List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	A new view of the tree of life. Nature Microbiology, 2016, 1, 16048.	13.3	1,823
2	Global patterns of the isotopic composition of soil and plant nitrogen. Global Biogeochemical Cycles, 2003, 17, .	4.9	866
3	Soil and human security in the 21st century. Science, 2015, 348, 1261071.	12.6	852
4	Rapid Exchange Between Soil Carbon and Atmospheric Carbon Dioxide Driven by Temperature Change. Science, 1996, 272, 393-396.	12.6	661
5	The Carbon Budget in Soils. Annual Review of Earth and Planetary Sciences, 2001, 29, 535-562.	11.0	586
6	Soil warming and organic carbon content. Nature, 2000, 408, 789-790.	27.8	413
7	Can C3 plants faithfully record the carbon isotopic composition of atmospheric carbon dioxide?. Paleobiology, 2000, 26, 137-164.	2.0	334
8	Clades of huge phages from across Earth's ecosystems. Nature, 2020, 578, 425-431.	27.8	331
9	Hypolithic Cyanobacteria, Dry Limit of Photosynthesis, and Microbial Ecology in the Hyperarid Atacama Desert. Microbial Ecology, 2006, 52, 389-398.	2.8	314
10	Comparative Effects of Isolated Trees on Their Undercanopy Environments in High- and Low-Rainfall Savannas. Journal of Applied Ecology, 1993, 30, 143.	4.0	295
11	The isotopic composition of soil and soil-respired CO2. Geoderma, 1998, 82, 83-114.	5.1	288
12	Terrestrial record of methane hydrate dissociation in the Early Cretaceous. Geology, 2001, 29, 159.	4.4	247
13	Turnover and storage of C and N in five density fractions from California annual grassland surface soils. Global Biogeochemical Cycles, 2002, 16, 64-1-64-16.	4.9	238
14	Soil development along an elevational transect in the western Sierra Nevada, California. Geoderma, 1997, 78, 207-236.	5.1	235
15	A threshold in soil formation at Earth's arid–hyperarid transition. Geochimica Et Cosmochimica Acta, 2006, 70, 5293-5322.	3.9	233
16	Radiocarbon Dating of Soil Organic Matter. Quaternary Research, 1996, 45, 282-288.	1.7	226
17	The critical role of climate and saprolite weathering in landscape evolution. Earth Surface Processes and Landforms, 2009, 34, 1507-1521.	2.5	218
18	Leaf Age as a Risk Factor in Contamination of Lettuce with <i>Escherichia coli</i> O157:H7 and <i>Salmonella enterica</i> . Applied and Environmental Microbiology, 2008, 74, 2298-2306.	3.1	208

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19	Spatial patterns of soil organic carbon on hillslopes: Integrating geomorphic processes and the biological C cycle. Geoderma, 2006, 130, 47-65.	5.1	199
20	Dissolved organic carbon chemistry and dynamics in contrasting forest and grassland soils. Biogeochemistry, 2008, 89, 181-198.	3.5	173
21	Soil carbon sequestration is an elusive climate mitigation tool. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11652-11656.	7.1	162
22	Tooth enamel biomineralization in extant horses: implications for isotopic microsampling. Palaeogeography, Palaeoclimatology, Palaeoecology, 2004, 206, 355-365.	2.3	155
23	Dating fluvial terraces by230Th/U on pedogenic carbonate, Wind River Basin, Wyoming. Quaternary Research, 2003, 59, 139-150.	1.7	146
24	Carbon dioxide and nitrogenous gases in the soil atmosphere. Journal of Geochemical Exploration, 1990, 38, 13-41.	3.2	145
25	Stable Isotope Ratios of Carbon in Phytoliths as a Quantitative Method of Monitoring Vegetation and Climate Change. Quaternary Research, 1991, 35, 222-233.	1.7	144
26	On a State Factor Model of Ecosystems. BioScience, 1997, 47, 536-543.	4.9	140
27	Managing for soil carbon sequestration: Let's get realistic. Global Change Biology, 2019, 25, 386-389.	9.5	140
28	A multiisotope C and N modeling analysis of soil organic matter turnover and transport as a function of soil depth in a California annual grassland soil chronosequence. Global Biogeochemical Cycles, 2002, 16, 82-1-82-26.	4.9	131
29	Oxygen isotope fractionation effects in soil water via interaction with cations (Mg, Ca, K, Na) adsorbed to phyllosilicate clay minerals. Journal of Hydrology, 2014, 515, 1-9.	5.4	128
30	Quantity and Spatial Variability of Soil Carbon in the Conterminous United States. Soil Science Society of America Journal, 2006, 70, 590-600.	2.2	123
