

# Stephan Wirth

## List of Publications by Year in descending order

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93  
papers

4,549  
citations

117625

34  
h-index

114465

63  
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94  
all docs

94  
docs citations

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times ranked

4688  
citing authors

#	ARTICLE	IF	CITATIONS
1	Phytohormones and Beneficial Microbes: Essential Components for Plants to Balance Stress and Fitness. <i>Frontiers in Microbiology</i> , 2017, 8, 2104.	3.5	448
2	Salt-Tolerant Plant Growth Promoting Rhizobacteria for Enhancing Crop Productivity of Saline Soils. <i>Frontiers in Microbiology</i> , 2019, 10, 2791.	3.5	312
3	Dye-labelled substrates for the assay and detection of chitinase and lysozyme activity. <i>Journal of Microbiological Methods</i> , 1990, 12, 197-205.	1.6	245
4	The Interaction between Arbuscular Mycorrhizal Fungi and Endophytic Bacteria Enhances Plant Growth of <i>Acacia gerrardii</i> under Salt Stress. <i>Frontiers in Microbiology</i> , 2016, 7, 1089.	3.5	229
5	Endophytic Bacteria Improve Plant Growth, Symbiotic Performance of Chickpea ( <i>Cicer arietinum</i> L.) and Induce Suppression of Root Rot Caused by <i>Fusarium solani</i> under Salt Stress. <i>Frontiers in Microbiology</i> , 2017, 8, 1887.	3.5	227
6	Coordination between <i>Bradyrhizobium</i> and <i>Pseudomonas</i> alleviates salt stress in soybean through altering root system architecture. <i>Journal of Plant Interactions</i> , 2017, 12, 100-107.	2.1	145
7	Antimicrobial Activity of Medicinal Plants Correlates with the Proportion of Antagonistic Endophytes. <i>Frontiers in Microbiology</i> , 2017, 8, 199.	3.5	136
8	Alleviation of cadmium stress in <i>Solanum lycopersicum</i> L. by arbuscular mycorrhizal fungi via induction of acquired systemic tolerance. <i>Saudi Journal of Biological Sciences</i> , 2016, 23, 272-281.	3.8	133
9	Micro-plate colourimetric assay for Endo-acting cellulase, xylanase, chitinase, 1,3- $\beta$ -glucanase and amylase extracted from forest soil horizons. <i>Soil Biology and Biochemistry</i> , 1992, 24, 511-519.	8.8	126
10	Increased resistance of drought by <i>Trichoderma harzianum</i> fungal treatment correlates with increased secondary metabolites and proline content. <i>Journal of Integrative Agriculture</i> , 2017, 16, 1751-1757.	3.5	119
11	Biochar Treatment Resulted in a Combined Effect on Soybean Growth Promotion and a Shift in Plant Growth Promoting Rhizobacteria. <i>Frontiers in Microbiology</i> , 2016, 7, 209.	3.5	114
12	Impact of soil salinity on the plant-growth promoting and biological control abilities of root associated bacteria. <i>Saudi Journal of Biological Sciences</i> , 2017, 24, 1601-1608.	3.8	98
13	Secondary salinity effects on soil microbial biomass. <i>Biology and Fertility of Soils</i> , 2010, 46, 445-449.	4.3	90
14	Diversity and Activity of Cellulose-Decomposing Bacteria, Isolated from a Sandy and a Loamy Soil after Long-Term Manure Application. <i>Microbial Ecology</i> , 2008, 55, 512-522.	2.8	82
15	Microbial respiration activities of soils from different climatic regions of European Russia. <i>European Journal of Soil Biology</i> , 2008, 44, 147-157.	3.2	82
16	Reconfigurable AUV for intervention missions: a case study on underwater object recovery. <i>Intelligent Service Robotics</i> , 2012, 5, 19-31.	2.6	82
17	Microbial activity in a sandy arable soil is governed by the fertilization regime. <i>European Journal of Soil Biology</i> , 2004, 40, 87-94.	3.2	77
18	Biochar-based <i>Bradyrhizobium</i> inoculum improves growth of lupin ( <i>Lupinus angustifolius</i> L.) under drought stress. <i>European Journal of Soil Biology</i> , 2017, 78, 38-42.	3.2	75

