Penny Hirsch

List of Publications by Year
in descending order

134	11,510	31949 53	29127 104
papers	citations	h-index	g-index

142	142	142	11361
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A binary plant vector strategy based on separation of vir- and T-region of the Agrobacterium tumefaciens Ti-plasmid. Nature, 1983, 303, 179-180.	13.7	1,716
2	Are root exudates more important than other sources of rhizodeposits in structuring rhizosphere bacterial communities?. FEMS Microbiology Ecology, 2010, 72, 313-327.	1.3	790
3	Soil pH Determines Microbial Diversity and Composition in the Park Grass Experiment. Microbial Ecology, 2015, 69, 395-406.	1.4	544
4	Failure of the Mycobacterium bovis BCG Vaccine: Some Species of Environmental Mycobacteria Block Multiplication of BCG and Induction of Protective Immunity to Tuberculosis. Infection and Immunity, 2002, 70, 672-678.	1.0	392
5	Soil management in relation to sustainable agriculture and ecosystem services. Food Policy, 2011, 36, S72-S87.	2.8	379
6	High frequency transfer of nodulating ability between strains and species of Rhizobium. Nature, 1978, 276, 634-636.	13.7	323
7	Accessing the Soil Metagenome for Studies of Microbial Diversity. Applied and Environmental Microbiology, 2011, 77, 1315-1324.	1.4	269
8	Data analysis for 16S microbial profiling from different benchtop sequencing platforms. Journal of Microbiological Methods, 2014, 107, 30-37.	0.7	221
9	Simple and rapid method fordirect extraction of microbial DNA fromsoil for PCR. Soil Biology and Biochemistry, 1998, 30, 983-993.	4.2	206
10	Structure, fluctuation and magnitude of a natural grassland soil metagenome. ISME Journal, 2012, 6, 1677-1687.	4.4	206
11	TerraGenome: a consortium for the sequencing of a soil metagenome. Nature Reviews Microbiology, 2009, 7, 252-252.	13.6	199
12	Culture-independent molecular techniques for soil microbial ecology. Soil Biology and Biochemistry, 2010, 42, 878-887.	4.2	193
13	A physical map of pPH1JI and pJB4JI. Plasmid, 1984, 12, 139-141.	0.4	191
14	Who's who in the plant root microbiome?. Nature Biotechnology, 2012, 30, 961-962.	9.4	176
15	Absence of nitrogen fixation in clover grown on soil subject to long-term contamination with heavy metals is due to survival of only ineffective Rhizobium. Soil Biology and Biochemistry, 1989, 21, 841-848.	4.2	172
16	Use of Molecular and Isotopic Techniques To Monitor the Response of Autotrophic Ammonia-Oxidizing Populations of the Î² Subdivision of the Class Proteobacteria in Arable Soils to Nitrogen Fertilizer. Applied and Environmental Microbiology, 1999, 65, 4155-4162.	1.4	160
17	Plasmid-determined Bacteriocin Production by Rhizobium leguminosarum. Journal of General Microbiology, 1979, 113, 219-228.	2.3	152
18	Rhizobium meliloti fixGHI sequence predicts involvement of a specific cation pump in symbiotic nitrogen fixation. Journal of Bacteriology, 1989, 171, 929-939.	1.0	135

