Yakov Kuzyakov

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633 33,678 82 160 g-index h-index citations papers 8.18 698 42,153 5.9 avg, IF L-index ext. papers ext. citations

#	Paper	IF	Citations
633	Review of mechanisms and quantification of priming effects. <i>Soil Biology and Biochemistry</i> , 2000 , 32, 1485-1498	7.5	1806
632	Priming effects: Interactions between living and dead organic matter. <i>Soil Biology and Biochemistry</i> , 2010 , 42, 1363-1371	7.5	1127
631	Plant and mycorrhizal regulation of rhizodeposition. <i>New Phytologist</i> , 2004 , 163, 459-480	9.8	941
630	Mechanisms of real and apparent priming effects and their dependence on soil microbial biomass and community structure: critical review. <i>Biology and Fertility of Soils</i> , 2008 , 45, 115-131	6.1	832
629	Carbon input by plants into the soil. Review. <i>Journal of Plant Nutrition and Soil Science</i> , 2000 , 163, 421-4	1 3 21.3	779
628	Microbial hotspots and hot moments in soil: Concept & review. <i>Soil Biology and Biochemistry</i> , 2015 , 83, 184-199	7.5	773
627	Sources of CO2 efflux from soil and review of partitioning methods. <i>Soil Biology and Biochemistry</i> , 2006 , 38, 425-448	7.5	764
626	Black carbon decomposition and incorporation into soil microbial biomass estimated by 14C labeling. <i>Soil Biology and Biochemistry</i> , 2009 , 41, 210-219	7.5	740
625	Review: Factors affecting rhizosphere priming effects. <i>Journal of Plant Nutrition and Soil Science</i> , 2002 , 165, 382	2.3	7 ⁰ 5
624	Competition between roots and microorganisms for nitrogen: mechanisms and ecological relevance. <i>New Phytologist</i> , 2013 , 198, 656-669	9.8	644
623	Biochar stability in soil: meta-analysis of decomposition and priming effects. <i>GCB Bioenergy</i> , 2016 , 8, 512-523	5.6	498
622	Soil C and N availability determine the priming effect: microbial N mining and stoichiometric decomposition theories. <i>Global Change Biology</i> , 2014 , 20, 2356-67	11.4	487
621	Active microorganisms in soil: Critical review of estimation criteria and approaches. <i>Soil Biology and Biochemistry</i> , 2013 , 67, 192-211	7.5	475
620	REVIEW: Time lag between photosynthesis and carbon dioxide efflux from soil: a review of mechanisms and controls. <i>Global Change Biology</i> , 2010 , 16, 3386-3406	11.4	475
619	Silicon pools and fluxes in soils and landscapes review. <i>Journal of Plant Nutrition and Soil Science</i> , 2006 , 169, 310-329	2.3	378
618	Photosynthesis controls of rhizosphere respiration and organic matter decomposition. <i>Soil Biology and Biochemistry</i> , 2001 , 33, 1915-1925	7.5	378
617	Biochar stability in soil: Decomposition during eight years and transformation as assessed by compound-specific 14C analysis. <i>Soil Biology and Biochemistry</i> , 2014 , 70, 229-236	7.5	322

(2009-2018)

616	Carbon input by roots into the soil: Quantification of rhizodeposition from root to ecosystem scale. <i>Global Change Biology</i> , 2018 , 24, 1-12	11.4	316
615	Priming effects in Chernozem induced by glucose and N in relation to microbial growth strategies. <i>Applied Soil Ecology</i> , 2007 , 37, 95-105	5	279
614	13C fractionation at the roothicroorganisms oil interface: A review and outlook for partitioning studies. <i>Soil Biology and Biochemistry</i> , 2010 , 42, 1372-1384	7.5	238
613	Sugars in soil and sweets for microorganisms: Review of origin, content, composition and fate. <i>Soil Biology and Biochemistry</i> , 2015 , 90, 87-100	7.5	222
612	Pedogenic carbonates: Forms and formation processes. <i>Earth-Science Reviews</i> , 2016 , 157, 1-17	10.2	216
611	Effects of 11 years of conservation tillage on soil organic matter fractions in wheat monoculture in Loess Plateau of China. <i>Soil and Tillage Research</i> , 2009 , 106, 85-94	6.5	207
610	Sources and mechanisms of priming effect induced in two grassland soils amended with slurry and sugar. <i>Soil Biology and Biochemistry</i> , 2006 , 38, 747-758	7.5	189
609	Losses of soil carbon by converting tropical forest to plantations: erosion and decomposition estimated by [13] C. <i>Global Change Biology</i> , 2015 , 21, 3548-60	11.4	176
608	Effects of 15 years of manure and inorganic fertilizers on soil organic carbon fractions in a wheat-maize system in the North China Plain. <i>Nutrient Cycling in Agroecosystems</i> , 2012 , 92, 21-33	3.3	176
607	Climate-land-use interactions shape tropical mountain biodiversity and ecosystem functions. <i>Nature</i> , 2019 , 568, 88-92	50.4	173
606	Nutrient acquisition from arable subsoils in temperate climates: A review. <i>Soil Biology and Biochemistry</i> , 2013 , 57, 1003-1022	7.5	173
605	Carbon partitioning and below-ground translocation by Lolium perenne. <i>Soil Biology and Biochemistry</i> , 2001 , 33, 61-74	7.5	168
604	Rhizosphere size and shape: Temporal dynamics and spatial stationarity. <i>Soil Biology and Biochemistry</i> , 2019 , 135, 343-360	7.5	163
603	Phosphorus mineralization can be driven by microbial need for carbon. <i>Soil Biology and Biochemistry</i> , 2013 , 61, 69-75	7.5	162
602	Contrasting effects of glucose, living roots and maize straw on microbial growth kinetics and substrate availability in soil. <i>European Journal of Soil Science</i> , 2009 , 60, 186-197	3.4	160
601	Root and rhizomicrobial respiration: A review of approaches to estimate respiration by autotrophic and heterotrophic organisms in soil. <i>Journal of Plant Nutrition and Soil Science</i> , 2005 , 168, 503-520	2.3	159
600	Effect of grazing on carbon stocks and assimilate partitioning in a Tibetan montane pasture revealed by 13CO2 pulse labeling. <i>Global Change Biology</i> , 2012 , 18, 528-538	11.4	156
599	Stimulation of microbial extracellular enzyme activities by elevated CO2 depends on soil aggregate size. <i>Global Change Biology</i> , 2009 , 15, 1603-1614	11.4	155

