

# Peter M Vitousek

## List of Publications by Year in descending order

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75  
papers

20,067  
citations

70961

41  
h-index

91712

69  
g-index

78  
all docs

78  
docs citations

78  
times ranked

17345  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nitrogen limitation on land and in the sea: How can it occur?. <i>Biogeochemistry</i> , 1991, 13, 87.	1.7	2,801
2	Enhanced nitrogen deposition over China. <i>Nature</i> , 2013, 494, 459-462.	13.7	2,009
3	Terrestrial phosphorus limitation: mechanisms, implications, and nitrogen-phosphorus interactions. <i>Ecological Applications</i> , 2010, 20, 5-15.	1.8	1,969
4	Mineral control of soil organic carbon storage and turnover. <i>Nature</i> , 1997, 389, 170-173.	13.7	1,318
5	Producing more grain with lower environmental costs. <i>Nature</i> , 2014, 514, 486-489.	13.7	1,292
6	Principles of Terrestrial Ecosystem Ecology. , 2011, , .		860
7	Nitrogen in Agriculture: Balancing the Cost of an Essential Resource. <i>Annual Review of Environment and Resources</i> , 2009, 34, 97-125.	5.6	854
8	Changes in Soil Phosphorus Fractions and Ecosystem Dynamics across a Long Chronosequence in Hawaii. <i>Ecology</i> , 1995, 76, 1407-1424.	1.5	824
9	Nutrient limitation and soil development: Experimental test of a biogeochemical theory. <i>Biogeochemistry</i> , 1997, 37, 63-75.	1.7	626
10	Biological nitrogen fixation: rates, patterns and ecological controls in terrestrial ecosystems. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20130119.	1.8	537
11	Policy distortions, farm size, and the overuse of agricultural chemicals in China. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7010-7015.	3.3	455
12	Integrated reactive nitrogen budgets and future trends in China. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 8792-8797.	3.3	430
13	NUTRIENT LIMITATION OF DECOMPOSITION IN HAWAIIAN FORESTS. <i>Ecology</i> , 2000, 81, 1867-1877.	1.5	410
14	The globalization of N deposition: ecosystem consequences in tropical environments. <i>Biogeochemistry</i> , 1999, 46, 67-83.	1.7	350
15	Understanding ecosystem retrogression. <i>Ecological Monographs</i> , 2010, 80, 509-529.	2.4	342
16	An experiment for the world. <i>Nature</i> , 2013, 497, 33-35.	13.7	312
17	Nutrient limitations to plant growth during primary succession in Hawaii Volcanoes National Park. <i>Biogeochemistry</i> , 1993, 23, 197-215.	1.7	245
18	Long-term carbon storage through retention of dissolved aromatic acids by reactive particles in soil. <i>Global Change Biology</i> , 2012, 18, 2594-2605.	4.2	236

