Evgenia Blagodatskaya

List of Publications by Year
in descending order

108 papers	10,671 citations	38742 50 h-index	32842 100 g-index
109 all docs	109 docs citations	109 times ranked	8890 citing authors

#	Article	IF	Citations
1	Microbial hotspots and hot moments in soil: Concept & review. Soil Biology and Biochemistry, 2015, 83, 184-199.	8.8	1,141
2	Mechanisms of real and apparent priming effects and their dependence on soil microbial biomass and community structure: critical review. Biology and Fertility of Soils, 2008, 45, 115-131.	4.3	1,113
3	Soil C and N availability determine the priming effect: microbial N mining and stoichiometric decomposition theories. Global Change Biology, 2014, 20, 2356-2367.	9.5	758
4	Active microorganisms in soil: Critical review of estimation criteria and approaches. Soil Biology and Biochemistry, 2013, 67, 192-211.	8.8	657
5	Priming effects in Chernozem induced by glucose and N in relation to microbial growth strategies. Applied Soil Ecology, 2007, 37, 95-105.	4.3	355
6	Interactive effects of pH and substrate quality on the fungal-to-bacterial ratio and qCO2 of microbial communities in forest soils. Soil Biology and Biochemistry, 1998, 30, 1269-1274.	8.8	301
7	Biochar affects soil organic matter cycling and microbial functions but does not alter microbial community structure in a paddy soil. Science of the Total Environment, 2016, 556, 89-97.	8.0	206
8	Contrasting effects of glucose, living roots and maize straw on microbial growth kinetics and substrate availability in soil. European Journal of Soil Science, 2009, 60, 186-197.	3.9	202
9	Drought effects on microbial biomass and enzyme activities in the rhizosphere of grasses depend on plant community composition. Applied Soil Ecology, 2011, 48, 38-44.	4.3	186
10	Stimulation of microbial extracellular enzyme activities by elevated CO₂ depends on soil aggregate size. Global Change Biology, 2009, 15, 1603-1614.	9.5	185
11	Microbial decomposition of soil organic matter is mediated by quality and quantity of crop residues: mechanisms and thresholds. Biology and Fertility of Soils, 2017, 53, 287-301.	4.3	182
12	Turnover of soil organic matter and of microbial biomass under C3â€“C4 vegetation change: Consideration of 13C fractionation and preferential substrate utilization. Soil Biology and Biochemistry, 2011, 43, 159-166.	8.8	176
13	Model of apparent and real priming effects: Linking microbial activity with soil organic matter decomposition. Soil Biology and Biochemistry, 2010, 42, 1275-1283.	8.8	172
14	Labile carbon retention compensates for CO₂released by priming in forest soils. Global Change Biology, 2014, 20, 1943-1954.	9.5	171
15	Microbial Growth and Carbon Use Efficiency in the Rhizosphere and Root-Free Soil. PLoS ONE, 2014, 9, e93282.	2.5	169
16	Elevated atmospheric CO₂ increases microbial growth rates in soil: results of three CO₂ enrichment experiments. Global Change Biology, 2010, 16, 836-848.	9.5	153
17	Rhizosphere shape of lentil and maize: Spatial distribution of enzyme activities. Soil Biology and Biochemistry, 2016, 96, 229-237.	8.8	148
18	Effects of polyacrylamide, biopolymer, and biochar on decomposition of soil organic matter and plant residues as determined by 14C and enzyme activities. European Journal of Soil Biology, 2012, 48, 1-10.	3.2	147

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19	Microbial interactions affect sources of priming induced by cellulose. Soil Biology and Biochemistry, 2014, 74, 39-49.	8.8	147
20	Review and synthesis of the effects of elevated atmospheric CO2 on soil processes: No changes in pools, but increased fluxes and accelerated cycles. Soil Biology and Biochemistry, 2019, 128, 66-78.	8.8	142