598	Root exudate components change litter decomposition in a simulated rhizosphere depending on temperature. <i>Plant and Soil</i> , 2007 , 290, 293-305	4.2	148
597	Distribution of microbial- and root-derived phosphatase activities in the rhizosphere depending on P availability and C allocation © Coupling soil zymography with 14C imaging. <i>Soil Biology and Biochemistry</i> , 2013 , 67, 106-113	7.5	147
596	Biochar affects soil organic matter cycling and microbial functions but does not alter microbial community structure in a paddy soil. <i>Science of the Total Environment</i> , 2016 , 556, 89-97	10.2	142
595	Drought effects on microbial biomass and enzyme activities in the rhizosphere of grasses depend on plant community composition. <i>Applied Soil Ecology</i> , 2011 , 48, 38-44	5	142
594	Turnover of soil organic matter and of microbial biomass under C3t14 vegetation change: Consideration of 13C fractionation and preferential substrate utilization. <i>Soil Biology and Biochemistry</i> , 2011 , 43, 159-166	7.5	141
593	Degradation of Tibetan grasslands: Consequences for carbon and nutrient cycles. <i>Agriculture, Ecosystems and Environment</i> , 2018 , 252, 93-104	5.7	140
592	Long-term manure application increases soil organic matter and aggregation, and alters microbial community structure and keystone taxa. <i>Soil Biology and Biochemistry</i> , 2019 , 134, 187-196	7.5	137
591	Microbial growth and carbon use efficiency in the rhizosphere and root-free soil. <i>PLoS ONE</i> , 2014 , 9, e9	3 3 8 , 2	137
590	Effects of polyacrylamide, biopolymer, and biochar on decomposition of soil organic matter and plant residues as determined by 14C and enzyme activities. <i>European Journal of Soil Biology</i> , 2012 , 48, 1-10	2.9	133
589	Model of apparent and real priming effects: Linking microbial activity with soil organic matter decomposition. <i>Soil Biology and Biochemistry</i> , 2010 , 42, 1275-1283	7.5	130
588	Isolating organic carbon fractions with varying turnover rates in temperate agricultural soils IA comprehensive method comparison. <i>Soil Biology and Biochemistry</i> , 2018 , 125, 10-26	7.5	125
587	Microbial uptake of low-molecular-weight organic substances out-competes sorption in soil. <i>European Journal of Soil Science</i> , 2010 , 61, 504-513	3.4	122
586	Separating microbial respiration of exudates from root respiration in non-sterile soils: a comparison of four methods. <i>Soil Biology and Biochemistry</i> , 2002 , 34, 1621-1631	7.5	122
585	Labile carbon retention compensates for CO2 released by priming in forest soils. <i>Global Change Biology</i> , 2014 , 20, 1943-54	11.4	118
584	Elevation of atmospheric CO2 and N-nutritional status modify nodulation, nodule-carbon supply, and root exudation of Phaseolus vulgaris L <i>Soil Biology and Biochemistry</i> , 2007 , 39, 2208-2221	7.5	114
583	Pathways of litter C by formation of aggregates and SOM density fractions: Implications from 13C natural abundance. <i>Soil Biology and Biochemistry</i> , 2014 , 71, 95-104	7.5	113
582	Elevated atmospheric CO2 increases microbial growth rates in soil: results of three CO2 enrichment experiments. <i>Global Change Biology</i> , 2010 , 16, 836-848	11.4	113
581	Microbial interactions affect sources of priming induced by cellulose. <i>Soil Biology and Biochemistry</i> , 2014 , 74, 39-49	7.5	110

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580	Carbohydrate and amino acid composition of dissolved organic matter leached from soil. <i>Soil Biology and Biochemistry</i> , 2007 , 39, 2926-2935	7.5	110
579	Three-source-partitioning of microbial biomass and of CO2 efflux from soil to evaluate mechanisms of priming effects. <i>Soil Biology and Biochemistry</i> , 2011 , 43, 778-786	7.5	109
578	Microbial decomposition of soil organic matter is mediated by quality and quantity of crop residues: mechanisms and thresholds. <i>Biology and Fertility of Soils</i> , 2017 , 53, 287-301	6.1	104
577	The Kobresia pygmaea ecosystem of the Tibetan highlands - Origin, functioning and degradation of the world's largest pastoral alpine ecosystem: Kobresia pastures of Tibet. <i>Science of the Total Environment</i> , 2019 , 648, 754-771	10.2	104
576	Fate of low molecular weight organic substances in an arable soil: From microbial uptake to utilisation and stabilisation. <i>Soil Biology and Biochemistry</i> , 2014 , 77, 304-313	7.5	102
575	Photosynthesis controls of CO2 efflux from maize rhizosphere. <i>Plant and Soil</i> , 2004 , 263, 85-99	4.2	99
574	Dissolved and colloidal phosphorus fluxes in forest ecosystems almost blind spot in ecosystem research. <i>Journal of Plant Nutrition and Soil Science</i> , 2016 , 179, 425-438	2.3	99
573	Effects of 15 years of manure and mineral fertilizers on enzyme activities in particle-size fractions in a North China Plain soil. <i>European Journal of Soil Biology</i> , 2014 , 60, 112-119	2.9	97
572	Effects of polyacrylamide, biopolymer and biochar on the decomposition of 14C-labelled maize residues and on their stabilization in soil aggregates. <i>European Journal of Soil Science</i> , 2013 , 64, 488-499	3.4	96
571	Effects of six-year biochar amendment on soil aggregation, crop growth, and nitrogen and phosphorus use efficiencies in a rice-wheat rotation. <i>Journal of Cleaner Production</i> , 2020 , 242, 118435	10.3	96
57°	Microbial utilization and mineralization of [14C]glucose added in six orders of concentration to soil. <i>Soil Biology and Biochemistry</i> , 2008 , 40, 1981-1988	7.5	95
569	Estimation of rhizodeposition at field scale: upscaling of a 14C labeling study. <i>Plant and Soil</i> , 2013 , 364, 273-285	4.2	94
568	Carbon allocation in grassland communities under drought stress followed by 14C pulse labeling. <i>Soil Biology and Biochemistry</i> , 2012 , 55, 132-139	7.5	93
567	Rhizosphere shape of lentil and maize: Spatial distribution of enzyme activities. <i>Soil Biology and Biochemistry</i> , 2016 , 96, 229-237	7.5	92
566	Soil zymography IA novel in situ method for mapping distribution of enzyme activity in soil. <i>Soil Biology and Biochemistry</i> , 2013 , 58, 275-280	7.5	91
565	Review of estimation of plant rhizodeposition and their contribution to soil organic matter formation. <i>Archives of Agronomy and Soil Science</i> , 2004 , 50, 115-132	2	91
564	Decrease of soil organic matter stabilization with increasing inputs: Mechanisms and controls. <i>Geoderma</i> , 2017 , 304, 76-82	6.7	90
563	Carbon flows in the rhizosphere of ryegrass (Lolium perenne). <i>Journal of Plant Nutrition and Soil Science</i> , 2001 , 164, 381	2.3	90

