Ivano Brunner

List of Publications by Year
in descending order

108 papers	6,292 citations	81900 39 h-index	74163 75 g-index
112 all docs	112 docs citations	112 times ranked	6805 citing authors

#	Article	IF	Citations
1	How tree roots respond to drought. Frontiers in Plant Science, 2015, 6, 547.	3.6	520
2	Specific root length as an indicator of environmental change. Plant Biosystems, 2007, 141, 426-442.	1.6	476
3	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. New Phytologist, 2021, 232, 1123-1158.	7.3	277
4	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. New Phytologist, 2021, 232, 973-1122.	7.3	216
5	Bacterial, Archaeal and Fungal Succession in the Forefield of a Receding Glacier. Microbial Ecology, 2012, 63, 552-564.	2.8	214
6	Variation in fine root biomass of three European tree species: Beech (<i>Fagus sylvatica</i>L.), Norway spruce (<i>Picea abies</i>L. Karst.), and Scots pine (<i>Pinus sylvestris</i>L.). Plant Biosystems, 2007, 141, 394-405.	1.6	189
7	Weathering-Associated Bacteria from the Damma Glacier Forefield: Physiological Capabilities and Impact on Granite Dissolution. Applied and Environmental Microbiology, 2010, 76, 4788-4796.	3.1	186
8	Vertical distribution of the soil microbiota along a successional gradient in a glacier forefield. Molecular Ecology, 2015, 24, 1091-1108.	3.9	180
9	Fine-root turnover rates of European forests revisited: an analysis of data from sequential coring and ingrowth cores. Plant and Soil, 2013, 362, 357-372.	3.7	167
10	A decade of irrigation transforms the soil microbiome of a semiâ€arid pine forest. Molecular Ecology, 2017, 26, 1190-1206.	3.9	163
11	Chemical and Biological Gradients along the Damma Glacier Soil Chronosequence, Switzerland. Vadose Zone Journal, 2011, 10, 867-883.	2.2	158
12	Tree roots in a changing world. Journal of Forest Research, 2007, 12, 78-82.	1.4	154
13	Heavy metal accumulation and phytostabilisation potential of tree fine roots in a contaminated soil. Environmental Pollution, 2008, 152, 559-568.	7.5	154
14	Aluminum exclusion and aluminum tolerance in woody plants. Frontiers in Plant Science, 2013, 4, 172.	3.6	144
15	Vitality of tree fine roots: reevaluation of the tetrazolium test. Tree Physiology, 2003, 23, 257-263.	3.1	124
16	Ability of fungi isolated from plastic debris floating in the shoreline of a lake to degrade plastics. PLoS ONE, 2018, 13, e0202047.	2.5	107
17	Exudation of organic acid anions from poplar roots after exposure to Al, Cu and Zn. Tree Physiology, 2007, 27, 313-320.	3.1	100
18	Accumulation of mercury and methylmercury by mushrooms and earthworms from forest soils. Environmental Pollution, 2011, 159, 2861-2869.	7.5	98

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19	The Evolutionary Split of Pinaceae from Other Conifers: Evidence from an Intron Loss and a Multigene Phylogeny. Molecular Phylogenetics and Evolution, 2001, 21, 167-175.	2.7	96
20	Microbial succession on decomposing root litter in a drought-prone Scots pine forest. ISME Journal, 2019, 13, 2346-2362.	9.8	84
21	Morphological and physiological responses of Scots pine fine roots to water supply in a dry climatic region in Switzerland. Tree Physiology, 2009, 29, 541-550.	3.1	78
22	Pioneering fungi from the Damma glacier forefield in the Swiss Alps can promote granite weathering. Geobiology, 2011, 9, 266-279.	2.4	78
23	Extracellular complexation of Cd in the Hartig net and cytosolic Zn sequestration in the fungal mantle of Picea abies - Hebeloma crustuliniforme ectomycorrhizas. Plant, Cell and Environment, 2000, 23, 1257-1265.	5.7	77
24	Contribution of Ectomycorrhizal Fungi to Cadmium Uptake of Poplars and Willows from a Heavily Polluted Soil. Plant and Soil, 2005, 277, 245-253.	3.7	76
25	Molecular identification of fine roots of trees from the Alps: reliable and fast DNA extraction and PCR-RFLP analyses of plastid DNA. Molecular Ecology, 2001, 10, 2079-2087.	3.9	70
26	Title is missing!. Plant and Soil, 1999, 216, 103-116.	3.7	65
27	Pattern of Elemental Release During the Granite Dissolution Can Be Changed by Aerobic Heterotrophic Bacterial Strains Isolated from Damma Glacier (Central Alps) Deglaciated Granite Sand. Microbial Ecology, 2012, 63, 865-882.	2.8	63
28	Effects of root exudates and humic substances on weathering kinetics. Water, Air, and Soil Pollution, 1993, 68, 213-229.	2.4	56
29	Tree fine root Ca/Al molar ratioÂâ€“Âindicator of Al and acidity stress. Plant Biosystems, 2007, 141, 460-480.	1.6	56
30	The â€œPlastisphereâ€• of Biodegradable Plastics Is Characterized by Specific Microbial Taxa of Alpine and Arctic Soils. Frontiers in Environmental Science, 2020, 8, .	3.3	54
31	Weathering, soil formation and initial ecosystem evolution on a glacier forefield: a case study from the Damma Glacier, Switzerland. Mineralogical Magazine, 2008, 72, 19-22.	1.4	50
32	Rhizosphere activity in an old-growth forest reacts rapidly to changes in soil moisture and shapes whole-tree carbon allocation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24885-24892.	7.1	50
33	Polyphenols in the woody roots of Norway spruce and European beech reduce TTC. Tree Physiology, 2007, 27, 155-160.	3.1	49
34	Fine root chemistry, starch concentration, and â€˜vitalityâ€™ of subalpine conifer forests in relation to soil pH. Forest Ecology and Management, 2002, 165, 75-84.	3.2	48
35	Transcriptome responses to aluminum stress in roots of aspen (Populus tremula). BMC Plant Biology, 2010, 10, 185.	3.6	48
36	Unravelling the age of fine roots of temperate and boreal forests. Nature Communications, 2018, 9, 3006.	12.8	48