31	Mineral control of carbon pools in a volcanic soil horizon. Geoderma, 2007, 137, 477-489.	5.1	123
32	THE PLACE OF HUMANS IN THE STATE FACTOR THEORY OF ECOSYSTEMS AND THEIR SOILS. Soil Science, 1991, 151, 99-109.	0.9	117
33	lsotopic evidence for shifts in atmospheric circulation patterns during the late Quaternary in mid–North America. Geology, 1996, 24, 23.	4.4	114
34	Soil N and 15 N variation with time in a California annual grassland ecosystem. Geochimica Et Cosmochimica Acta, 2001, 65, 4171-4186.	3.9	114
35	Linking soils and streams: Sources and chemistry of dissolved organic matter in a small coastal watershed. Water Resources Research, 2009, 45, .	4.2	114
36	Process-based model linking pocket gopher (Thomomys bottae) activity to sediment transport and soil thickness. Geology, 2005, 33, 917.	4.4	112

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37	Integration of geochemical mass balance with sediment transport to calculate rates of soil chemical weathering and transport on hillslopes. Journal of Geophysical Research, 2007, 112, .	3.3	112
38	Soil Diversity and Land Use in the United States. Ecosystems, 2003, 6, 470-482.	3.4	104
39	Climate-driven processes of hillslope weathering. Geology, 2009, 37, 975-978.	4.4	104
40	Erosion of upland hillslope soil organic carbon: Coupling field measurements with a sediment transport model. Global Biogeochemical Cycles, 2005, 19, .	4.9	103
41	Spatial and temporal variations in the isotopic composition of bison tooth enamel from the Early Holocene Hudson–Meng Bone Bed, Nebraska. Palaeogeography, Palaeoclimatology, Palaeoecology, 2000, 157, 79-93.	2.3	102
42	Factors and processes governing the 14C content of carbonate in desert soils. Earth and Planetary Science Letters, 1994, 125, 385-405.	4.4	97
43	The effect of climate and cultivation on soil organic C and N. Biogeochemistry, 2004, 67, 57-72.	3.5	97
44	Hillslope soils and vegetation. Geomorphology, 2015, 234, 122-132.	2.6	94
45	Application of eddy covariance measurements to the temperature dependence of soil organic matter mean residence time. Global Biogeochemical Cycles, 2003, 17, n/a-n/a.	4.9	93
46	DISABILITY, HANDICAP, AND THE ENVIRONMENT. Journal of Social Philosophy, 1992, 23, 105-119.	0.9	92
47	Analysis of Factors Controlling Soil Carbon in the Conterminous United States. Soil Science Society of America Journal, 2006, 70, 601-612.	2.2	92
48	The sensitivity of hillslope bedrock erosion to precipitation. Earth Surface Processes and Landforms, 2011, 36, 117-135.	2.5	89
49	Geomorphologic evidence for the late Pliocene onset of hyperaridity in the Atacama Desert. Bulletin of the Geological Society of America, 2012, 124, 1048-1070.	3.3	89
50	Pedodiversity in the United States of America. Geoderma, 2003, 117, 99-115.	5.1	88
51	Relationship Between Climate and Vegetation and the Stable Carbon Isotope Chemistry of Soils in the Eastern Mojave Desert, Nevada. Quaternary Research, 1988, 29, 245-254.	1.7	86
52	The impact of land use change on C turnover in soils. Global Biogeochemical Cycles, 1999, 13, 47-57.	4.9	83
53	A comparative study of dissolved organic carbon transport and stabilization in California forest and grassland soils. Biogeochemistry, 2008, 89, 309-327.	3.5	83
54	Non-biological fractionation of stable Ca isotopes in soils of the Atacama Desert, Chile. Geochimica Et Cosmochimica Acta, 2008, 72, 1096-1110.	3.9	83

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55	Effect of land use change on soil carbon in Hawaii. Biogeochemistry, 2003, 65, 213-232.	3.5	79
56	Isotopic analysis of tooth enamel carbonate from modern North American feral horses: implications for paleoenvironmental reconstructions. Palaeogeography, Palaeoclimatology, Palaeoecology, 2004, 203, 299-311.	2.3	78
57	Title is missing!. Bulletin of the Geological Society of America, 1996, 108, 0379.	3.3	72
58	A model for soil 14CO2 and its implications for using 14C to date pedogenic carbonate. Geochimica Et Cosmochimica Acta, 1994, 58, 393-399.	3.9	71