562	Response of soil organic matter fractions and composition of microbial community to long-term organic and mineral fertilization. <i>Biology and Fertility of Soils</i> , 2017 , 53, 523-532	6.1	88
561	Rice rhizodeposition and its utilization by microbial groups depends on N fertilization. <i>Biology and Fertility of Soils</i> , 2017 , 53, 37-48	6.1	88
560	Carbon flow into microbial and fungal biomass as a basis for the belowground food web of agroecosystems. <i>Pedobiologia</i> , 2012 , 55, 111-119	1.7	88
559	MgO-modified biochar increases phosphate retention and rice yields in saline-alkaline soil. <i>Journal of Cleaner Production</i> , 2019 , 235, 901-909	10.3	87
558	Spatial and temporal dynamics of hotspots of enzyme activity in soil as affected by living and dead roots soil zymography analysis. <i>Plant and Soil</i> , 2014 , 379, 67-77	4.2	87
557	Carbon cost of collective farming collapse in Russia. <i>Global Change Biology</i> , 2014 , 20, 938-47	11.4	87
556	Land-use change affects phosphorus fractions in highly weathered tropical soils. <i>Catena</i> , 2017 , 149, 38.	5- 3.9 3	86
555	Viruses in soil: Nano-scale undead drivers of microbial life, biogeochemical turnover and ecosystem functions. <i>Soil Biology and Biochemistry</i> , 2018 , 127, 305-317	7.5	85
554	Microbial gross organic phosphorus mineralization can be stimulated by root exudates 🖪 33P isotopic dilution study. <i>Soil Biology and Biochemistry</i> , 2013 , 65, 254-263	7.5	84
553	Earthworm burrows: Kinetics and spatial distribution of enzymes of C-, N- and P- cycles. <i>Soil Biology and Biochemistry</i> , 2016 , 99, 94-103	7.5	83
552	Effect of land-use and elevation on microbial biomass and water extractable carbon in soils of Mt. Kilimanjaro ecosystems. <i>Applied Soil Ecology</i> , 2013 , 67, 10-19	5	82
551	Turnover and distribution of root exudates of Zea mays. <i>Plant and Soil</i> , 2003 , 254, 317-327	4.2	81
550	Contribution of Lolium perenne rhizodeposition to carbon turnover of pasture soil. <i>Plant and Soil</i> , 1999 , 213, 127-136	4.2	81
549	Priming effects in biochar enriched soils using a three-source-partitioning approach: 14C labelling and 13C natural abundance. <i>Soil Biology and Biochemistry</i> , 2017 , 106, 28-35	7.5	79
548	Nitrogen fertilization raises CO efflux from inorganic carbon: A global assessment. <i>Global Change Biology</i> , 2018 , 24, 2810-2817	11.4	79
547	Feedstock determines biochar-induced soil priming effects by stimulating the activity of specific microorganisms. <i>European Journal of Soil Science</i> , 2018 , 69, 521-534	3.4	79
546	Review and synthesis of the effects of elevated atmospheric CO2 on soil processes: No changes in pools, but increased fluxes and accelerated cycles. <i>Soil Biology and Biochemistry</i> , 2019 , 128, 66-78	7.5	79
545	Temperature sensitivity and enzymatic mechanisms of soil organic matter decomposition along an altitudinal gradient on Mount Kilimanjaro. <i>Scientific Reports</i> , 2016 , 6, 22240	4.9	78

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544	Glucose uptake by maize roots and its transformation in the rhizosphere. <i>Soil Biology and Biochemistry</i> , 2006 , 38, 851-860	7.5	78
543	Rice rhizodeposits affect organic matter priming in paddy soil: The role of N fertilization and plant growth for enzyme activities, CO 2 and CH 4 emissions. <i>Soil Biology and Biochemistry</i> , 2018 , 116, 369-37	7 7.5	78
542	Dramatic loss of inorganic carbon by nitrogen-induced soil acidification in Chinese croplands. <i>Global Change Biology</i> , 2020 , 26, 3738-3751	11.4	77
541	Carbon and nitrogen recycling from microbial necromass to cope with C:N stoichiometric imbalance by priming. <i>Soil Biology and Biochemistry</i> , 2020 , 142, 107720	7.5	75
540	Regulation of priming effect by soil organic matter stability over a broad geographic scale. <i>Nature Communications</i> , 2019 , 10, 5112	17.4	75
539	Loss of labile organic carbon from subsoil due to land-use changes in Bubtropical China. <i>Soil Biology and Biochemistry</i> , 2015 , 88, 148-157	7.5	75
538	Quantification of priming and CO2 respiration sources following slurry-C incorporation into two grassland soils with different C content. <i>Rapid Communications in Mass Spectrometry</i> , 2003 , 17, 2585-90	2.2	74
537	Effect of Clay Minerals on Immobilization of Heavy Metals and Microbial Activity in a Sewage Sludge-Contaminated Soil (8 pp). <i>Journal of Soils and Sediments</i> , 2005 , 5, 245-252	3.4	74
536	Soil aggregation regulates distributions of carbon, microbial community and enzyme activities after 23-year manure amendment. <i>Applied Soil Ecology</i> , 2017 , 111, 65-72	5	73
535	Functional response of soil microbial communities to tillage, cover crops and nitrogen fertilization. <i>Applied Soil Ecology</i> , 2016 , 108, 147-155	5	73
534	Carbon costs and benefits of Indonesian rainforest conversion to plantations. <i>Nature Communications</i> , 2018 , 9, 2388	17.4	73
533	Root-derived carbon in soil respiration and microbial biomass determined by 14C and 13C. <i>Soil Biology and Biochemistry</i> , 2008 , 40, 625-637	7.5	73
532	Carbon sequestration under Miscanthus in sandy and loamy soils estimated by natural 13C abundance. <i>Journal of Plant Nutrition and Soil Science</i> , 2007 , 170, 538-542	2.3	72
531	Plant inter-species effects on rhizosphere priming of soil organic matter decomposition. <i>Soil Biology and Biochemistry</i> , 2013 , 57, 91-99	7.5	71
530	Carbonate rhizoliths in loess and their implications for paleoenvironmental reconstruction revealed by isotopic composition: 1 3C, 14C. <i>Chemical Geology</i> , 2011 , 283, 251-260	4.2	71
529	Comments on the paper by Kemmitt etlal. (2008) Mineralization of native soil organic matter is not regulated by the size, activity or composition of the soil microbial biomass lanew perspective [Soil Biology & Biochemistry 40, 61 13]: The biology of the Regulatory Gate. Soil Biology and	7.5	71
528	Decomposition of biogas residues in soil and their effects on microbial growth kinetics and enzyme activities. <i>Biomass and Bioenergy</i> , 2012 , 45, 221-229	5.3	70
527	Soil organic carbon and total nitrogen in intensively managed arable soils. <i>Agriculture, Ecosystems and Environment</i> , 2012 , 150, 102-110	5.7	70

