Dominik Zak

List of Publications by Year
in descending order

57 papers	2,625 citations	186209 28 h-index	206029 48 g-index
70 all docs	70 docs citations	70 times ranked	2902 citing authors

#	Article	IF	Citations
1	Iron traps terrestrially derived dissolved organic matter at redox interfaces. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10101-10105.	3.3	360
2	The mobilisation of phosphorus, organic carbon and ammonium in the initial stage of fen rewetting (a) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.7	157
3	A global analysis of terrestrial plant litter dynamics in non-perennial waterways. Nature Geoscience, 2018, 11, 497-503.	5.4	108
4	Phosphorus mobilization in rewetted fens: the effect of altered peat properties and implications for their restoration. Ecological Applications, 2010, 20, 1336-1349.	1.8	107
5	Phosphorus Retention at the Redox Interface of Peatlands Adjacent to Surface Waters in Northeast Germany. Biogeochemistry, 2004, 70, 357-368.	1.7	106
6	Wetland buffer zones for nitrogen and phosphorus retention: Impacts of soil type, hydrology and vegetation. Science of the Total Environment, 2020, 727, 138709.	3.9	89
7	Organic sediment formed during inundation of a degraded fen grassland emits large fluxes of CH₄ and CO₂. Biogeosciences, 2011, 8, 1539-1550.	1.3	82
8	Sulphate in freshwater ecosystems: A review of sources, biogeochemical cycles, ecotoxicological effects and bioremediation. Earth-Science Reviews, 2021, 212, 103446.	4.0	82
9	Rewetting does not return drained fen peatlands to their old selves. Nature Communications, 2021, 12, 5693.	5.8	75
10	Comparison of Organic Matter Composition in Agricultural versus Forest Affected Headwaters with Special Emphasis on Organic Nitrogen. Environmental Science & Technology, 2015, 49, 2081-2090.	4.6	73
11	Nitrogen and Phosphorus Removal from Agricultural Runoff in Integrated Buffer Zones. Environmental Science & Technology, 2018, 52, 6508-6517.	4.6	71
12	Simulating rewetting events in intermittent rivers and ephemeral streams: A global analysis of leached nutrients and organic matter. Global Change Biology, 2019, 25, 1591-1611.	4.2	71
13	Ecosystem Service Restoration after 10ÂYears of Rewetting Peatlands in NE Germany. Environmental Management, 2013, 51, 1194-1209.	1.2	61
14	Sulphate-mediated phosphorus mobilization in riverine sediments at increasing sulphate concentration, River Spree, NE Germany. Biogeochemistry, 2006, 80, 109-119.	1.7	60
15	Evaluation of phosphorus mobilization potential in rewetted fens by an improved sequential chemical extraction procedure. European Journal of Soil Science, 2008, 59, 1191-1201.	1.8	54
16	Efficiency of mitigation measures targeting nutrient losses from agricultural drainage systems: A review. Ambio, 2020, 49, 1820-1837.	2.8	53
17	Sediment Respiration Pulses in Intermittent Rivers and Ephemeral Streams. Global Biogeochemical Cycles, 2019, 33, 1251-1263.	1.9	48
18	From Understanding to Sustainable Use of Peatlands: The WETSCAPES Approach. Soil Systems, 2020, 4, 14.	1.0	45

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19	Evaluation of a wellâ€established sequential phosphorus fractionation technique for use in calciteâ€rich lake sediments: identification and prevention of artifacts due to apatite formation. Limnology and Oceanography: Methods, 2009, 7, 399-410.	1.0	44
20	How helophytes influence the phosphorus cycle in degraded inundated peat soils â€" Implications for fen restoration. Ecological Engineering, 2014, 66, 82-90.	1.6	43
21	Water level fluctuations in a tropical reservoir: the impact of sediment drying, aquatic macrophyte dieback, and oxygen availability on phosphorus mobilization. Environmental Science and Pollution Research, 2016, 23, 6883-6894.	2.7	39
22	Predominance of methanogens over methanotrophs in rewetted fens characterized by high methane emissions. Biogeosciences, 2018, 15, 6519-6536.	1.3	38
23	Soil degradation determines release of nitrous oxide and dissolved organic carbon from peatlands. Environmental Research Letters, 2019, 14, 094009.	2.2	38
24	Changes of the CO₂ and CH₄ production potential of rewetted fens in the perspective of temporal vegetation shifts. Biogeosciences, 2015, 12, 2455-2468.	1.3	36
25	Nitrogen and phosphorus retention in Danish restored wetlands. Ambio, 2020, 49, 324-336.	2.8	36
26	Unraveling the Importance of Polyphenols for Microbial Carbon Mineralization in Rewetted Riparian Peatlands. Frontiers in Environmental Science, 2019, 7, .	1.5	34
27	Top soil removal reduces water pollution from phosphorus and dissolved organic matter and lowers methane emissions from rewetted peatlands. Journal of Applied Ecology, 2018, 55, 311-320.	1.9	33
28	The importance of landscape diversity for carbon fluxes at the landscape level: smallâ€scale heterogeneity matters. Wiley Interdisciplinary Reviews: Water, 2016, 3, 601-617.	2.8	32
29	Topsoil removal to minimize internal eutrophication in rewetted peatlands and to protect downstream systems against phosphorus pollution: A case study from NE Germany. Ecological Engineering, 2017, 103, 488-496.	1.6	32
30	Effects of degree of peat decomposition, loading rate and temperature on dissolved nitrogen turnover in rewetted fens. Soil Biology and Biochemistry, 2012, 48, 182-191.	4.2	31
31	Biomass and nutrient stock of submersed and floating macrophytes in shallow lakes formed by rewetting of degraded fens. Hydrobiologia, 2012, 692, 99-109.	1.0	30
32	Carbon, nitrogen, and phosphorus accumulation in novel ecosystems: Shallow lakes in degraded fen areas. Ecological Engineering, 2014, 66, 63-71.	1.6	30
33	Storage effects on quantity and composition of dissolved organic carbon and nitrogen of lake water, leaf leachate and peat soil water. Water Research, 2018, 130, 98-104.	5.3	29
34	An Assessment of the Multifunctionality of Integrated Buffer Zones in Northwestern Europe. Journal of Environmental Quality, 2019, 48, 362-375.	1.0	29
35	An overview of nutrient transport mitigation measures for improvement of water quality in Denmark. Ecological Engineering, 2020, 155, 105863.	1.6	28
36	Catchment-Scale Analysis Reveals High Cost-Effectiveness of Wetland Buffer Zones as a Remedy to Non-Point Nutrient Pollution in North-Eastern Poland. Water (Switzerland), 2020, 12, 629.	1.2	27