59	Role of large-scale soil structure in organic carbon turnover: Evidence from California grassland soils. Journal of Geophysical Research, 2006, 111, .	3.3	67
60	Seasonal and altitudinal variation in decomposition of soil organic matter inferred from radiocarbon measurements of soil CO2flux. Global Biogeochemical Cycles, 2000, 14, 199-211.	4.9	66
61	A comparison of soil climate and biological activity along an elevation gradient in the eastern Mojave Desert. Oecologia, 1989, 80, 395-400.	2.0	64
62	Rainfall limit of the N cycle on Earth. Global Biogeochemical Cycles, 2007, 21, .	4.9	64
63	Processes controlling the oxygen isotope ratio of soil CO2: analytic and numerical modeling. Geochimica Et Cosmochimica Acta, 1999, 63, 799-814.	3.9	57
64	On the in situ aqueous alteration of soils on Mars. Geochimica Et Cosmochimica Acta, 2008, 72, 3845-3864.	3.9	54
65	Seasonal changes in the pigments, carbohydrates and growth of red spruce as affected by exposure to ozone for two growing seasons. New Phytologist, 1991, 118, 127-137.	7.3	52
66	Determining Stone Tool Use: Chemical and Morphological Analyses of Residues on Experimentally Manufactured Stone Tools. Journal of Archaeological Science, 1997, 24, 245-250.	2.4	52
67	Chronology, stratigraphy and hydrological modelling of extensive wetlands and paleolakes in the hyperarid core of the Atacama Desert during the late quaternary. Quaternary Science Reviews, 2018, 197, 224-245.	3.0	52
68	A comparative study of dissolved organic carbon transport and stabilization in California forest and grassland soils. Biogeochemistry, 2009, 92, 41-59.	3.5	51
69	Mineralogical control of organic carbon dynamics in a volcanic ash soil on La Reunion. European Journal of Soil Science, 2005, 56, 050912034650042.	3.9	48
70	A mass balance analysis of podzolization: Examples from the northeastern United States. Geoderma, 1995, 66, 15-42.	5.1	47
71	AN ANALYTICAL APPROACH TO ECOSYSTEM BIOGEOCHEMISTRY MODELING. , 2003, 13, 649-663.		47
72	Spatial patterns and controls of soil chemical weathering rates along a transient hillslope. Earth and Planetary Science Letters, 2009, 288, 184-193.	4.4	47

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73	Winter desiccation and solar radiation in relation to red spruce decline in the northern Appalachians. Canadian Journal of Forest Research, 1991, 21, 269-272.	1.7	45
74	Influence of soils on oxygen isotope ratio of atmospheric CO2. Global Biogeochemical Cycles, 2001, 15, 753-759.	4.9	45
75	Stable carbon isotope composition of Poaceae pollen and its potential in paleovegetational reconstructions. Review of Palaeobotany and Palynology, 1997, 99, 17-24.	1.5	43
76	Rates and geochemical processes of soil and salt crust formation in Salars of the Atacama Desert, Chile. Geoderma, 2016, 284, 57-72.	5.1	43
77	Stomatal responsiveness to changing light intensityincreases rain-use efficiency of below-crown vegetation in tropical savannas. Journal of Arid Environments, 1995, 29, 139-153.	2.4	41
78	The Urey Instrument: An Advanced In Situ Organic and Oxidant Detector for Mars Exploration. Astrobiology, 2008, 8, 583-595.	3.0	40
79	The chemistry and mineralogy of a CO2-rich travertine depositing spring in the California Coast Range. Geochimica Et Cosmochimica Acta, 1987, 51, 2883-2890.	3.9	39
80	Identifying sources and processes influencing nitrogen export to a small stream using dual isotopes of nitrate. Water Resources Research, 2013, 49, 5715-5731.	4.2	38
81	Terrestrial analogs for interpretation of infrared spectra from the Martian surface and subsurface: Sulfate, nitrate, carbonate, and phyllosilicateâ€bearing Atacama Desert soils. Journal of Geophysical Research, 2007, 112, .	3.3	35
82	Methods of Separating Soil Carbon Pools Affect the Chemistry and Turnover Time of Isolated Fractions. Radiocarbon, 2008, 50, 83-97.	1.8	35
83	Zebra stripes in the Atacama Desert: Fossil evidence of overland flow. Geomorphology, 2013, 182, 157-172.	2.6	35
84	Soil evolution along an altitudinal transect in the Eastern Mojave Desert of Nevada, U.S.A Geoderma, 1989, 43, 349-371.	5.1	34
85	Potential for14C Dating of Biogenic Carbonate in Hackberry (Celtis) Endocarps. Quaternary Research, 1997, 47, 337-343.	1.7	34
