

Bahar S Razavi

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4180003/publications.pdf>

Version: 2024-02-01

61
papers

3,485
citations

117619

34
h-index

149686

56
g-index

66
all docs

66
docs citations

66
times ranked

2600
citing authors

#	ARTICLE	IF	CITATIONS
1	Rhizosphere size and shape: Temporal dynamics and spatial stationarity. <i>Soil Biology and Biochemistry</i> , 2019, 135, 343-360.	8.8	356
2	Plant flavones enrich rhizosphere Oxalobacteraceae to improve maize performance under nitrogen deprivation. <i>Nature Plants</i> , 2021, 7, 481-499.	9.3	247
3	Rare taxa of alkaline phosphomonoesterase-harboring microorganisms mediate soil phosphorus mineralization. <i>Soil Biology and Biochemistry</i> , 2019, 131, 62-70.	8.8	193
4	Rhizosphere shape of lentil and maize: Spatial distribution of enzyme activities. <i>Soil Biology and Biochemistry</i> , 2016, 96, 229-237.	8.8	148
5	Microbial spatial footprint as a driver of soil carbon stabilization. <i>Nature Communications</i> , 2019, 10, 3121.	12.8	124
6	Earthworm burrows: Kinetics and spatial distribution of enzymes of C-, N- and P- cycles. <i>Soil Biology and Biochemistry</i> , 2016, 99, 94-103.	8.8	110
7	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.	4.3	96
8	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.	8.8	96
9	Nonlinear temperature sensitivity of enzyme kinetics explains canceling effect—a case study on loamy haplic Luvisol. <i>Frontiers in Microbiology</i> , 2015, 6, 1126.	3.5	91
10	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.	8.8	86
11	Temperature selects for static soil enzyme systems to maintain high catalytic efficiency. <i>Soil Biology and Biochemistry</i> , 2016, 97, 15-22.	8.8	85
12	Spatial distribution and catalytic mechanisms of β -glucosidase activity at the root-soil interface. <i>Biology and Fertility of Soils</i> , 2016, 52, 505-514.	4.3	80
13	Microbial growth and enzyme kinetics in rhizosphere hotspots are modulated by soil organics and nutrient availability. <i>Soil Biology and Biochemistry</i> , 2020, 141, 107662.	8.8	77
14	Impact of manure on soil biochemical properties: A global synthesis. <i>Science of the Total Environment</i> , 2020, 745, 141003.	8.0	77
15	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.	4.3	73
16	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, 100-109.	8.8	72
17	C/P stoichiometry of dying rice root defines the spatial distribution and dynamics of enzyme activities in root-detritosphere. <i>Biology and Fertility of Soils</i> , 2019, 55, 251-263.	4.3	70
18	Combined biochar and nitrogen application stimulates enzyme activity and root plasticity. <i>Science of the Total Environment</i> , 2020, 735, 139393.	8.0	70