526	Carbonate re-crystallization in soil revealed by 14C labeling: Experiment, model and significance for paleo-environmental reconstructions. <i>Geoderma</i> , 2006 , 131, 45-58	6.7	70
525	N fertilization decreases soil organic matter decomposition in the rhizosphere. <i>Applied Soil Ecology</i> , 2016 , 108, 47-53	5	68
524	Root hairs increase rhizosphere extension and carbon input to soil. <i>Annals of Botany</i> , 2018 , 121, 61-69	4.1	66
523	Source determination of lipids in bulk soil and soil density fractions after four years of wheat cropping. <i>Geoderma</i> , 2010 , 156, 267-277	6.7	66
522	Agroforestry systems: Meta-analysis of soil carbon stocks, sequestration processes, and future potentials. <i>Land Degradation and Development</i> , 2018 , 29, 3886-3897	4.4	65
521	Carbon fluxes in soil food webs of increasing complexity revealed by 14C labelling and 13C natural abundance. <i>Soil Biology and Biochemistry</i> , 2006 , 38, 2390-2400	7.5	65
520	Effect of biochar origin and soil pH on greenhouse gas emissions from sandy and clay soils. <i>Applied Soil Ecology</i> , 2018 , 129, 121-127	5	65
519	Stability and dynamics of enzyme activity patterns in the rice rhizosphere: Effects of plant growth and temperature. <i>Soil Biology and Biochemistry</i> , 2017 , 113, 108-115	7.5	64
518	Substrate quality affects kinetics and catalytic efficiency of exo-enzymes in rhizosphere and detritusphere. <i>Soil Biology and Biochemistry</i> , 2016 , 92, 111-118	7.5	64
517	Biochemical pathways of amino acids in soil: Assessment by position-specific labeling and 13C-PLFA analysis. <i>Soil Biology and Biochemistry</i> , 2013 , 67, 31-40	7.5	63
516	Nonlinear temperature sensitivity of enzyme kinetics explains canceling effect-a case study on loamy haplic Luvisol. <i>Frontiers in Microbiology</i> , 2015 , 6, 1126	5.7	63
515	Carbon partitioning in plant and soil, carbon dioxide fluxes and enzyme activities as affected by cutting ryegrass. <i>Biology and Fertility of Soils</i> , 2002 , 35, 348-358	6.1	63
514	Tree species identity surpasses richness in affecting soil microbial richness and community composition in subtropical forests. <i>Soil Biology and Biochemistry</i> , 2019 , 130, 113-121	7.5	63
513	Soil organic matter availability and climate drive latitudinal patterns in bacterial diversity from tropical to cold temperate forests. <i>Functional Ecology</i> , 2018 , 32, 61-70	5.6	63
512	Significance of organic nitrogen acquisition for dominant plant species in an alpine meadow on the Tibet plateau, China. <i>Plant and Soil</i> , 2006 , 285, 221-231	4.2	62
511	Pasture degradation modifies the water and carbon cycles of the Tibetan highlands. <i>Biogeosciences</i> , 2014 , 11, 6633-6656	4.6	61
510	Microbial utilization of rice root exudates: 13C labeling and PLFA composition. <i>Biology and Fertility of Soils</i> , 2016 , 52, 615-627	6.1	61
509	Small but active [bool size does not matter for carbon incorporation in below-ground food webs. <i>Functional Ecology</i> , 2016 , 30, 479-489	5.6	60