86	Comparisons of seasonal changes in photosynthetic capacity, pigments, and carbohydrates of healthy sapling and mature red spruce and of declining and healthy red spruce. Canadian Journal of Forest Research, 1992, 22, 1605-1616.	1.7	33
87	THE STABLE ISOTOPE CHEMISTRY OF PEDOGENIC CARBONATE IN AN ALLUVIAL SOIL FROM THE PUNJAB, PAKISTAN. Soil Science, 1990, 149, 199-211.	0.9	32
88	Active erosion–deposition cycles in the hyperarid Atacama Desert of Northern Chile. Earth and Planetary Science Letters, 2013, 371-372, 125-133.	4.4	32
89	The relationship of precipitation seasonality to the flora and stable isotope chemistry of soils in the VizcaĀno desert, Baja California, México. Journal of Arid Environments, 1994, 28, 265-279. 	2.4	31
90	Century scale rainfall in the absolute Atacama Desert: Landscape response and implications for past and future rainfall. Quaternary Science Reviews, 2021, 254, 106797.	3.0	31

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91	The implications for paleodietary and paleoclimatic reconstructions of intrapopulation variability in the oxygen and carbon isotopes of teeth from modern feral horses. Quaternary Research, 2005, 64, 138-146.	1.7	27
92	Pedothem carbonates reveal anomalous North American atmospheric circulation 70,000–55,000 years ago. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 919-924.	7.1	27
93	Biomineralization in seeds: developmental trends in isotopic signatures of hackberry. Palaeogeography, Palaeoclimatology, Palaeoecology, 1998, 138, 259-269.	2.3	26
94	Soil organic carbon and mineral interactions on climatically different hillslopes. Geoderma, 2018, 322, 71-80.	5.1	26
95	Stable Isotope Tracers and Mathematical Models in Soil Organic Matter Studies. , 2000, , 117-137.		25
96	Climate controls on spatial and temporal variations in the formation of pedogenic carbonate in the western Great Basin of North America. Bulletin of the Geological Society of America, 2016, 128, 1095-1104.	3.3	25
97	E. W. Hilgard and John Wesley Powell: Efforts for a Joint Agricultural and Geological Survey. Soil Science Society of America Journal, 1995, 59, 4-13.	2.2	24
98	Decoupling of sulfur and nitrogen cycling due to biotic processes in a tropical rainforest. Geochimica Et Cosmochimica Acta, 2014, 142, 411-428.	3.9	24
99	Surface materials and landforms as controls on InSAR permanent and transient responses to precipitation events in a hyperarid desert, Chile. Remote Sensing of Environment, 2020, 237, 111544.	11.0	23
100	Moderate water stress alters carbohydrate content and cold tolerance of red spruce foliage. Environmental and Experimental Botany, 1993, 33, 383-390.	4.2	22
101	Paleoclimatic Reconstruction Using the Correlation in δ180 of Hackberry Carbonate and Environmental Water, North America. Quaternary Research, 2001, 56, 252-263.	1.7	22
102	The stable isotope composition of halite and sulfate of hyperarid soils and its relation to aqueous transport. Geochimica Et Cosmochimica Acta, 2012, 99, 271-286.	3.9	22
103	Trace Metal Geochemistry in Spodosols of the Northeastern United States. Journal of Environmental Quality, 1997, 26, 511-521.	2.0	21
104	Taxonomic Structure, Distribution, and Abundance of the Soils in the USA. Soil Science Society of America Journal, 2003, 67, 1507-1516.	2.2	19
105	Hyperarid Soils and the Soil Taxonomy. Soil Science Society of America Journal, 2014, 78, 1845-1851.	2.2	18
106	Early to Middle Miocene climate in the Atacama Desert of Northern Chile. Palaeogeography, Palaeoclimatology, Palaeoecology, 2016, 441, 890-900.	2.3	18
107	Factors of soil formation in the 21st century. Geoderma, 2021, 391, 114960.	5.1	18
108	Stable Isotope Dietary Analysis of Bison Bone Samples from the Hudson-Meng Bonebed: Effects of Paleotopography. Journal of Archaeological Science, 1998, 25, 465-475.	2.4	17

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109	A view of extraterrestrial soils. European Journal of Soil Science, 2009, 60, 1078-1092.	3.9	15