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19	Diet simplification selects for high gut microbial diversity and strong fermenting ability in high-altitude pikas. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 6739-6751.	3.6	75
20	Co-Inoculation of Rhizobacteria and Biochar Application Improves Growth and Nutrients in Soybean and Enriches Soil Nutrients and Enzymes. <i>Agronomy</i> , 2020, 10, 1142.	3.0	70
21	Pika Gut May Select for Rare but Diverse Environmental Bacteria. <i>Frontiers in Microbiology</i> , 2016, 7, 1269.	3.5	65
22	Forest succession on abandoned arable soils in European Russia – Impacts on microbial biomass, fungal-bacterial ratio, and basal CO <sub>2</sub> respiration activity. <i>European Journal of Soil Biology</i> , 2011, 47, 169-174.	3.2	62
23	Co-inoculation of rhizobacteria promotes growth, yield, and nutrient contents in soybean and improves soil enzymes and nutrients under drought conditions. <i>Scientific Reports</i> , 2021, 11, 22081.	3.3	58
24	Comparing symbiotic performance and physiological responses of two soybean cultivars to arbuscular mycorrhizal fungi under salt stress. <i>Saudi Journal of Biological Sciences</i> , 2019, 26, 38-48.	3.8	53
25	Potential effects of biochar-based microbial inoculants in agriculture. <i>Environmental Sustainability</i> , 2018, 1, 19-24.	2.8	50
26	Interactive Effects of Nutrients and Bradyrhizobium japonicum on the Growth and Root Architecture of Soybean (Glycine max L.). <i>Frontiers in Microbiology</i> , 2018, 9, 1000.	3.5	48
27	Diversity and activity of cellulolytic bacteria, isolated from the gut contents of grass carp ( <i>Ctenopharyngodon idellus</i> ) (Valenciennes) fed on Sudan grass ( <i>Sorghum sudanense</i> ) or artificial feedstuffs. <i>Aquaculture Research</i> , 2016, 47, 153-164.	1.8	47
28	Cellulose-Degrading Potentials and Phylogenetic Classification of Carboxymethyl-cellulose Decomposing Bacteria Isolated from Soil. <i>Systematic and Applied Microbiology</i> , 2002, 25, 584-591.	2.8	42
29	Diversity of autochthonous bacterial communities in the intestinal mucosa of grass carp ( <i>Ctenopharyngodon idellus</i> ) (Valenciennes) determined by culture-dependent and culture-independent techniques. <i>Aquaculture Research</i> , 2015, 46, 2344-2359.	1.8	42
30	Contrasting effects of biochar on N <sub>2</sub> O emission and N uptake at different N fertilizer levels on a temperate sandy loam. <i>Science of the Total Environment</i> , 2017, 578, 557-565.	8.0	42
31	The role played by microorganisms in the biogenesis of soil cracks: importance of substrate quantity and quality. <i>Soil Biology and Biochemistry</i> , 2001, 33, 1851-1858.	8.8	41
32	Phylogenetic Diversity and Population Densities of Culturable Cellulolytic Soil Bacteria across an Agricultural Encatchment. <i>Microbial Ecology</i> , 1999, 37, 238-247.	2.8	40
33	Exploration Transform: A stable exploring algorithm for robots in rescue environments. , 2007, , .		38
34	Microbial respiration activities related to sequentially separated, particulate and water-soluble organic matter fractions from arable and forest topsoils. <i>Soil Biology and Biochemistry</i> , 2010, 42, 418-428.	8.8	37
35	Calcium application enhances growth and alleviates the damaging effects induced by Cd stress in sesame ( <i>Sesamum indicum</i> L.). <i>Journal of Plant Interactions</i> , 2017, 12, 237-243.	2.1	37
36	Microbial cooperation in the rhizosphere improves liquorice growth under salt stress. <i>Bioengineered</i> , 2017, 8, 433-438.	3.2	37