21	Three-source-partitioning of microbial biomass and of CO2 efflux from soil to evaluate mechanisms of priming effects. Soil Biology and Biochemistry, 2011, 43, 778-786.	8.8	129
22	Response of soil organic matter fractions and composition of microbial community to long-term organic and mineral fertilization. Biology and Fertility of Soils, 2017, 53, 523-532.	4.3	118
23	Effects of polyacrylamide, biopolymer and biochar on the decomposition of <scp>¹⁴C</scp>â€labelled maize residues and on their stabilization in soil aggregates. European Journal of Soil Science, 2013, 64, 488-499.	3.9	114
24	Earthworm burrows: Kinetics and spatial distribution of enzymes of C-, N- and P- cycles. Soil Biology and Biochemistry, 2016, 99, 94-103.	8.8	110
25	Soil organic matter availability and climate drive latitudinal patterns in bacterial diversity from tropical to cold temperate forests. Functional Ecology, 2018, 32, 61-70.	3.6	106
26	Microbial community structure and resource availability drive the catalytic efficiency of soil enzymes under land-use change conditions. Soil Biology and Biochemistry, 2015, 89, 226-237.	8.8	102
27	Effect of biochar origin and soil pH on greenhouse gas emissions from sandy and clay soils. Applied Soil Ecology, 2018, 129, 121-127.	4.3	98
28	Microbial C:N:P stoichiometry and turnover depend on nutrients availability in soil: A 14C, 15N and 33P triple labelling study. Soil Biology and Biochemistry, 2019, 131, 206-216.	8.8	96
29	Nonlinear temperature sensitivity of enzyme kinetics explains canceling effectâ€"a case study on loamy haplic Luvisol. Frontiers in Microbiology, 2015, 6, 1126.	3.5	91
30	Decomposition of biogas residues in soil and their effects on microbial growth kinetics and enzyme activities. Biomass and Bioenergy, 2012, 45, 221-229.	5.7	90
31	Substrate quality affects kinetics and catalytic efficiency of exo-enzymes in rhizosphere and detritusphere. Soil Biology and Biochemistry, 2016, 92, 111-118.	8.8	90
32	Comments on the paper by Kemmitt etÂal. (2008) â€˜Mineralization of native soil organic matter is not regulated by the size, activity or composition of the soil microbial biomass â€" A new perspectiveâ€™ [Soil Biology & Biochemistry 40, 61â€"73]: The biology of the Regulatory Gate. Soil Biology and Biochemistry, 2009, 41, 435-439.	8.8	87
33	Spatial patterns of enzyme activities in the rhizosphere: Effects of root hairs and root radius. Soil Biology and Biochemistry, 2018, 118, 69-78.	8.8	86
34	Universality of priming effect: An analysis using thirty five soils with contrasted properties sampled from five continents. Soil Biology and Biochemistry, 2019, 134, 162-171.	8.8	86
35	Temperature selects for static soil enzyme systems to maintain high catalytic efficiency. Soil Biology and Biochemistry, 2016, 97, 15-22.	8.8	85
36	Carbon and nitrogen additions induce distinct priming effects along an organic-matter decay continuum. Scientific Reports, 2016, 6, 19865.	3.3	81

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37	Spatial distribution and catalytic mechanisms of Î2-glucosidase activity at the root-soil interface. Biology and Fertility of Soils, 2016, 52, 505-514.	4.3	80
38	Aggregate size and their disruption affect 14C-labeled glucose mineralization and priming effect. Applied Soil Ecology, 2015, 90, 1-10.	4.3	77
39	Microbial growth and enzyme kinetics in rhizosphere hotspots are modulated by soil organics and nutrient availability. Soil Biology and Biochemistry, 2020, 141, 107662.	8.8	77
40	Impact of manure on soil biochemical properties: A global synthesis. Science of the Total Environment, 2020, 745, 141003.	8.0	77
41	Microbial response to rhizodeposition depending on water regimes in paddy soils. Soil Biology and Biochemistry, 2013, 65, 195-203.	8.8	76