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37	Element localization in ultrathin cryosections of high-pressure frozen ectomycorrhizal spruce roots. Plant, Cell and Environment, 1997, 20, 929-937.	5.7	46
38	Nucleotide sequence variation of chitin synthase genes among ectomycorrhizal fungi and its potential use in taxonomy. Applied and Environmental Microbiology, 1994, 60, 3105-3111.	3.1	45
39	Influence of ectomycorrhization and cesium/potassium ratio on uptake and localization of cesium in Norway spruce seedlings. Tree Physiology, 1996, 16, 705-711.	3.1	44
40	Fine root growth and element concentrations of Norway spruce as affected by wood ash and liquid fertilisation. Plant and Soil, 2003, 255, 253-264.	3.7	43
41	Fine-Root Traits Reveal Contrasting Ecological Strategies in European Beech and Norway Spruce During Extreme Drought. Frontiers in Plant Science, 2020, 11, 1211.	3.6	42
42	Deep Soil Layers of Drought-Exposed Forests Harbor Poorly Known Bacterial and Fungal Communities. Frontiers in Microbiology, 2021, 12, 674160.	3.5	41
43	Nine Years of Irrigation Cause Vegetation and Fine Root Shifts in a Water-Limited Pine Forest. PLoS ONE, 2014, 9, e96321.	2.5	40
44	Characterization and comparison of macrofungal communities in an Alnus tenuifolia and an Alnus crispa forest in Alaska. Canadian Journal of Botany, 1992, 70, 1247-1258.	1.1	39
45	Root parameters of forest trees as sensitive indicators of acidifying pollutants: a review of research of Japanese forest trees. Journal of Forest Research, 2007, 12, 134-142.	1.4	39
46	Effects of high nitrogen concentrations on ectomycorrhizal structure and growth of seedlings of Picea abies (L.) Karst.. New Phytologist, 1995, 129, 83-95.	7.3	37
47	Detection and localization of aluminum and heavy metals in ectomycorrhizal Norway spruce seedlings. Environmental Pollution, 2000, 108, 121-128.	7.5	37
48	Wood-ash recycling affects forest soil and tree fine-root chemistry and reverses soil acidification. Plant and Soil, 2004, 267, 61-71.	3.7	36
49	Root exudation, organic acids, and element distribution in roots of Norway spruce seedlings treated with aluminum in hydroponics. Journal of Plant Nutrition and Soil Science, 2001, 164, 519.	1.9	35
50	Induction of callose in roots of Norway spruce seedlings after short-term exposure to aluminum. Tree Physiology, 2004, 24, 1279-1283.	3.1	34
51	Methylation of Mercury in Earthworms and the Effect of Mercury on the Associated Bacterial Communities. PLoS ONE, 2013, 8, e61215.	2.5	34
52	Effect of ectomycorrhizae and ammonium on 134Cs and 85Sr uptake into Picea abies seedlings. Environmental Pollution, 1996, 93, 1-8.	7.5	33
53	Experimentally increased water and nitrogen affect root production and vertical allocation of an old-field grassland. Plant and Soil, 2017, 412, 369-380.	3.7	32
54	Plasticity of Fine-Root Traits Under Long-Term Irrigation of a Water-Limited Scots Pine Forest. Frontiers in Plant Science, 2019, 10, 701.	3.6	32