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37	Impacts of biochar on basil ( <i>Ocimum basilicum</i> ) growth, root morphological traits, plant biochemical and physiological properties and soil enzymatic activities. <i>Scientia Horticulturae</i> , 2021, 290, 110518.	3.6	37
38	Effect of Biochar and Irrigation on Soybean-Rhizobium Symbiotic Performance and Soil Enzymatic Activity in Field Rhizosphere. <i>Agronomy</i> , 2019, 9, 626.	3.0	36
39	Impact of chars and readily available carbon on soil microbial respiration and microbial community composition in a dynamic incubation experiment. <i>Soil and Tillage Research</i> , 2016, 164, 18-24.	5.6	35
40	Application of multiple regression and neural network approaches for landscape-scale assessment of soil microbial biomass. <i>Soil Biology and Biochemistry</i> , 2005, 37, 1577-1580.	8.8	34
41	Soil Amendment With Different Maize Biochars Improves Chickpea Growth Under Different Moisture Levels by Improving Symbiotic Performance With <i>Mesorhizobium ciceri</i> and Soil Biochemical Properties to Varying Degrees. <i>Frontiers in Microbiology</i> , 2019, 10, 2423.	3.5	33
42	Effects of grazing management on leaf litter decomposition and soil microbial activities in northern Iranian rangeland. <i>Geoderma</i> , 2020, 361, 114100.	5.1	33
43	Role of calcium in AMF-mediated alleviation of the adverse impacts of cadmium stress in <i>Bassia indica</i> [Wight] A.J. Scott. <i>Saudi Journal of Biological Sciences</i> , 2019, 26, 828-838.	3.8	31
44	Response of soil microbial biomass, activities, and community structure at a pine stand in northeastern Germany 5 years after thinning. <i>Canadian Journal of Forest Research</i> , 2006, 36, 1427-1434.	1.7	26
45	Endophytic bacteria associated with halophyte <i>Seidlitzia rosmarinus</i> Ehrenb. ex Boiss. from saline soil of Uzbekistan and their plant beneficial traits. <i>Journal of Arid Land</i> , 2020, 12, 730-740.	2.3	26
46	The Effect of Biochars and Endophytic Bacteria on Growth and Root Rot Disease Incidence of <i>Fusarium</i> Infested Narrow-Leafed Lupin ( <i>Lupinus angustifolius</i> L.). <i>Microorganisms</i> , 2020, 8, 496.	3.6	26
47	Callase-(1,3- $\beta$ -D-glucanase) activity during spring reactivation in deciduous trees. <i>Plant Science</i> , 1993, 93, 19-23.	3.6	25
48	Alleviation of Salt Stress in Legumes by Co-inoculation with <i>Pseudomonas</i> and <i>Rhizobium</i> . , 2013, , 291-303.		25
49	Biochar mitigates effects of pesticides on soil biological activities. <i>Environmental Sustainability</i> , 2021, 4, 335-342.	2.8	23
50	Biochar Amendments Improve Licorice ( <i>Glycyrrhiza uralensis</i> Fisch.) Growth and Nutrient Uptake under Salt Stress. <i>Plants</i> , 2021, 10, 2135.	3.5	22
51	Regulatory roles of 24-epibrassinolide in tolerance of <i>Acacia gerrardii</i> Benth to salt stress. <i>Bioengineered</i> , 2018, 9, 61-71.	3.2	21
52	Effect of Biochar and Irrigation on the Interrelationships among Soybean Growth, Root Nodulation, Plant P Uptake, and Soil Nutrients in a Sandy Field. <i>Sustainability</i> , 2019, 11, 6542.	3.2	21
53	Biochar for Improving Soil Biological Properties and Mitigating Salt Stress in Plants on Salt-affected Soils. <i>Communications in Soil Science and Plant Analysis</i> , 2022, 53, 140-152.	1.4	21
54	Enzyme Activities in the Rhizosphere of Plants. <i>Soil Biology</i> , 2010, , 149-166.	0.8	18