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508	Temperature selects for static soil enzyme systems to maintain high catalytic efficiency. <i>Soil Biology and Biochemistry</i> , 2016 , 97, 15-22	7.5	60	
507	Microbial response to rhizodeposition depending on water regimes in paddy soils. <i>Soil Biology and Biochemistry</i> , 2013 , 65, 195-203	7.5	60	
506	Plant-mediated CH₄ transport and contribution of photosynthates to methanogenesis at a boreal mire: a ¹⁴C pulse-labeling study. <i>Biogeosciences</i> , 2011 , 8, 2365-2375	4.6	60	
505	Dynamics of Organic C Mineralization and the Mobile Fraction of Heavy Metals in a Calcareous Soil Incubated with Organic Wastes. <i>Water, Air, and Soil Pollution</i> , 2004 , 158, 401-418	2.6	60	
504	Response of soil microbial community to afforestation with pure and mixed species. <i>Plant and Soil</i> , 2017 , 412, 357-368	4.2	59	
503	Neoformation of pedogenic carbonates by irrigation and fertilization and their contribution to carbon sequestration in soil. <i>Geoderma</i> , 2016 , 262, 12-19	6.7	58	
502	Microbial spatial footprint as a driver of soil carbon stabilization. <i>Nature Communications</i> , 2019 , 10, 312	117.4	58	
501	Photoassimilate allocation and dynamics of hotspots in roots visualized by 14C phosphor imaging. Journal of Plant Nutrition and Soil Science, 2011 , 174, 12-19	2.3	58	
500	Carbonate recrystallization in root-free soil and rhizosphere of Triticum aestivum and Lolium perenne estimated by 14C labeling. <i>Biogeochemistry</i> , 2011 , 103, 209-222	3.8	58	
499	Organic carbon burial and sources in soils of coastal mudflat and mangrove ecosystems. <i>Catena</i> , 2020 , 187, 104414	5.8	58	
498	Nitrogen fertilization decreases the decomposition of soil organic matter and plant residues in planted soils. <i>Soil Biology and Biochemistry</i> , 2017 , 112, 47-55	7.5	57	
497	Effect of fertilization on decomposition of 14C labelled plant residues and their incorporation into soil aggregates. <i>Soil and Tillage Research</i> , 2010 , 109, 94-102	6.5	57	
496	Carbon and nitrogen additions induce distinct priming effects along an organic-matter decay continuum. <i>Scientific Reports</i> , 2016 , 6, 19865	4.9	57	
495	Carbon input and allocation by rice into paddy soils: A review. <i>Soil Biology and Biochemistry</i> , 2019 , 133, 97-107	7.5	56	
494	Maize rhizosphere priming: field estimates using 13C natural abundance. <i>Plant and Soil</i> , 2016 , 409, 87-9	74.2	56	
493	Dominant plant species shift their nitrogen uptake patterns in response to nutrient enrichment caused by a fungal fairy in an alpine meadow. <i>Plant and Soil</i> , 2011 , 341, 495-504	4.2	56	
492	Rhizoliths in loess revidence for post-sedimentary incorporation of root-derived organic matter in terrestrial sediments as assessed from molecular proxies. <i>Organic Geochemistry</i> , 2010 , 41, 1198-1206	3.1	56	
491	Model for rhizodeposition and CO2 efflux from planted soil and its validation by 14C pulse labelling of ryegrass. <i>Plant and Soil</i> , 2002 , 239, 87-102	4.2	56	

490	Arbuscular mycorrhiza enhances rhizodeposition and reduces the rhizosphere priming effect on the decomposition of soil organic matter. <i>Soil Biology and Biochemistry</i> , 2020 , 140, 107641	7.5	56
489	Effect of land use and management practices on microbial biomass and enzyme activities in subtropical top-and sub-soils. <i>Applied Soil Ecology</i> , 2017 , 113, 22-28	5	55
488	Urban soils as hot spots of anthropogenic carbon accumulation: Review of stocks, mechanisms and driving factors. <i>Land Degradation and Development</i> , 2018 , 29, 1607-1622	4.4	55
4 ⁸ 7	Spatial patterns of enzyme activities in the rhizosphere: Effects of root hairs and root radius. <i>Soil Biology and Biochemistry</i> , 2018 , 118, 69-78	7.5	55
486	C and N in soil organic matter density fractions under elevated atmospheric CO2: Turnover vs. stabilization. <i>Soil Biology and Biochemistry</i> , 2011 , 43, 579-589	7.5	55
485	Water scarcity and oil palm expansion: social views and environmental processes. <i>Ecology and Society</i> , 2016 , 21,	4.1	54
484	Spatial distribution and catalytic mechanisms of Eglucosidase activity at the root-soil interface. <i>Biology and Fertility of Soils</i> , 2016 , 52, 505-514	6.1	53
483	Aggregate size and their disruption affect 14C-labeled glucose mineralization and priming effect. <i>Applied Soil Ecology</i> , 2015 , 90, 1-10	5	53
482	Stimulation of r- vs. K-selected microorganisms by elevated atmospheric CO(2) depends on soil aggregate size. <i>FEMS Microbiology Ecology</i> , 2009 , 69, 43-52	4.3	53
481	Iron oxidation affects nitrous oxide emissions via donating electrons to denitrification in paddy soils. <i>Geoderma</i> , 2016 , 271, 173-180	6.7	53
480	Nitrogen fertilization increases rhizodeposit incorporation into microbial biomass and reduces soil organic matter losses. <i>Biology and Fertility of Soils</i> , 2017 , 53, 419-429	6.1	52
479	Hotspots of microbial activity induced by earthworm burrows, old root channels, and their combination in subsoil. <i>Biology and Fertility of Soils</i> , 2016 , 52, 1105-1119	6.1	52
478	Microbial C:N:P stoichiometry and turnover depend on nutrients availability in soil: A 14C, 15N and 33P triple labelling study. <i>Soil Biology and Biochemistry</i> , 2019 , 131, 206-216	7.5	51
477	Carbon and nitrogen mineralization and enzyme activities in soil aggregate-size classes: Effects of biochar, oyster shells, and polymers. <i>Chemosphere</i> , 2018 , 198, 40-48	8.4	51
476	Biochar has no effect on soil respiration across Chinese agricultural soils. <i>Science of the Total Environment</i> , 2016 , 554-555, 259-65	10.2	51
475	Large-scale carbon sequestration in post-agrogenic ecosystems in Russia and Kazakhstan. <i>Catena</i> , 2015 , 133, 461-466	5.8	50
474	Dynamics of soil organic carbon pools after agricultural abandonment. <i>Geoderma</i> , 2014 , 235-236, 191-1	96 .7	50
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471	Soil nitrogen transformation responses to seasonal precipitation changes are regulated by changes in functional microbial abundance in a subtropical forest. <i>Biogeosciences</i> , 2017 , 14, 2513-2525	4.6	50
470	Land use affects soil biochemical properties in Mt. Kilimanjaro region. <i>Catena</i> , 2016 , 141, 22-29	5.8	49
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468	Fast incorporation of root-derived lipids and fatty acids into soil Evidence from a short term multiple pulse labelling experiment. <i>Organic Geochemistry</i> , 2010 , 41, 1049-1055	3.1	49
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460	Turnover of microbial groups and cell components in soil: ¹³C analysis of cellular biomarkers. <i>Biogeosciences</i> , 2017 , 14, 271-283	4.6	47
459	Linkages between the soil organic matter fractions and the microbial metabolic functional diversity within a broad-leaved Korean pine forest. <i>European Journal of Soil Biology</i> , 2015 , 66, 57-64	2.9	46
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449	Labile soil organic matter fractions as influenced by non-flooded mulching cultivation and cropping season in riceWheat rotation. <i>European Journal of Soil Biology</i> , 2013 , 56, 19-25	2.9	44
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445	Spatio-temporal patterns of enzyme activities after manure application reflect mechanisms of niche differentiation between plants and microorganisms. <i>Soil Biology and Biochemistry</i> , 2017 , 112, 100	-705	43
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443	Biochemistry of hexose and pentose transformations in soil analyzed by position-specific labeling and 13C-PLFA. <i>Soil Biology and Biochemistry</i> , 2015 , 80, 199-208	7.5	42
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439	Influence of defoliation on CO2 efflux from soil and microbial activity in a Mediterranean grassland. <i>Agriculture, Ecosystems and Environment</i> , 2010 , 136, 87-96	5.7	41
438	Ammonium versus nitrate nutrition of Zea mays and Lupinus albus: Effect on root-derived CO2 efflux. <i>Soil Biology and Biochemistry</i> , 2008 , 40, 2835-2842	7.5	41
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380	Anaerobic oxidation of methane in paddy soil: Role of electron acceptors and fertilization in mitigating CH4 fluxes. <i>Soil Biology and Biochemistry</i> , 2020 , 141, 107685	7.5	31
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371	Carbon and Nitrogen Losses from Soil Depend on Degradation of Tibetan Kobresia Pastures. <i>Land Degradation and Development</i> , 2017 , 28, 1253-1262	4.4	28
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318	Interactive priming effect of labile carbon and crop residues on SOM depends on residue decomposition stage: Three-source partitioning to evaluate mechanisms. <i>Soil Biology and Biochemistry</i> , 2018 , 126, 179-190	7.5	22	
317	Effects of peat decomposition on 🛘 3C and 🗘 5N depth profiles of Alpine bogs. <i>Catena</i> , 2019 , 178, 1-10	5.8	21	
316	Effect of plant communities on aggregate composition and organic matter stabilisation in young soils. <i>Plant and Soil</i> , 2015 , 387, 265-275	4.2	21	
315	Glucose decomposition and its incorporation into soil microbial biomass depending on land use in Mt. Kilimanjaro ecosystems. <i>European Journal of Soil Biology</i> , 2014 , 62, 74-82	2.9	21	
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312	Soil organic matter mineralization and residue decomposition of spring wheat grown under elevated CO2 atmosphere. <i>Agriculture, Ecosystems and Environment</i> , 2008 , 123, 63-68	5.7	21	
311	Shift from dormancy to microbial growth revealed by RNA:DNA ratio. <i>Ecological Indicators</i> , 2018 , 85, 603-612	5.8	21	