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55	Drought alters the carbon footprint of trees in soilsâ€"tracking the spatioâ€temporal fate of ¹³Câ€labelled assimilates in the soil of an oldâ€growth pine forest. Global Change Biology, 2021, 27, 2491-2506.	9.5	32
56	Ontogeny of synthesized Picea abies (L.) Karst.-Hebeloma crustuliniforme (Bull. ex St Amans) Quel. ectomycorrhizas. New Phytologist, 1992, 120, 359-369.	7.3	31
57	Extreme summer heat and drought lead to early fruit abortion in European beech. Scientific Reports, 2020, 10, 5334.	3.3	31
58	Incorporation and remobilization of 13C within the fine-root systems of individual Abies alba trees in a temperate coniferous stand. Tree Physiology, 2010, 30, 1515-1527.	3.1	29
59	Ectomycorrhizas: their role in forest ecosystems under the impact of acidifying pollutants. Perspectives in Plant Ecology, Evolution and Systematics, 2001, 4, 13-27.	2.7	27
60	Ectomycorrhizal synthesis with Alaskan Alnus tenuifolia. Canadian Journal of Botany, 1990, 68, 761-767.	1.1	26
61	Ecology of Alpine Macrofungi - Combining Historical with Recent Data. Frontiers in Microbiology, 2017, 8, 2066.	3.5	25
62	Response of Norway spruce seedlings in relation to chemical properties of forest soils. Forest Ecology and Management, 1999, 116, 71-81.	3.2	24
63	Belowground Biodiversity Relates Positively to Ecosystem Services of European Forests. Frontiers in Forests and Global Change, 2019, 2, .	2.3	24
64	Habitat specialisation controls ectomycorrhizal fungi above the treeline in the European Alps. New Phytologist, 2021, 229, 2901-2916.	7.3	24
65	Response of mycorrhizal Norway spruce seedlings to various nitrogen loads and sources. Environmental Pollution, 2001, 114, 223-233.	7.5	23
66	Characterization of naturally grown and in vitro synthesized ectomycorrhizas of Hebeloma crustuliniforme and Picea abies. Mycological Research, 1991, 95, 1407-1413.	2.5	22
67	Natural and synthesized ectomycorrhizas of the alpine dwarf willow Salix herbacea. Mycorrhiza, 1996, 6, 227-235.	2.8	22
68	Molecular markers reveal extensive intraspecific below-ground overlap of silver fir fine roots. Molecular Ecology, 2004, 13, 3595-3600.	3.9	21
69	Freezeâ€fracturing for lowâ€temperature scanning electron microscopy of Hartig net in synthesized <i>Picea abies</i>â€"<i>Hebeloma crustuliniforme</i> and â€"<i>Tricholoma vaccinum</i> ectomycorrhizas [*]. New Phytologist, 1993, 123, 123-132.	7.3	21
70	Soil acidity affects fine root turnover of European beech. Plant Biosystems, 2013, 147, 50-59.	1.6	21
71	Response of European Chestnut to Varying Calcium/Aluminum Ratios. Journal of Environmental Quality, 1996, 25, 702-708.	2.0	19
72	Callose in root apices of European chestnut seedlings: a physiological indicator of aluminum stress. Tree Physiology, 2006, 26, 431-440.	3.1	19

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73	Seasonal variations of throughfall chemistry in pure and mixed stands of Oriental beech (Fagus) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.0	19
74	Only Minor Changes in the Soil Microbiome of a Sub-alpine Forest After 20 Years of Moderately Increased Nitrogen Loads. Frontiers in Forests and Global Change, 2020, 3, .	2.3	19
75	Species-Specific Responses of Root Morphology of Three Co-existing Tree Species to Nutrient Patches Reflect Their Root Foraging Strategies. Frontiers in Plant Science, 2020, 11, 618222.	3.6	18
76	Comparative studies on ectomycorrhizae synthesized with various in vitro techniques using Picea abies and two Hebeloma species. Trees - Structure and Function, 1991, 5, 90.	1.9	17
77	Global patterns of dead fine root stocks in forest ecosystems. Journal of Biogeography, 2018, 45, 1378-1394.	3.0	17
78	Cultural ecosystem services provided by the biodiversity of forest soils: A European review. Geoderma, 2019, 343, 19-30.	5.1	16
79	Aluminum Effects on at Low Solution Concentrations. Soil Science Society of America Journal, 2003, 67, 895.	2.2	16
80	Does low soil base saturation affect fine root properties of European beech (Fagus sylvatica L.)?. Plant and Soil, 2007, 298, 69-79.	3.7	15
81	Lessons learned from a longâ€term irrigation experiment in a dry Scots pine forest: Impacts on traits and functioning. Ecological Monographs, 2022, 92, e1507.	5.4	15
82	Ectomycorrhizal syntheses with Picea abies and three fungal species: a case study on the use of an in vitro technique to identify naturally occurring ectomycorrhizae. Mycorrhiza, 1992, 2, 89-96.	2.8	14
83	Rapid 15N uptake and metabolism in fine roots of Norway spruce. Trees - Structure and Function, 2003, 17, 144-152.	1.9	14
84	Contrasting reactions of roots of two coniferous tree species to aluminum stress. Environmental and Experimental Botany, 2012, 77, 12-18.	4.2	14
85	The Responses of Forest Fine Root Biomass/Necromass Ratio to Environmental Factors Depend on Mycorrhizal Type and Latitudinal Region. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1769-1788.	3.0	14
86	Base cation dynamics in rainfall, throughfall, litterflow and soil solution under Oriental beech (Fagus orientalis Lipsky) trees in northern Iran. Annals of Forest Science, 2019, 76, 1.	2.0	14
87	The Dynamics of Living and Dead Fine Roots of Forest Biomes Across the Northern Hemisphere. Forests, 2019, 10, 953.	2.1	13
88	Plant-fungal interactions in hybrid zones: Ectomycorrhizal communities of willows (Salix) in an alpine glacier forefield. Fungal Ecology, 2020, 45, 100936.	1.6	13
89	The effects of fertiliser or wood ash on nitrate reductase activity in Norway spruce fine roots. Forest Ecology and Management, 2003, 175, 413-423.	3.2	12
90	Leaf Morphological Traits and Leaf Nutrient Concentrations of European Beech Across a Water Availability Gradient in Switzerland. Frontiers in Forests and Global Change, 2020, 3, .	2.3	12