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55	Implications of soil substrate and land use for properties of fen soils in North-East Germany Part I: Basic soil conditions, chemical and biological properties of topsoils. <i>Archives of Agronomy and Soil Science</i> , 2007, 53, 113-126.	2.6	17
56	Salt tolerant <i>Methylobacterium mesophilicum</i> showed viable colonization abilities in the plant rhizosphere. <i>Saudi Journal of Biological Sciences</i> , 2015, 22, 585-590.	3.8	17
57	Growth Response of Ginger ( <i>Zingiber officinale</i> ), Its Physiological Properties and Soil Enzyme Activities after Biochar Application under Greenhouse Conditions. <i>Horticulturae</i> , 2021, 7, 250.	2.8	17
58	Plant growth response of broad bean ( <i>Vicia faba</i> L.) to biochar amendment of loamy sand soil under irrigated and drought conditions. <i>Environmental Sustainability</i> , 2020, 3, 319-324.	2.8	16
59	Comparative assessment of soil microbial biomass determined by the methods of direct microscopy and substrate-induced respiration. <i>Microbiology</i> , 2008, 77, 356-364.	1.2	15
60	Short-Term Response of Soil Respiration to Addition of Chars: Impact of Fermentation Post-Processing and Mineral Nitrogen. <i>Pedosphere</i> , 2015, 25, 761-769.	4.0	15
61	Allelopathic effects of the aqueous extract of <i>Rhazya stricta</i> on growth and metabolism of <i>Salsola villosa</i> . <i>Plant Biosystems</i> , 2018, 152, 1263-1273.	1.6	15
62	Impact of multi-resistant transgenic Bt maize on straw decomposition and the involved microbial communities. <i>Applied Soil Ecology</i> , 2014, 73, 9-18.	4.3	14
63	Field Inoculation of Arbuscular Mycorrhizal Fungi Improves Fruit Quality and Root Physiological Activity of Citrus. <i>Agriculture (Switzerland)</i> , 2021, 11, 1297.	3.1	14
64	Bacterial endophytes from horseradish ( <i>Armoracia rusticana</i> G. Gaertn., B.Mey. & Scherb.) with antimicrobial efficacy against pathogens. <i>Plant, Soil and Environment</i> , 2020, 66, 309-316.	2.2	13
65	Diversity and Plant Growth-Promoting Ability of Endophytic, Halotolerant Bacteria Associated with <i>Tetragonia tetragonioides</i> (Pall.) Kuntze. <i>Plants</i> , 2022, 11, 49.	3.5	13
66	Soil microbiological monitoring of a pine forest after partial thinning for stand regeneration with beech seedlings. <i>Soil Science and Plant Nutrition</i> , 2004, 50, 815-819.	1.9	11
67	A multi-layer, closed-loop system for continuous measurement of soil CO <sub>2</sub> concentration. <i>Journal of Plant Nutrition and Soil Science</i> , 2018, 181, 61-68.	1.9	11
68	Diversity and biological activity of culturable endophytic bacteria associated with marigold ( <i>Calendula officinalis</i> L.). <i>AIMS Microbiology</i> , 2021, 7, 336-353.	2.2	11
69	The Integrated Effect of Microbial Inoculants and Biochar Types on Soil Biological Properties, and Plant Growth of Lettuce ( <i>Lactuca sativa</i> L.). <i>Plants</i> , 2022, 11, 423.	3.5	11
70	Soluble, dye-labelled substrates for a micro-plate assay of proteinase activity. <i>Journal of Microbiological Methods</i> , 1996, 25, 337-342.	1.6	10
71	Medicinal plants with phytotoxic activity harbour endophytic bacteria with plant growth inhibitory properties. <i>Environmental Sustainability</i> , 2018, 1, 209-215.	2.8	10
72	Response of Soybean to Hydrochar-Based <i>Rhizobium</i> Inoculation in Loamy Sandy Soil. <i>Microorganisms</i> , 2020, 8, 1674.	3.6	10