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307	Inorganic carbon losses by soil acidification jeopardize global efforts on carbon sequestration and climate change mitigation. <i>Journal of Cleaner Production</i> , 2021 , 315, 128036	10.3	21
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295	Effects of nitrate and sulfate on greenhouse gas emission potentials from microform-derived peats of a boreal peatland: A 13C tracer study. <i>Soil Biology and Biochemistry</i> , 2016 , 100, 182-191	7.5	19
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200	Effect of cactus pear cultivation after Mediterranean maquis on soil carbon stock, 1 3C spatial distribution and root turnover. <i>Catena</i> , 2014 , 118, 84-90	5.8	10
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197	The persistence of bacterial diversity and ecosystem multifunctionality along a disturbance intensity gradient in karst soil. <i>Science of the Total Environment</i> , 2020 , 748, 142381	10.2	10
196	Tight coupling of fungal community composition with soil quality in a Chinese fir plantation chronosequence. <i>Land Degradation and Development</i> , 2021 , 32, 1164-1178	4.4	10
195	Assessing and mapping urban soils as geochemical barriers for contamination by heavy metal(loid)s in Moscow megapolis. <i>Journal of Environmental Quality</i> , 2021 , 50, 22-37	3.4	10
194	Phosphatase activity and acidification in lupine and maize rhizosphere depend on phosphorus availability and root properties: Coupling zymography with planar optodes. <i>Applied Soil Ecology</i> , 2021 , 167, 104029	5	10
193	Legume and Non-legume Trees Increase Soil Carbon Sequestration in Savanna. <i>Ecosystems</i> , 2017 , 20, 989-999	3.9	9
192	Secondary soil salinization in urban lawns: Microbial functioning, vegetation state, and implications for carbon balance. <i>Land Degradation and Development</i> , 2020 , 31, 2591-2604	4.4	9
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181	Synergy effect of peroxidase enzymes and Fenton reactions greatly increase the anaerobic oxidation of soil organic matter. <i>Scientific Reports</i> , 2020 , 10, 11289	4.9	9	
180	Calibration of 2-D soil zymography for correct analysis of enzyme distribution. <i>European Journal of Soil Science</i> , 2019 , 70, 715-726	3.4	9	
179	Letter-to-the-Editor: Does acidification really increase soil carbon in croplands? How statistical analyses of large datasets might mislead the conclusions. <i>Geoderma</i> , 2021 , 384, 114806	6.7	9	
178	Temperature sensitivity (Q) of stable, primed and easily available organic matter pools during decomposition in paddy soil. <i>Applied Soil Ecology</i> , 2021 , 157, 103752	5	9	
177	Rice rhizodeposition promotes the build-up of organic carbon in soil via fungal necromass. <i>Soil Biology and Biochemistry</i> , 2021 , 160, 108345	7.5	9	
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175	Soil carbon balance by priming differs with single versus repeated addition of glucose and soil fertility level. <i>Soil Biology and Biochemistry</i> , 2020 , 148, 107913	7.5	8	
174	Impact of sea level change on coastal soil organic matter, priming effects and prokaryotic community assembly. <i>FEMS Microbiology Ecology</i> , 2019 , 95,	4.3	8	
173	The rates of organic matter renewal in gray forest soils and chernozems. <i>Eurasian Soil Science</i> , 2008 , 41, 1378-1386	1.5	8	
172	Impact of forest fire on soil properties (review) 2018 , 13-23		8	
171	Accelerated microbial activity, turnover and efficiency in the drilosphere is depth dependent. <i>Soil Biology and Biochemistry</i> , 2020 , 147, 107852	7.5	8	
170	C:N stoichiometry of stable and labile organic compounds determine priming patterns. <i>Geoderma</i> , 2020 , 362, 114122	6.7	8	
169	Conversion of coastal marshes to croplands decreases organic carbon but increases inorganic carbon in saline soils. <i>Land Degradation and Development</i> , 2020 , 31, 1099-1109	4.4	8	
168	Long-term active restoration of extremely degraded alpine grassland accelerated turnover and increased stability of soil carbon. <i>Global Change Biology</i> , 2020 , 26, 7217-7228	11.4	8	
167	Fertilization effects on microbial community composition and aggregate formation in saline-alkaline soil. <i>Plant and Soil</i> , 2021 , 463, 523-535	4.2	8	

