, 1989, 21, 119-123.	8.8	42
69	Chemistry of dissolved organic carbon and organic acids in two streams draining forested watersheds. Water Resources Research, 1992, 28, 389-396.	4.2	42
70	Assessment of Chlorophyllâ€<i>a</i> as a Criterion for Establishing Nutrient Standards in the Streams and Rivers of Illinois. Journal of Environmental Quality, 2008, 37, 437-447.	2.0	41
71	Effect of nitrogen addition on <i>MiscanthusÂ</i>Ã—<i>Âgiganteus</i> yield, nitrogen losses, and soil organic matter across five sites. GCB Bioenergy, 2015, 7, 1222-1231.	5.6	39
72	Soil nutrient removal by four potential bioenergy crops: Zea mays, Panicum virgatum, MiscanthusÃ—giganteus, and prairie. Agriculture, Ecosystems and Environment, 2016, 216, 51-60.	5.3	37

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73	Fractionation of dissolved organic carbon in soil water: Effects of extraction and storage methods. Communications in Soil Science and Plant Analysis, 1994, 25, 3305-3319.	1.4	35
74	Stream Transport of Herbicides and Metabolites in a Tileâ€Drained, Agricultural Watershed. Journal of Environmental Quality, 2003, 32, 1790-1801.	2.0	31
75	Navigating the Socio-Bio-Geo-Chemistry and Engineering of Nitrogen Management in Two Illinois Tile-Drained Watersheds. Journal of Environmental Quality, 2015, 44, 368-381.	2.0	31
76	Illinois River Nitrateâ€Nitrogen Concentrations and Loads: Longâ€term Variation and Association with Watershed Nitrogen Inputs. Journal of Environmental Quality, 2016, 45, 1268-1275.	2.0	31
77	Adsorption of dissolved organic carbon and sulfate by acid forest soils in the Fichtelgebirge, FRG. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1990, 153, 379-384.	0.4	30
78	Variation in Riverine Nitrate Flux and Fall Nitrogen Fertilizer Application in East-Central Illinois. Journal of Environmental Quality, 2014, 43, 1467-1474.	2.0	27
79	CHEMICAL EVALUATION OF SOIL-SOLUTION IN ACID FOREST SOILS. Soil Science, 1996, 161, 298-313.	0.9	27
80	Evaluating silicon concentrations in biofuel feedstock crops Miscanthus and switchgrass. Biomass and Bioenergy, 2011, 35, 2807-2813.	5.7	25
81	Controls on chlorophyll-a in nutrient-rich agricultural streams in Illinois, USA. Hydrobiologia, 2006, 568, 287-298.	2.0	23
82	Riverine Response of Sulfate to Declining Atmospheric Sulfur Deposition in Agricultural Watersheds. Journal of Environmental Quality, 2016, 45, 1313-1319.	2.0	23
83	Mechanisms of Phosphorus Control in Urban Streams Receiving Sewage Effluent. Water, Air, and Soil Pollution, 2008, 191, 217-229.	2.4	22
84	Sulfur constituents and transformations in upland and floodplain forest soils. Canadian Journal of Forest Research, 1988, 18, 1106-1112.	1.7	21
85	Sulfur, carbon, and nitrogen relationships in forest soils across the northern Great Lakes States as affected by atmospheric deposition and vegetation. Canadian Journal of Forest Research, 1988, 18, 1386-1391.	1.7	21
86	FOREST SOIL RESPONSE TO ACID AND SALT ADDITIONS OF SULFATE: I. SULFUR CONSTITUENTS AND NET RETENTION. Soil Science, 1991, 151, 136-145.	0.9	21
87	Exchangeable Hydrogen Explains the pH of Spodosol Oa Horizons. Soil Science Society of America Journal, 1996, 60, 1926-1932.	2.2	21
88	Transformations of Organic and Inorganic Sulfur: Importance to Sulfate Flux in an Adirondack Forest Soil. Japca, 1987, 37, 39-44.	0.3	20
89	Estimated Historical and Current Nitrogen Balances for Illinois. Scientific World Journal, The, 2001, 1, 597-604.	2.1	20
90	Response of Sediment Denitrification Rates to Environmental Variables in Streams Heavily Impacted by Agriculture. Journal of Freshwater Ecology, 2007, 22, 371-382.	1.2	20