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73	Effects of shelterwood and single-tree cutting systems on topsoil quality and functions in northern Iranian forests. <i>Forest Ecology and Management</i> , 2020, 468, 118188.	3.2	10
74	Soil functional indicators in a mountain forest-rangeland mosaic of northern Iran. <i>Ecological Indicators</i> , 2021, 126, 107672.	6.3	10
75	Quantifizierung der Cellulaseaktivität und Nachweis von Fettsäure-Coating-Effekten im Pansen von Schafen. <i>Journal of Animal Physiology and Animal Nutrition</i> , 1991, 66, 45-52.	2.2	9
76	A soluble, dye-labelled chitin derivative adapted for the assay of krill chitinase. <i>Comparative Biochemistry and Physiology Part B: Comparative Biochemistry</i> , 1993, 105, 673-678.	0.2	9
77	Plant Hormones as Key Regulators in Plant-Microbe Interactions Under Salt Stress. <i>Microorganisms for Sustainability</i> , 2018, , 165-182.	0.7	9
78	Combining a root exclusion technique with continuous chamber and porous tube measurements for a point separation of ecosystem respiration in croplands. <i>Journal of Plant Nutrition and Soil Science</i> , 2018, 181, 41-50.	1.9	9
79	Degradability of raw and post-processed chars in a two-year field experiment. <i>Science of the Total Environment</i> , 2018, 628-629, 1600-1608.	8.0	8
80	Spatially-distributed microbial enzyme activities at intact, coated macropore surfaces in Luvisol Bt-horizons. <i>Soil Biology and Biochemistry</i> , 2021, 156, 108193.	8.8	8
81	Biochar mediated control of soil-borne phytopathogens. <i>Environmental Sustainability</i> , 2021, 4, 329-334.	2.8	8
82	Soil Microbial Properties Across an Encatchment in the Moraine, Agricultural Landscape of Northeast Germany. <i>Geomicrobiology Journal</i> , 1999, 16, 207-219.	2.0	7
83	Arbuscular mycorrhizal fungi alleviate salt stress in lupine ( <i>Lupinus termis</i> Forsk) through modulation of antioxidant defense systems and physiological traits. <i>Legume Research</i> , 2016, 39, .	0.1	7
84	Assessing the Changes in Bacterial diversity in Rhizosphere and Phyllosphere of Transgenic and Non-transgenic Potato Plant. <i>Plant Tissue Culture and Biotechnology</i> , 2008, 17, 87-95.	0.2	5
85	Interactive Effects of Biochar, Nitrogen, and Phosphorous on the Symbiotic Performance, Growth, and Nutrient Uptake of Soybean ( <i>Glycine max</i> L.). <i>Agronomy</i> , 2022, 12, 27.	3.0	4
86	Dynamics of Soil CO <sub>2</sub> Efflux and Vertical CO <sub>2</sub> Production in a European Beech and a Scots Pine Forest. <i>Frontiers in Forests and Global Change</i> , 2022, 5, .	2.3	4
87	Beneficial effects of biochar application on lettuce ( <i>Lactuca sativa</i> L.) growth, root morphological traits and physiological properties. <i>Annals of Phytomedicine an International Journal</i> , 2021, 10, .	0.1	2
88	Tripartite Interaction Among Root-Associated Beneficial Microbes Under Stress. , 2017, , 219-236.		1
89	Soil Salinity and Microbes: Diversity, Ecology, and Biotechnological Potential. <i>Microorganisms for Sustainability</i> , 2018, , 317-332.	0.7	1
90	Translocation of Soil Enzyme Activity by Leachates from Different Agricultural Drainage Systems. <i>International Journal of Soil Science</i> , 2008, 3, 52-61.	0.7	1

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91	Desert Truffles in Saudi Arabia: Diversity, Ecology, and Conservation. <i>Soil Biology</i> , 2018, , 353-369.	0.8	0
92	Biochar amendments improve licorice growth and nutrient uptake through altering the root system and soil enzyme activities in loamy sand under salt stress. , 0, , .		0
93	Water-soluble, dye-labelled fatty acid derivatives for preliminary detection of lipolytic microorganisms in agar media. <i>FEMS Microbiology Letters</i> , 1992, 95, 77-79.	1.8	0