166	Soil organic matter formation is controlled by the chemistry and bioavailability of organic carbon inputs across different land uses. <i>Science of the Total Environment</i> , 2021 , 770, 145307	10.2	8
165	Nitrogen fixation and crop productivity enhancements co-driven by intercrop root exudates and key rhizosphere bacteria. <i>Journal of Applied Ecology</i> , 2021 , 58, 2243	5.8	8
164	Increase of soil nitrogen availability and recycling with stand age of Chinese-fir plantations. <i>Forest Ecology and Management</i> , 2021 , 480, 118643	3.9	8
163	From rock eating to vegetarian ecosystems Disentangling processes of phosphorus acquisition across biomes. <i>Geoderma</i> , 2021 , 388, 114827	6.7	8
162	Warming exerts greater impacts on subsoil than topsoil CO2 efflux in a subtropical forest. <i>Agricultural and Forest Meteorology</i> , 2018 , 263, 137-146	5.8	8
161	Glycoproteins of arbuscular mycorrhiza for soil carbon sequestration: Review of mechanisms and controls. <i>Science of the Total Environment</i> , 2022 , 806, 150571	10.2	8
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159	15N-tracer approach to assess nitrogen cycling processes: Nitrate reduction, anammox and denitrification in different pH cropland soils. <i>Catena</i> , 2020 , 193, 104611	5.8	7
158	Carbon allocation and fate in paddy soil depending on phosphorus fertilization and water management: results of 13C continuous labelling of rice. <i>Canadian Journal of Soil Science</i> , 2018 , 98, 469	-483	7
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155	Effects of atmospheric CO2 enrichment on 🛭 3C, 🖺 5N values and turnover times of soil organic matter pools isolated by thermal techniques. <i>Plant and Soil</i> , 2007 , 297, 15-28	4.2	7
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150	Active metabolic pathways of anaerobic methane oxidation in paddy soils. <i>Soil Biology and Biochemistry</i> , 2021 , 156, 108215	7.5	7
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147	Iron-reducing bacteria decompose lignin by electron transfer from soil organic matter. <i>Science of the Total Environment</i> , 2021 , 761, 143194	10.2	7
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144	The effect of microorganisms on soil carbonate recrystallization and abiotic CO2 uptake of soil. <i>Catena</i> , 2020 , 192, 104592	5.8	6
143	Effects of rain shortage on carbon allocation, pools and fluxes in a Mediterranean shrub ecosystem - a C labelling field study. <i>Science of the Total Environment</i> , 2018 , 627, 1242-1252	10.2	6
142	Carbon budgets of top- and subsoil food webs in an arable system. <i>Pedobiologia</i> , 2018 , 69, 29-33	1.7	6
141	Direct phloem transport and pressure concentration waves in linking shoot and rhizosphere activity <i>Plant and Soil</i> , 2012 , 351, 23-30	4.2	6
140	Pedogenic carbonate recrystallization assessed by isotopic labeling: a comparison of 13C and 14C tracers. <i>Journal of Plant Nutrition and Soil Science</i> , 2011 , 174, 809-817	2.3	6
139	Root-Derived Short-Chain Suberin Diacids from Rice and Rape Seed in a Paddy Soil under Rice Cultivar Treatments. <i>PLoS ONE</i> , 2015 , 10, e0127474	3.7	6
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137	Molybdenum Bioavailability and Asymbiotic Nitrogen Fixation in Soils are Raised by Iron (Oxyhydr)oxide-Mediated Free Radical Production. <i>Environmental Science & Environmental Science & Environmenta</i>	10.3	6
136	New approaches for evaluation of soil health, sensitivity and resistance to degradation. <i>Frontiers of Agricultural Science and Engineering</i> , 2020 , 7, 282	1.7	6
135	Direct evidence for thickening nanoscale organic films at soil biogeochemical interfaces and its relevance to organic matter preservation. <i>Environmental Science: Nano</i> , 2020 , 7, 2747-2758	7.1	6
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125	Recrystallization of shell carbonate in soil: 14C labeling, modeling and relevance for dating and paleo-reconstructions. <i>Geoderma</i> , 2016 , 282, 87-95	6.7	5
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118	Lower microbial carbon use efficiency reduces cellulose-derived carbon retention in soils amended with compost versus mineral fertilizers. <i>Soil Biology and Biochemistry</i> , 2021 , 156, 108227	7·5	5
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116	To shake or not to shake: Silicone tube approach for incubation studies on CH oxidation in submerged soils. <i>Science of the Total Environment</i> , 2019 , 657, 893-901	10.2	5
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113	Land use and fertilisation affect priming in tropical andosols. <i>European Journal of Soil Biology</i> , 2018 , 87, 9-16	2.9	5

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99	Increased soil organic matter after 28 years of nitrogen fertilization only with plastic film mulching is controlled by maize root biomass <i>Science of the Total Environment</i> , 2021 , 810, 152244	10.2	4	
98	Annual litterfall dynamics and nutrient deposition depending on elevation and land use at Mt. Kilimanja	эго	4	
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96	Bacterial communities drive the resistance of soil multifunctionality to land-use change in karst soils. <i>European Journal of Soil Biology</i> , 2021 , 104, 103313	2.9	4	
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92	Root and mycorrhizal strategies for nutrient acquisition in forests under nitrogen deposition: A meta-analysis. <i>Soil Biology and Biochemistry</i> , 2021 , 163, 108418	7.5	4
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81	Root-o-Mat: A novel tool for 2D image processing of root-soil interactions and its application in soil zymography. <i>Soil Biology and Biochemistry</i> , 2021 , 157, 108236	7.5	3
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79	Higher free-living N2 fixation at rock-soil interfaces than topsoils during vegetation recovery in karst soils. <i>Soil Biology and Biochemistry</i> , 2021 , 159, 108286	7.5	3
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77	Vulnerability and driving factors of soil inorganic carbon stocks in Chinese croplands <i>Science of the Total Environment</i> , 2022 , 154087	10.2	3