110	Soil Carbon Dioxide Production and Climatic Sensitivity in Contrasting California Ecosystems. Soil Science Society of America Journal, 2010, 74, 1356-1366.	2.2	15
111	Response of sugar maple to multiple year exposures to ozone and simulated acidic precipitation. Environmental Pollution, 1996, 92, 119-126.	7.5	14
112	The Intellectual Background for the Factors of Soil Formation. SSSA Special Publication Series, 0, , 1-13.	0.2	14
113	Annual cycles of physical and biological properties in an uncultivated and an irrigated soil in the San Joaquin Valley of California. Agriculture, Ecosystems and Environment, 1988, 20, 195-208.	5.3	13
114	Physiological response to controlled freezing of attached red spruce branches. Environmental and Experimental Botany, 1993, 33, 591-609.	4.2	13
115	Relict soil evidence for profound quaternary aridification of the Atacama Desert, Chile. Geoderma, 2016, 267, 196-206.	5.1	13
116	CHANGES IN THE CHEMICAL AND PHYSICAL PROPERTIES OF A RECLAIMED SALINE-SODIC SOIL IN THE SAN JOAQUIN VALLEY OF CALIFORNIA. Soil Science, 1985, 140, 213-222.	0.9	12
117	Calcic soils as indicators of profound Quaternary climate change in eastern Isfahan, Iran. Geoderma, 2018, 315, 220-230.	5.1	12
118	Meteoric water alteration of soil and landscapes at Meridiani Planum, Mars. Earth and Planetary Science Letters, 2018, 488, 155-167.	4.4	12
119	Processes controlling the 14C content of soil carbon dioxide: Model development. Chemical Geology, 1993, 107, 225-226.	3.3	11
120	The policy challenges to managing global soil resources. Geoderma, 2020, 379, 114639.	5.1	11
121	Soil biogeochemistry and the global agricultural footprint. Soil Security, 2022, 6, 100022.	2.3	11
122	Greenhouse gas fluxes from Atacama Desert soils: a test of biogeochemical potential at the Earth's arid extreme. Biogeochemistry, 2012, 111, 303-315.	3.5	9
123	A late Quaternary paleoenvironmental record in sand dunes of the northern Atacama Desert, Chile. Quaternary Research, 2018, 90, 127-138.	1.7	9
124	Rare calcium chloride–rich soil and implications for the existence of liquid water in a hyperarid environment. Geology, 2019, 47, 163-166.	4.4	9
125	ORIENTATION OF CARBONATE LAMINATIONS IN GRAVELLY SOILS ALONG A WINTER/SUMMER PRECIPITATION GRADIENT IN BAJA CALIFORNIA, MEXICO. Soil Science, 1997, 162, 940-952.	0.9	9
126	Factors Controlling Ecosystem Structure and Function. SSSA Special Publication Series, 2015, , 87-97.	0.2	7

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127	Greenhouse Gas Production and Transport in Desert Soils of the Southwestern United States. Global Biogeochemical Cycles, 2018, 32, 1703-1717.	4.9	7
128	Kiss the ground (and make a wish): soil science and hollywood. Biogeochemistry, 2022, 157, 127-130.	3.5	7
129	Reply to Loisel et al.: Soil in climate mitigation and adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10213-10213.	7.1	4
130	Whose Security is Important? Communicating Environmental Risk About Soil to a Diverse Audience. Progress in Soil Science, 2017, , 383-387.	0.8	4
131	Towards the quantitative modeling of pedogenesis - a review - Comment. Geoderma, 1994, 63, 299-302.	5.1	3
132	Using LIDAR to model Mima mound evolution and regional energy balances in the Great Central Valley, California. , 2012, , .		3
133	Element distribution in red spruce (<i>Picearubens</i>) fine roots; evidence for aluminium toxicity at Whiteface Mountain: Discussion. Canadian Journal of Forest Research, 1993, 23, 1732-1733.	1.7	2
134	Stable isotope geochemistry of pedogenic carbonates in calcareous materials, Iran: a review and synthesis. Geological Society Special Publication, 2021, 507, 255-272.	1.3	2
135	The Pandora's box of soil carbon. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2201077119.	7.1	2
136	Negative emissions in agriculture are improbable in the near future. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2118142119.	7.1	1
137	Bridging the divide: Soil resources and the geosciences on a cultivated planet. , 2013, , .		0
138	Stable nitrogen and oxygen isotope fractionation during precipitation of nitrate salt from saturated solutions. Rapid Communications in Mass Spectrometry, 2020, 34, e8905.	1.5	0