42	Stimulation of r- vs. K-selected microorganisms by elevated atmospheric CO2 depends on soil aggregate size. FEMS Microbiology Ecology, 2009, 69, 43-52.	2.7	73
43	Spatio-temporal patterns of enzyme activities after manure application reflect mechanisms of niche differentiation between plants and microorganisms. Soil Biology and Biochemistry, 2017, 112, 100-109.	8.8	72
44	Strong priming of soil organic matter induced by frequent input of labile carbon. Soil Biology and Biochemistry, 2021, 152, 108069.	8.8	70
45	Nitrogen fertilization increases rhizodeposit incorporation into microbial biomass and reduces soil organic matter losses. Biology and Fertility of Soils, 2017, 53, 419-429.	4.3	65
46	Warming increases hotspot areas of enzyme activity and shortens the duration of hot moments in the root-detritusphere. Soil Biology and Biochemistry, 2017, 107, 226-233.	8.8	62
47	Linkages between the soil organic matter fractions and the microbial metabolic functional diversity within a broad-leaved Korean pine forest. European Journal of Soil Biology, 2015, 66, 57-64.	3.2	61
48	Enzyme properties down the soil profile - A matter of substrate quality in rhizosphere and detritusphere. Soil Biology and Biochemistry, 2016, 103, 274-283.	8.8	61
49	Priming effects induced by glucose and decaying plant residues on SOM decomposition: A three-source 13C/14C partitioning study. Soil Biology and Biochemistry, 2018, 121, 138-146.	8.8	55
50	Quantitative soil zymography: Mechanisms, processes of substrate and enzyme diffusion in porous media. Soil Biology and Biochemistry, 2018, 127, 156-167.	8.8	55
51	Adaptive responses of soil microbial communities under experimental acid stress in controlled laboratory studies. Applied Soil Ecology, 1999, 11, 207-216.	4.3	53
52	Microbial immobilisation of phosphorus in soils exposed to drying-rewetting and freeze-thawing cycles. Biology and Fertility of Soils, 2016, 52, 685-696.	4.3	50
53	Contrasting responses of phosphatase kinetic parameters to nitrogen and phosphorus additions in forest soils. Functional Ecology, 2018, 32, 106-116.	3.6	44
54	Carbon sequestration and turnover in soil under the energy crop <i>Miscanthus</i>: repeated ¹³C natural abundance approach and literature synthesis. GCB Bioenergy, 2018, 10, 262-271.	5.6	44

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55	Soil enzymes in response to climate warming: Mechanisms and feedbacks. Functional Ecology, 2022, 36, 1378-1395.	3.6	44
56	How do microbial communities in top- and subsoil respond to root litter addition under field conditions?. Soil Biology and Biochemistry, 2016, 103, 28-38.	8.8	43
57	Aggregate size and glucose level affect priming sources: A three-source-partitioning study. Soil Biology and Biochemistry, 2016, 97, 199-210.	8.8	42
58	Substrate quality affects microbialâ€•and enzyme activities in rooted soil. Journal of Plant Nutrition and Soil Science, 2016, 179, 39-47.	1.9	40
59	Spatial patterns of extracellular enzymes: Combining X-ray computed micro-tomography and 2D zymography. Soil Biology and Biochemistry, 2019, 135, 411-419.	8.8	40
60	Management of grasslands by mowing versus grazing â€" impacts on soil organic matter quality and microbial functioning. Applied Soil Ecology, 2020, 156, 103701.	4.3	40
61	Soil microbial carbon turnover decreases with increasing molecular size. Soil Biology and Biochemistry, 2013, 62, 115-118.	8.8	39
62	ORCHIMIC (v1.0), a microbe-mediated model for soil organic matter decomposition. Geoscientific Model Development, 2018, 11, 2111-2138.	3.6	39
63	Interactive priming effect of labile carbon and crop residues on SOM depends on residue decomposition stage: Three-source partitioning to evaluate mechanisms. Soil Biology and Biochemistry, 2018, 126, 179-190.	8.8	38