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37	Soil Iron Content as a Predictor of Carbon and Nutrient Mobilization in Rewetted Fens. PLoS ONE, 2016, 11, e0153166.	1.1	27
38	The effect of rewetting drained fens with nitrate-polluted water on dissolved organic carbon and phosphorus release. Ecological Engineering, 2013, 53, 79-88.	1.6	25
39	Long-Term Rewetting of Three Formerly Drained Peatlands Drives Congruent Compositional Changes in Pro- and Eukaryotic Soil Microbiomes through Environmental Filtering. Microorganisms, 2020, 8, 550.	1.6	25
40	Towards an improved understanding of biogeochemical processes across surface-groundwater interactions in intermittent rivers and ephemeral streams. Earth-Science Reviews, 2021, 220, 103724.	4.0	24
41	Restoration of endangered fen communities: the ambiguity of ironâ€"phosphorus binding and phosphorus limitation. Journal of Applied Ecology, 2017, 54, 1755-1764.	1.9	20
42	Population Density of the Crayfish,Orconectes limosus, in Relation to Fish and Macroinvertebrate Densities in a Small Mesotrophic Lake - Implications for the Lake's Food Web. International Review of Hydrobiology, 2005, 90, 523-533.	0.5	19
43	Topsoil removal reduced in-situ methane emissions in a temperate rewetted bog grassland by a hundredfold. Science of the Total Environment, 2020, 721, 137763.	3.9	19
44	Mitigation of sulfate pollution by rewetting of fens â€" A conflict with restoring their phosphorus sink function?. Wetlands, 2009, 29, 1093-1103.	0.7	17
45	Effect of anisotropy on solute transport in degraded fen peat soils. Hydrological Processes, 2020, 34, 2128-2138.	1.1	16
46	Impact of vegetation harvesting on nutrient removal and plant biomass quality in wetland buffer zones. Hydrobiologia, 2021, 848, 3273-3289.	1.0	16
47	Nitrogen removal and nitrous oxide emissions from woodchip bioreactors treating agricultural drainage waters. Ecological Engineering, 2021, 169, 106328.	1.6	13
48	Preface: Restoration, biogeochemistry and ecological services of wetlands. Hydrobiologia, 2011, 674, 1-4.	1.0	12
49	Desiccation time and rainfall control gaseous carbon fluxes in an intermittent stream. Biogeochemistry, 2021, 155, 381-400.	1.7	12
50	Evidence for preferential protein depolymerization in wetland soils in response to external nitrogen availability provided by a novel FTIR routine. Biogeosciences, 2020, 17, 499-514.	1.3	11
51	Going with the flow: Planktonic processing of dissolved organic carbon in streams. Science of the Total Environment, 2018, 625, 519-530.	3.9	10
52	Danish wetlands remained poor with plant species 17-years after restoration. Science of the Total Environment, 2021, 798, 149146.	3.9	9
53	Direct Analysis of Lignin Phenols in Freshwater Dissolved Organic Matter. Analytical Chemistry, 2017, 89, 13449-13457.	3.2	8
54	Eukaryotic rather than prokaryotic microbiomes change over seasons in rewetted fen peatlands. FEMS Microbiology Ecology, 2021, 97, .	1.3	8

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55	Nitrogen removal and greenhouse gas fluxes from integrated buffer zones treating agricultural drainage water. Science of the Total Environment, 2021, 774, 145070.	3.9	7
56	Phosphorus mobilization in rewetted fens: the effect of altered peat properties and implications for their restoration. , 0, , 100319061507001.		4
57	Restoring Riparian Peatlands for Inland Waters: A European Perspective. , 2022, , 276-287.		3