#	ARTICLE	IF	CITATIONS
19	Land use affects soil biochemical properties in Mt. Kilimanjaro region. <i>Catena</i> , 2016, 141, 22-29.	5.0	69
20	Hot experience for cold-adapted microorganisms: Temperature sensitivity of soil enzymes. <i>Soil Biology and Biochemistry</i> , 2017, 105, 236-243.	8.8	68
21	Labile carbon matters more than temperature for enzyme activity in paddy soil. <i>Soil Biology and Biochemistry</i> , 2019, 135, 134-143.	8.8	65
22	Spatial pattern of enzyme activities depends on root exudate composition. <i>Soil Biology and Biochemistry</i> , 2019, 133, 83-93.	8.8	65
23	Warming increases hotspot areas of enzyme activity and shortens the duration of hot moments in the root-detritusphere. <i>Soil Biology and Biochemistry</i> , 2017, 107, 226-233.	8.8	62
24	Nutrients in the rhizosphere: A meta-analysis of content, availability, and influencing factors. <i>Science of the Total Environment</i> , 2022, 826, 153908.	8.0	60
25	Quantitative soil zymography: Mechanisms, processes of substrate and enzyme diffusion in porous media. <i>Soil Biology and Biochemistry</i> , 2018, 127, 156-167.	8.8	55
26	Soil zymography: Simple and reliable? Review of current knowledge and optimization of the method. <i>Rhizosphere</i> , 2019, 11, 100161.	3.0	53
27	Rhizosphere hotspots: Root hairs and warming control microbial efficiency, carbon utilization and energy production. <i>Soil Biology and Biochemistry</i> , 2020, 148, 107872.	8.8	48
28	Insights into the associations between soil quality and ecosystem multifunctionality driven by fertilization management: A case study from the North China Plain. <i>Journal of Cleaner Production</i> , 2022, 362, 132265.	9.3	48
29	Deciphering the rhizobium inoculation effect on spatial distribution of phosphatase activity in the rhizosphere of alfalfa under copper stress. <i>Soil Biology and Biochemistry</i> , 2019, 137, 107574.	8.8	47
30	Spatial patterns of extracellular enzymes: Combining X-ray computed micro-tomography and 2D zymography. <i>Soil Biology and Biochemistry</i> , 2019, 135, 411-419.	8.8	40
31	Effects of plastic and straw mulching on soil microbial P limitations in maize fields: Dependency on soil organic carbon demonstrated by ecoenzymatic stoichiometry. <i>Geoderma</i> , 2021, 388, 114928.	5.1	40
32	Resistance of microbial community and its functional sensitivity in the rhizosphere hotspots to drought. <i>Soil Biology and Biochemistry</i> , 2021, 161, 108360.	8.8	39
33	Microbial and enzymes response to nutrient additions in soils of Mt. Kilimanjaro region depending on land use. <i>European Journal of Soil Biology</i> , 2015, 69, 33-40.	3.2	37
34	Expansion of rice enzymatic rhizosphere: temporal dynamics in response to phosphorus and cellulose application. <i>Plant and Soil</i> , 2019, 445, 169-181.	3.7	37
35	Coupling zymography with pH mapping reveals a shift in lupine phosphorus acquisition strategy driven by cluster roots. <i>Soil Biology and Biochemistry</i> , 2019, 135, 420-428.	8.8	36
36	Rare microbial taxa rather than phoD gene abundance determine hotspots of alkaline phosphomonoesterase activity in the karst rhizosphere soil. <i>Biology and Fertility of Soils</i> , 2021, 57, 257-268.	4.3	32