64	Extracellular enzyme activities in a tropical mountain rainforest region of southern Ecuador affected by low soil P status and land-use change. Applied Soil Ecology, 2014, 74, 1-11.	4.3	37
65	Nitrogen uptake and utilisation as a competition factor between invasive Duchesnea indica and native Fragaria vesca. Plant and Soil, 2010, 331, 105-114.	3.7	36
66	Soil microbial biomass and its activity estimated by kinetic respiration analysis â€" Statistical guidelines. Soil Biology and Biochemistry, 2012, 45, 102-112.	8.8	36
67	Plant traits regulating N capture define microbial competition in the rhizosphere. European Journal of Soil Biology, 2014, 61, 41-48.	3.2	36
68	Root trait plasticity and plant nutrient acquisition in phosphorus limited soil. Journal of Plant Nutrition and Soil Science, 2019, 182, 945-952.	1.9	36
69	Coupling zymography with pH mapping reveals a shift in lupine phosphorus acquisition strategy driven by cluster roots. Soil Biology and Biochemistry, 2019, 135, 420-428.	8.8	36
70	Soil microorganisms exhibit enzymatic and priming response to root mucilage under drought. Soil Biology and Biochemistry, 2018, 116, 410-418.	8.8	35
71	Dominant extracellular enzymes in priming of SOM decomposition depend on temperature. Geoderma, 2019, 343, 187-195.	5.1	34
72	DNA-based determination of soil microbial biomass in alkaline and carbonaceous soils of semi-arid climate. Journal of Arid Environments, 2018, 150, 54-61.	2.4	33

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73	Functional soil organic matter fractions in response to long-term fertilization in upland and paddy systems in South China. Catena, 2018, 162, 270-277.	5.0	33
74	Spatiotemporal patterns of enzyme activities in the rhizosphere: effects of plant growth and root morphology. Biology and Fertility of Soils, 2018, 54, 819-828.	4.3	31
75	Shift from dormancy to microbial growth revealed by RNA:DNA ratio. Ecological Indicators, 2018, 85, 603-612.	6.3	30
76	Changes in the Size of the Active Microbial Pool Explain Short-Term Soil Respiratory Responses to Temperature and Moisture. Frontiers in Microbiology, 2016, 7, 524.	3.5	29
77	Depth rather than microrelief controls microbial biomass and kinetics of C-, N-, P- and S-cycle enzymes in peatland. Geoderma, 2018, 324, 67-76.	5.1	29
78	Temperature sensitivity of soil organic matter mineralization decreases with longâ€term N fertilization: Evidence from four Q₁₀ estimation approaches. Land Degradation and Development, 2020, 31, 683-693.	3.9	29
79	Mapping the footprint of nematodes in the rhizosphere: Cluster root formation and spatial distribution of enzyme activities. Soil Biology and Biochemistry, 2017, 115, 213-220.	8.8	22
80	Calibration of 2â€Ð soil zymography for correct analysis of enzyme distribution. European Journal of Soil Science, 2019, 70, 715-726.	3.9	21
81	Spatiotemporal Dynamics of Maize (Zea mays L.) Root Growth and Its Potential Consequences for the Assembly of the Rhizosphere Microbiota. Frontiers in Microbiology, 2021, 12, 619499.	3.5	21
82	Time-lapse approach to correct deficiencies of 2D soil zymography. Soil Biology and Biochemistry, 2021, 157, 108225.	8.8	21
83	A preview of perennial grain agriculture: knowledge gain from biotic interactions in natural and agricultural ecosystems. Ecosphere, 2017, 8, e02048.	2.2	20
84	Towards a conversion factor for soil microbial phosphorus. European Journal of Soil Biology, 2018, 87, 1-8.	3.2	20
85	Maize phenology alters the distribution of enzyme activities in soil: Field estimates. Applied Soil Ecology, 2018, 125, 233-239.	4.3	19
86	Hydrolase kinetics to detect temperature-related changes in the rates of soil organic matter decomposition. European Journal of Soil Biology, 2017, 81, 108-115.	3.2	17