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19	PRIMARY PRODUCTIVITY AND ECOSYSTEM DEVELOPMENT ALONG AN ELEVATIONAL GRADIENT ON MAUNA LOA, HAWAII. <i>Ecology</i> , 1997, 78, 707-721.	1.5	226
20	Technical Report: Human Alteration of the Global Nitrogen Cycle: Sources and Consequences. , 1997, 7, 737.		217
21	Nitrogen and Nature. <i>Ambio</i> , 2002, 31, 97-101.	2.8	208
22	Foliar 15N natural abundance in Hawaiian rainforest: patterns and possible mechanisms. <i>Oecologia</i> , 1989, 78, 383-388.	0.9	194
23	Ecosystem constraints to symbiotic nitrogen fixers: A simple model and its implications. <i>Biogeochemistry</i> , 1999, 46, 179-202.	1.7	190
24	Production and Resource Use Efficiencies in N- and P-Limited Tropical Forests: A Comparison of Responses to Long-term Fertilization. <i>Ecosystems</i> , 2001, 4, 646-657.	1.6	190
25	Plant acclimation to long-term high nitrogen deposition in an N-rich tropical forest. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5187-5192.	3.3	164
26	Changes in belowground biodiversity during ecosystem development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6891-6896.	3.3	151
27	The Mauna Loa environmental matrix: foliar and soil nutrients. <i>Oecologia</i> , 1992, 89, 372-382.	0.9	150
28	Combining spectroscopic and isotopic techniques gives a dynamic view of phosphorus cycling in soil. <i>Nature Communications</i> , 2018, 9, 3226.	5.8	141
29	Ecosystem development on Hawaiian lava flows: biomass and species composition. <i>Journal of Vegetation Science</i> , 1998, 9, 17-26.	1.1	127
30	Nitrogen deposition accelerates soil carbon sequestration in tropical forests. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	120
31	Title is missing!. <i>Biogeochemistry</i> , 2000, 51, 283-302.	1.7	106
32	Pedogenic Thresholds and Soil Process Domains in Basalt-Derived Soils. <i>Ecosystems</i> , 2013, 16, 1379-1395.	1.6	105
33	Evidence for a Historic Change Occurring in China. <i>Environmental Science &amp; Technology</i> , 2016, 50, 505-506.	4.6	105
34	Can Planted Forests Counteract Increasing Atmospheric Carbon Dioxide?. <i>Journal of Environmental Quality</i> , 1991, 20, 348-354.	1.0	96
35	Climate Cycles, Geomorphological Change, and the Interpretation of Soil and Ecosystem Development. <i>Ecosystems</i> , 2000, 3, 522-533.	1.6	86
36	Convergence and contrast in the community structure of Bacteria, Fungi and Archaea along a tropical elevationâ€“climate gradient. <i>FEMS Microbiology Ecology</i> , 2017, 93, .	1.3	84

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37	Climate-driven thresholds for chemical weathering in postglacial soils of New Zealand. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 1619-1634.	1.0	79
38	Variation in Rapa Nui (Easter Island) land use indicates production and population peaks prior to European contact. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 1025-1030.	3.3	74
39	Exploring global changes in agricultural ammonia emissions and their contribution to nitrogen deposition since 1980. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2121998119.	3.3	69
40	Ecosystem constraints to symbiotic nitrogen fixers: a simple model and its implications. <i>Biogeochemistry</i> , 1999, 46, 179-202.	1.7	65
41	Mineralogical controls on soil black carbon preservation. <i>Global Biogeochemical Cycles</i> , 2012, 26, .	1.9	61
42	Are patterns in nutrient limitation belowground consistent with those aboveground: results from a 4 million year chronosequence. <i>Biogeochemistry</i> , 2011, 106, 323-336.	1.7	59
43	Precontact vegetation and soil nutrient status in the shadow of Kohala Volcano, Hawaii. <i>Geomorphology</i> , 2007, 89, 70-83.	1.1	49
44	Landscape-level variation in forest structure and biogeochemistry across a substrate age gradient in Hawaii. <i>Ecology</i> , 2009, 90, 3074-3086.	1.5	42
45	Prevalence of Tree Regeneration by Sprouting and Seeding Along a Rainfall Gradient in Hawai'i. <i>Biotropica</i> , 2010, 42, 80-86.	0.8	33
46	The Ahupua'a of Puanui: A Resource for Understanding Hawaiian Rain-Fed Agriculture. <i>Pacific Science</i> , 2012, 66, 161-172.	0.2	33
47	Provincial food security in China: a quantitative risk assessment based on local food supply and demand trends. <i>Food Security</i> , 2015, 7, 621-632.	2.4	29
48	Restoration of 'Āina Mālo'o on Hawai'i Island: Expanding Biocultural Relationships. <i>Sustainability</i> , 2018, 10, 3985.	1.6	29
49	Dependence of Forest Structure and Dynamics on Substrate Age and Ecosystem Development. <i>Ecosystems</i> , 2011, 14, 1156-1167.	1.6	27
50	Indicators of soil fertility and opportunities for precontact agriculture in Kona, Hawai'i. <i>Ecosphere</i> , 2014, 5, 1-20.	1.0	27
51	Erosion, Geological History, and Indigenous Agriculture: A Tale of Two Valleys. <i>Ecosystems</i> , 2010, 13, 782-793.	1.6	25
52	Controls of nitrogen cycling evaluated along a well-characterized climate gradient. <i>Ecology</i> , 2017, 98, 1117-1129.	1.5	24
53	Restoring people and productivity to Puanui: challenges and opportunities in the restoration of an intensive rain-fed Hawaiian field system. <i>Ecology and Society</i> , 2017, 22, .	1.0	23
54	The soil and plant biogeochemistry sampling design for The National Ecological Observatory Network. <i>Ecosphere</i> , 2016, 7, e01234.	1.0	21