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91	Soil fauna drives vertical redistribution of soil organic carbon in a longâ€term irrigated dry pine forest. Global Change Biology, 2022, 28, 3145-3160.	9.5	12
92	Phytotoxic effects of the high molecular weight fraction of an aqueous leaf litter extract on barley root development. Plant and Soil, 1996, 178, 83-93.	3.7	11
93	Quantitative determination of callose in tree roots. Journal of Plant Physiology, 2006, 163, 1333-1336.	3.5	10
94	Soil base saturation affects root growth of European beech seedlings^{Â§}. Journal of Plant Nutrition and Soil Science, 2011, 174, 408-419.	1.9	10
95	The platform for European root science, COST action E38: An introduction and overview. Plant Biosystems, 2007, 141, 390-393.	1.6	9
96	Shotgun Metagenomics of Deep Forest Soil Layers Show Evidence of Altered Microbial Genetic Potential for Biogeochemical Cycling. Frontiers in Microbiology, 2022, 13, 828977.	3.5	8
97	Wood ash treatment affects seasonal N fluctuations in needles of adult Picea abies trees: a 15 N-tracer study. Trees - Structure and Function, 2004, 18, 54-60.	1.9	7
98	Carbon Allocation into Different Fine-Root Classes of Young Abies alba Trees Is Affected More by Phenology than by Simulated Browsing. PLoS ONE, 2016, 11, e0154687.	2.5	7
99	Production of ectomycorrhizal Ppicea abies ? Hebeloma crustuliniforme seedlings for ecological studies: Effects of synthesis techniques on the morphology of the symbiosis. Water, Air, and Soil Pollution, 1993, 68, 231-240.	2.4	6
100	Patterns of organic acids exuded by pioneering fungi from a glacier forefield are affected by carbohydrate sources. Environmental Research Letters, 2014, 9, 025002.	5.2	6
101	Aluminum Effects on Picea abies at Low Solution Concentrations. Soil Science Society of America Journal, 2003, 67, 895-898.	2.2	4
102	Effects of long-term water reduction and nitrogen addition on fine roots and fungal hyphae in a mixed mature Pinus koraiensis forest. Plant and Soil, 2021, 467, 451-463.	3.7	4
103	A new method to produce numerous uncontaminated alder seedlings. Forest Pathology, 1990, 20, 430-435.	1.1	3
104	Microbial Depolymerization of Epoxy Resins: A Novel Approach to a Complex Challenge. Applied Sciences (Switzerland), 2022, 12, 466.	2.5	3
105	Contrasting Dynamics in the Fine Root Mass of Angiosperm and Gymnosperm Forests on the Global Scale. Ecosystems, 2023, 26, 428-441.	3.4	3
106	The Right-Skewed Distribution of Fine-Root Size in Three Temperate Forests in Northeastern China. Frontiers in Plant Science, 2021, 12, 772463.	3.6	2
107	Organic Acids Exuded by Pioneering Fungi from a Glacier Forefield Help to Weather the Granitic Sediments. Chimia, 2014, 68, 567.	0.6	1
108	VerfrÃ¼hter Fruchtabwurf in Schweizer BuchenbestÃnden im Hitze- und Trockensommer 2018. Schweizerische Zeitschrift Fur Forstwesen, 2021, 172, 166-175.	0.1	0