87	Compatibility of X-ray computed tomography with plant gene expression, rhizosphere bacterial communities and enzyme activities. Journal of Experimental Botany, 2020, 71, 5603-5614.	4.8	17
88	Growth rates of rhizosphere microorganisms depend on competitive abilities of plants and N supply. Plant Biosystems, 2010, 144, 408-413.	1.6	16
89	Organic Nutrients Induced Coupled C- and P-Cycling Enzyme Activities During Microbial Growth in Forest Soils. Frontiers in Forests and Global Change, 2020, 3, .	2.3	16
90	Priming Effects in Relation to Soil Conditions â€“ Mechanisms. Encyclopedia of Earth Sciences Series, 2011, , 657-667.	0.1	14

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91	Bridging Microbial Functional Traits With Localized Process Rates at Soil Interfaces. Frontiers in Microbiology, 2021, 12, 625697.	3.5	12
92	Nitrogen fixing bacteria facilitate microbial biodegradation of a bio-based and biodegradable plastic in soils under ambient and future climatic conditions. Environmental Sciences: Processes and Impacts, 2022, 24, 233-241.	3.5	12
93	Soil oxidoreductase zymography: Visualizing spatial distributions of peroxidase and phenol oxidase activities at the root-soil interface. Soil Biology and Biochemistry, 2022, 167, 108610.	8.8	12
94	Oily waste containing natural radionuclides: does it cause stimulation orÂinhibition of soil bacterial community?. Journal of Plant Nutrition and Soil Science, 2015, 178, 825-833.	1.9	11
95	Organic N deposition favours soil C sequestration by decreasing priming effect. Plant and Soil, 2019, 445, 439-451.	3.7	11
96	Microbial tradeoffs in internal and external use of resources regulated by phosphorus and carbon availability. European Journal of Soil Biology, 2021, 106, 103353.	3.2	11
97	Oxygen matters: Short- and medium-term effects of aeration on hydrolytic enzymes in a paddy soil. Geoderma, 2022, 407, 115548.	5.1	11
98	Keep oxygen in check: Contrasting effects of short-term aeration on hydrolytic versus oxidative enzymes in paddy soils. Soil Biology and Biochemistry, 2022, 169, 108690.	8.8	11
99	Are enzymes transported in soils by water fluxes?. Soil Biology and Biochemistry, 2022, 168, 108633.	8.8	10
100	Effect of snowpack pattern on cold-season CO2 efflux from soils under temperate continental climate. Geoderma, 2017, 304, 28-39.	5.1	9
101	Fertilization promotes microbial growth and minimum tillage increases nutrient-acquiring enzyme activities in a semiarid agro-ecosystem. Applied Soil Ecology, 2022, 177, 104529.	4.3	9
102	Land use impact on carbon mineralization in well aerated soils is mainly explained by variations of particulate organic matter rather than of soil structure. Soil, 2022, 8, 253-267.	4.9	7
103	Links among Microbial Communities, Soil Properties and Functions: Are Fungi the Sole Players in Decomposition of Bio-Based and Biodegradable Plastic?. Polymers, 2022, 14, 2801.	4.5	6
104	Effects of Elevated CO2 in the Atmosphere on Soil C and N Turnover. Developments in Soil Science, 2018, , 207-219.	0.5	5
105	Development of micro-zymography: Visualization of enzymatic activity at the microscopic scale for aggregates collected from the rhizosphere. Plant and Soil, 2022, 478, 253-271.	3.7	5
106	An improved Amplex Redâ€based fluorometric assay of phenol oxidases and peroxidases activity: A case study on Haplic Chernozem. European Journal of Soil Science, 2022, 73, .	3.9	4
107	Two-Phase Conceptual Framework of Phosphatase Activity and Phosphorus Bioavailability. Frontiers in Plant Science, 0, 13, .	3.6	4
108	Editorial for soil organic matter 2019 special issue. European Journal of Soil Science, 2019, 70, 713-714.	3.9	0