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91	Characterizing the Performance of Denitrifying Bioreactors during Simulated Subsurface Drainage Events. Journal of Environmental Quality, 2015, 44, 1647-1656.	2.0	20
92	Chloride Sources and Losses in Two Tile-Drained Agricultural Watersheds. Journal of Environmental Quality, 2016, 45, 341-348.	2.0	20
93	Dissolved organic carbon fractions in Finnish and Maine (USA) lakes. Environment International, 1998, 24, 521-525.	10.0	18
94	Fate of water and nitrate using drainage water management on tile systems in east-central Illinois. Agricultural Water Management, 2017, 191, 218-228.	5.6	17
95	Acid-base characteristics of organic carbon in the HUMEX lake Skjervatjern. Environment International, 1992, 18, 621-629.	10.0	16
96	Long-term fate of nitrate fertilizer in agricultural soils is not necessarily related to nitrate leaching from agricultural soils. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E766.	7.1	15
97	Generation of soil solution acid-neutralizing capacity by addition of dissolved inorganic carbon. Environmental Science & Technology, 1989, 23, 1021-1024.	10.0	14
98	Carbon Controls on Spodosol Nitrogen, Sulfur, and Phosphorus Cycling. , 0, , 329-353.		11
99	Export of dissolved organic carbon from agricultural streams in Illinois, USA. Aquatic Sciences, 2005, 67, 465-471.	1.5	11
100	Nitrogen Mineralization in Soils Used for Biofuel Crops. Communications in Soil Science and Plant Analysis, 2013, 44, 987-995.	1.4	9
101	Evidence for effects of CO₂ on soil solution chemistry in spodosols by a simple inâ€field extractor. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1996, 159, 195-198.	0.4	8
102	Assessing the nitrous oxide mole fraction of soils from perennial biofuel and cornâ€“soybean fields. Agriculture, Ecosystems and Environment, 2010, 138, 299-305.	5.3	8
103	Biophysical and Social Barriers Restrict Water Quality Improvements in the Mississippi River Basin. Environmental Science & Technology, 2013, 47, 11928-11929.	10.0	8
104	ACIDITY CHARACTERISTICS OF SOLUBLE ORGANIC SUBSTANCES IN SPRUCE-FIR FOREST FLOOR LEACHATES. Soil Science, 1996, 161, 694-704.	0.9	7
105	Sources of variation in soil solution collected by tension plate lysimeters. Canadian Journal of Forest Research, 1987, 17, 191-193.	1.7	6
106	Artificial Sinks: Opportunities and Challenges for Managing Offsite Nitrogen Losses. Journal of Contemporary Water Research and Education, 2013, 151, 9-19.	0.7	6
107	On the need for consistent and comprehensive treatment of the N cycle. Science of the Total Environment, 2003, 305, 249-255.	8.0	5
108	Modeling N2O flux from an Illinois agroecosystem using Monte Carlo sampling of field observations. Biogeochemistry, 2009, 93, 31-48.	3.5	5

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109	Role of arthropod communities in bioenergy crop litter decompositionâ€. Insect Science, 2013, 20, 671-678.	3.0	5
110	Twenty-Three-Year Changes in Upland and Bottomland Forest Soils of Central Illinois. Soil Science, 2014, 179, 95-102.	0.9	5
111	Nitrous Oxide Fluxes from Agricultural Streams in East-Central Illinois. Water, Air, and Soil Pollution, 2018, 229, 1.	2.4	4
112	Algal Growth Response in Two Illinois Rivers Receiving Sewage Effluent. Journal of Freshwater Ecology, 2008, 23, 179-187.	1.2	3