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55	Nitrogen fixation during decomposition of sugarcane ( <i>Saccharum officinarum</i> ) is an important contribution to nutrient supply in traditional dryland agricultural systems of Hawai'i. <i>International Journal of Agricultural Sustainability</i> , 2016, 14, 214-230.	1.3	21
56	Input/Output Balances and Nitrogen Limitation in Terrestrial Ecosystems. , 2001, , 217-225.		21
57	Parent material and pedogenic thresholds: observations and a simple model. <i>Biogeochemistry</i> , 2016, 130, 147-157.	1.7	18
58	NUTRIENT LIMITATION OF DECOMPOSITION IN HAWAIIAN FORESTS. , 2000, 81, 1867.		17
59	Soil-Food-Environment-Health Nexus for Sustainable Development. <i>Research</i> , 2021, 2021, 9804807.	2.8	15
60	Quantitative Analysis of Pedogenic Thresholds and Domains in Volcanic Soils. <i>Ecosystems</i> , 2019, 22, 1633-1649.	1.6	14
61	Strengthening Agronomy Research for Food Security and Environmental Quality. <i>Environmental Science &amp; Technology</i> , 2016, 50, 1639-1641.	4.6	13
62	Grassland ecology: Complexity of nutrient constraints. <i>Nature Plants</i> , 2015, 1, 15098.	4.7	11
63	Identification and evaluation of risk factors related to provincial food insecurity in China. <i>Journal of Risk Research</i> , 2015, 18, 1184-1202.	1.4	10
64	Soil fertility response to <i>Ulex europaeus</i> invasion and restoration efforts. <i>Biological Invasions</i> , 2018, 20, 2777-2791.	1.2	10
65	Diversity of putative ericoid mycorrhizal fungi increases with soil age and progressive phosphorus limitation across a 4.1-million-year chronosequence. <i>FEMS Microbiology Ecology</i> , 2021, 97, .	1.3	10
66	A model of biogeochemical dynamics on climate gradients. <i>Biogeochemistry</i> , 2021, 154, 183-210.	1.7	9
67	Introduced Canopy Tree Species Effect on the Soil Microbial Community in a Montane Tropical Forest. <i>Pacific Science</i> , 2012, 66, 141-150.	0.2	8
68	Top-Down Analysis of Forest Structure and Biogeochemistry Across Hawaiian Landscapes. <i>Pacific Science</i> , 2010, 64, 359-366.	0.2	7
69	Nitrogen dynamics along a climate gradient on geologically old substrate, Kaua'i, Hawai'i. <i>Oecologia</i> , 2019, 189, 211-219.	0.9	6
70	Pacific islands in the Anthropocene. <i>Elementa</i> , 2013, 1, .	1.1	6
71	Environmental filtering controls soil biodiversity in wet tropical ecosystems. <i>Soil Biology and Biochemistry</i> , 2022, 166, 108571.	4.2	3
72	Constraints of Climate and Age on Soil Development in Hawai'i. , 2022, , 49-88.		3

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73	Managing water, harvesting results. <i>Frontiers in Ecology and the Environment</i> , 2012, 10, 3-3.	1.9	2
74	Foliar $\delta^{15}\text{N}$ patterns in legumes and non-N fixers across a climate gradient, Hawaii Island, USA. <i>Oecologia</i> , 2022, 198, 229-242.	0.9	2
75	Insightful, Scholarly, and Synthetic: Eville Gorham and the Chemistry of Surface Waters. <i>Bulletin of the Ecological Society of America</i> , 2014, 95, 226-228.	0.2	0