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74	NITROGEN UPTAKE AND NITROGEN LOSSES IN FIELD TRIALS WITH CARROTS. <i>Acta Horticulturae</i> , 1996 , 95-104	0.3	2	
73	Depth effects on bacterial community assembly processes in paddy soils. <i>Soil Biology and Biochemistry</i> , 2022 , 165, 108517	7.5	2	
72	In-situ 13CO2 labeling to trace carbon fluxes in plant-soil-microorganism systems: Review and methodological guideline. <i>Rhizosphere</i> , 2021 , 20, 100441	3.5	2	
71	Precipitation Partitioning⊞ydrologic Highways Between Microbial Communities of the Plant Microbiome? Open image in new window 2020 , 229-252		2	
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69	Waterlogging increases organic carbon decomposition in grassland soils. <i>Soil Biology and Biochemistry</i> , 2020 , 148, 107927	7.5	2	
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67	Interkingdom plant-microbial ecological networks under selective and clear cutting of tropical rainforest. <i>Forest Ecology and Management</i> , 2021 , 491, 119182	3.9	2	
66	Nitrogen fertilization modifies organic transformations and coatings on soil biogeochemical interfaces through microbial polysaccharides synthesis. <i>Scientific Reports</i> , 2019 , 9, 18684	4.9	2	
65	Facts to acidification-induced carbonate losses from Chinese croplands. <i>Global Change Biology</i> , 2020 , 27, e7	11.4	2	
64	Metagenomic insights into soil microbial communities involved in carbon cycling along an elevation climosequences. <i>Environmental Microbiology</i> , 2021 , 23, 4631-4645	5.2	2	
63	Species richness is more important for ecosystem functioning than species turnover along an elevational gradient. <i>Nature Ecology and Evolution</i> , 2021 , 5, 1582-1593	12.3	2	
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43	Belowground interplant carbon transfer promotes soil carbon gains in diverse plant communities. <i>Soil Biology and Biochemistry</i> , 2021 , 159, 108297	7.5	1
42	Plant and soil elemental C:N:P ratios are linked to soil microbial diversity during grassland restoration on the Loess Plateau, China. <i>Science of the Total Environment</i> , 2022 , 806, 150557	10.2	1
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39	Phosphorus addition decreases plant lignin but increases microbial necromass contribution to soil organic carbon in a subalpine forest <i>Global Change Biology</i> , 2022 ,	11.4	1
38	Increasing contribution of microbial residues to soil organic carbon in grassland restoration chronosequence. <i>Soil Biology and Biochemistry</i> , 2022 , 170, 108688	7.5	1
37	Deep-C storage: Biological, chemical and physical strategies to enhance carbon stocks in agricultural subsoils. <i>Soil Biology and Biochemistry</i> , 2022 , 108697	7.5	1
36	Moderate grazing increases newly assimilated carbon allocation belowground. Rhizosphere, 2022, 1005	5 43 .5	1
35	Soil health evaluation approaches along a reclamation consequence in Hangzhou Bay, China. <i>Agriculture, Ecosystems and Environment</i> , 2022 , 337, 108045	5.7	1
34	Microbial Communities and Functions in the Rhizosphere of Disease-Resistant and Susceptible spp. <i>Frontiers in Microbiology</i> , 2021 , 12, 732905	5.7	Ο
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32	Soil pore architecture and rhizosphere legacy define N2O production in root detritusphere. <i>Soil Biology and Biochemistry</i> , 2022 , 166, 108565	7.5	О
31	Network analysis reveals bacterial and fungal keystone taxa involved in straw and soil organic matter mineralization. <i>Applied Soil Ecology</i> , 2022 , 173, 104395	5	О
30	Fertilization effects on soil microbial composition and nutrient availability in integrated rice-livestock production systems. <i>Applied Soil Ecology</i> , 2022 , 174, 104420	5	О
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27	Management extensification in oil palm plantations reduces SOC decomposition. <i>Soil Biology and Biochemistry</i> , 2022 , 165, 108535	7.5	О
26	Investigation of the effects of the conversion of forests and rangeland to cropland on fertility and soil functions in mountainous semi-arid landscape. <i>Catena</i> , 2022 , 210, 105951	5.8	О
25	Post-agricultural restoration of soil organic carbon pools across a climate gradient. <i>Catena</i> , 2021 , 200, 105138	5.8	О
24	Tussock microhabitats increase nitrogen uptake by plants in an alpine wetland. <i>Plant and Soil</i> , 2021 , 466, 569-580	4.2	O
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22	Regulation of soil phosphorus availability and composition during forest succession in subtropics. <i>Forest Ecology and Management</i> , 2021 , 502, 119706	3.9	Ο
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20	Precipitation balances deterministic and stochastic processes of bacterial community assembly in grassland soils. <i>Soil Biology and Biochemistry</i> , 2022 , 168, 108635	7.5	0
19	Nitrite-dependent anaerobic oxidation decreases methane emissions from peatlands. <i>Soil Biology and Biochemistry</i> , 2022 , 169, 108658	7.5	О
18	Microbial growth rates, carbon use efficiency and enzyme activities during post-agricultural soil restoration. <i>Catena</i> , 2022 , 214, 106226	5.8	0
17	Fungal key players of cellulose utilization: Microbial networks in aggregates of long-term fertilized soils disentangled using C-DNA-stable isotope probing <i>Science of the Total Environment</i> , 2022 , 832, 15	55057	Ο
16	High frequency of extreme precipitation increases Stipa grandis biomass by altering plant and microbial nitrogen acquisition. <i>Biology and Fertility of Soils</i> , 2022 , 58, 63-75	6.1	0
15	Stoichiometric regulation of priming effects and soil carbon balance by microbial life strategies. <i>Soil Biology and Biochemistry</i> , 2022 , 169, 108669	7.5	O
14	Microbial iron reduction compensates for phosphorus limitation in paddy soils <i>Science of the Total Environment</i> , 2022 , 837, 155810	10.2	0
13	Microbial functional changes mark irreversible course of Tibetan grassland degradation <i>Nature Communications</i> , 2022 , 13, 2681	17.4	Ο
12	Maize root exudate composition alters rhizosphere bacterial community to control hotspots of hydrolase activity in response to nitrogen supply. <i>Soil Biology and Biochemistry</i> , 2022 , 170, 108717	7.5	0
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3	Fate of phosphorus fertilizer in acidic Cambisol assessed using 33P isotope labeling technique. <i>Annals of Tropical Research</i> , 2019 , 32-42	0
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