#	ARTICLE	IF	CITATIONS
37	Spatiotemporal patterns of enzyme activities in the rhizosphere: effects of plant growth and root morphology. <i>Biology and Fertility of Soils</i> , 2018, 54, 819-828.	4.3	31
38	Comparable effects of manure and its biochar on reducing soil Cr bioavailability and narrowing the rhizosphere extent of enzyme activities. <i>Environment International</i> , 2020, 134, 105277.	10.0	31
39	Maize genotype-specific exudation strategies: An adaptive mechanism to increase microbial activity in the rhizosphere. <i>Soil Biology and Biochemistry</i> , 2021, 162, 108426.	8.8	31
40	Co-localised phosphorus mobilization processes in the rhizosphere of field-grown maize jointly contribute to plant nutrition. <i>Soil Biology and Biochemistry</i> , 2022, 165, 108497.	8.8	27
41	How "hot" are hotspots: Statistically localizing the high-activity areas on soil and rhizosphere images. <i>Rhizosphere</i> , 2020, 16, 100259.	3.0	25
42	Mapping the footprint of nematodes in the rhizosphere: Cluster root formation and spatial distribution of enzyme activities. <i>Soil Biology and Biochemistry</i> , 2017, 115, 213-220.	8.8	22
43	Effects of rhizosphere wettability on microbial biomass, enzyme activities and localization. <i>Rhizosphere</i> , 2018, 7, 35-42.	3.0	21
44	Calibration of 2D soil zymography for correct analysis of enzyme distribution. <i>European Journal of Soil Science</i> , 2019, 70, 715-726.	3.9	21
45	Spatiotemporal Dynamics of Maize (<i>Zea mays</i> L.) Root Growth and Its Potential Consequences for the Assembly of the Rhizosphere Microbiota. <i>Frontiers in Microbiology</i> , 2021, 12, 619499.	3.5	21
46	Time-lapse approach to correct deficiencies of 2D soil zymography. <i>Soil Biology and Biochemistry</i> , 2021, 157, 108225.	8.8	21
47	Differentiated response of plant and microbial C: N: P stoichiometries to phosphorus application in phosphorus-limited paddy soil. <i>European Journal of Soil Biology</i> , 2019, 95, 103122.	3.2	19
48	The geographical scale dependence of diazotroph assembly and activity: Effect of a decade fertilization. <i>Geoderma</i> , 2021, 386, 114923.	5.1	18
49	Improvement of dragonhead (<i>Dracocephalum moldavica</i> L.) yield quality through a coupled intercropping system and vermicompost application along with maintenance of soil microbial activity. <i>Land Degradation and Development</i> , 2021, 32, 2833-2848.	3.9	17
50	Accelerated microbial activity, turnover and efficiency in the drilosphere is depth dependent. <i>Soil Biology and Biochemistry</i> , 2020, 147, 107852.	8.8	17
51	Mutualistic interaction between arbuscular mycorrhiza fungi and soybean roots enhances drought resistant through regulating glucose exudation and rhizosphere expansion. <i>Soil Biology and Biochemistry</i> , 2022, 171, 108728.	8.8	14
52	Effects of land use and elevation on the functional characteristics of soil enzymes at Mt. Kilimanjaro. <i>European Journal of Soil Biology</i> , 2020, 97, 103167.	3.2	13
53	Root hairs and protein addition to soil promote leucine aminopeptidase activity of <i>Hordeum vulgare</i> L. <i>Rhizosphere</i> , 2021, 18, 100329.	3.0	13
54	Phenological Stage, Plant Biomass, and Drought Stress Affect Microbial Biomass and Enzyme Activities in the Rhizosphere of <i>Enteropogon macrostachyus</i> . <i>Pedosphere</i> , 2019, 29, 259-265.	4.0	12

#	ARTICLE	IF	CITATIONS
55	Bridging Microbial Functional Traits With Localized Process Rates at Soil Interfaces. <i>Frontiers in Microbiology</i> , 2021, 12, 625697.	3.5	12
56	Optimization of EDTA and citric acid for risk assessment in the remediation of lead contaminated soil. <i>Rhizosphere</i> , 2021, 17, 100277.	3.0	10
57	Croplands conversion to cash crops in dry regions: Consequences of nitrogen losses and decreasing nitrogen use efficiency for the food chain system. <i>Land Degradation and Development</i> , 2021, 32, 1103-1113.	3.9	10
58	Visualization of Enzyme Activities in Earthworm Biopores by In Situ Soil Zymography. <i>Methods in Molecular Biology</i> , 2017, 1626, 229-238.	0.9	8
59	Reduction in root active zones under drought stress controls spatial distribution and catalytic efficiency of enzyme activities in rhizosphere of wheat. <i>Rhizosphere</i> , 2022, 23, 100561.	3.0	7
60	Reply to: "Variables in the effect of land use on soil extrapore enzymatic activity and carbon stabilization" by Glenn (2020). <i>Nature Communications</i> , 2020, 11, 6427.	12.8	3
61	Nitrous Oxide Emission from Forage Plantain and Perennial Ryegrass Swards Is Affected by Belowground Resource Allocation Dynamics. <i>Agronomy</i> , 2021, 11, 1936.	3.0	2