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19	A comparison of two colorimetric assays, based upon Lowry and Bradford techniques, to estimate total protein in soil extracts. Soil Biology and Biochemistry, 2013, 67, 166-173.	4.2	131
20	The use of real-time PCR and species-specific primers for the identification and monitoring of Paecilomyces lilacinus. FEMS Microbiology Ecology, 2005, 51, 257-264.	1.3	130
21	Measuring the soil-microbial interface: Extraction of extracellular polymeric substances (EPS) from soil biofilms. Soil Biology and Biochemistry, 2014, 72, 163-171.	4.2	130
22	Endophytic bacterial community composition in wheat (Triticum aestivum) is determined by plant tissue type, developmental stage and soil nutrient availability. Plant and Soil, 2016, 405, 381-396.	1.8	128
23	Detection and Quantification of Plectosphaerella cucumerina, a Potential Biological Control Agent of Potato Cyst Nematodes, by Using Conventional PCR, Real-Time PCR, Selective Media, and Baiting. Applied and Environmental Microbiology, 2003, 69, 4788-4793.	1.4	126
24	Exploitation of endophytes for sustainable agricultural intensification. Molecular Plant Pathology, 2017, 18, 469-473.	2.0	126
25	Inorganic Nitrogen Application Affects Both Taxonomical and Predicted Functional Structure of Wheat Rhizosphere Bacterial Communities. Frontiers in Microbiology, 2018, 9, 1074.	1.5	125
26	Brazilian Microbiome Project: Revealing the Unexplored Microbial Diversityâ€"Challenges and Prospects. Microbial Ecology, 2014, 67, 237-241.	1.4	119
27	Landâ€use influences phosphatase gene microdiversity in soils. Environmental Microbiology, 2017, 19, 2740-2753.	1.8	115
28	Infection of plant-parasitic nematodes by nematophagous fungi â€“ a review of the application of molecular biology to understand infection processes and to improve biological control. Nematology, 2004, 6, 161-170.	0.2	108
29	Population dynamics of indigenous and genetically modified rhizobia in the field. New Phytologist, 1996, 133, 159-171.	3.5	104
30	Heavy metals from past applications of sewage sludge decrease the genetic diversity of rhizobium leguminosarum biovar trifolii populations. Soil Biology and Biochemistry, 1993, 25, 1485-1490.	4.2	99
31	Long-Term Impact of Field Applications of Sewage Sludge on Soil Antibiotic Resistome. Environmental Science & Technology, 2016, 50, 12602-12611.	4.6	97
32	Isolation of symbiotically defective mutants in Rhizobium leguminosarum by insertion of the transposon Tn5 into a transmissible plasmid. Molecular Genetics and Genomics, 1980, 178, 185-190.	2.4	96
33	Development of a new management strategy for the control of root-knot nematodes (Meloidogyne) Tj ETQq1 1 0.784314 rgBT /Over	1.7	88
34	The role of soil microorganisms in soil organic matter conservation in the tropics. Nutrient Cycling in Agroecosystems, 2001, 61, 41-51.	1.1	87
35	Ca. Nitrososphaera and Bradyrhizobium are inversely correlated and related to agricultural practices in long-term field experiments. Frontiers in Microbiology, 2013, 4, 104.	1.5	86
36	Impacts of nitrogen application rates on the activity and diversity of denitrifying bacteria in the Broadbalk Wheat Experiment. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 1235-1244.	1.8	84

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37	PCR-based molecular discrimination of Verticillium chlamydosporium isolates. Mycological Research, 1996, 100, 801-809.	2.5	83
38	Changes in the microbial community of an arable soil caused by long-term metal contamination. European Journal of Soil Science, 2005, 56, 93-102.	1.8	77
39	Plantâ€“microbe networks in soil are weakened by centuryâ€long use of inorganic fertilizers. Microbial Biotechnology, 2019, 12, 1464-1475.	2.0	77
40	Quantification in Soil and the Rhizosphere of the Nematophagous Fungus Verticillium chlamydosporium by Competitive PCR and Comparison with Selective Plating. Applied and Environmental Microbiology, 2002, 68, 1846-1853.	1.4	75
41	The pH optimum of soil exoenzymes adapt to long term changes in soil pH. Soil Biology and Biochemistry, 2019, 138, 107601.	4.2	73
42	Cloning of and genetic variation in protease VCP1 from the nematophagous fungus Pochonia chlamydosporia. Mycological Research, 2003, 107, 38-46.	2.5	72
43	Comparison of methods to investigate microbial populations in soils under different agricultural management. FEMS Microbiology Ecology, 2000, 33, 129-137.	1.3	70
44	Survival of bacterial DNA and culturable bacteria in archived soils from the Rothamsted Broadbalk experiment. Soil Biology and Biochemistry, 2008, 40, 1090-1102.	4.2	70
45	Long-term impacts of zinc and copper enriched sewage sludge additions on bacterial, archaeal and fungal communities in arable and grassland soils. Soil Biology and Biochemistry, 2011, 43, 932-941.	4.2	65
46	Effects of the nitrification inhibitor 3,4-dimethylpyrazole phosphate (DMPP) on abundance and activity of ammonia oxidizers in soil. Biology and Fertility of Soils, 2014, 50, 795-807.	2.3	64
47	Detection of the nematophagous fungus Verticillium chlamydosporium in nematode-infested plant roots using PCR. Mycological Research, 2000, 104, 435-439.	2.5	63
48	Starving the soil of plant inputs for 50 years reduces abundance but not diversity of soil bacterial communities. Soil Biology and Biochemistry, 2009, 41, 2021-2024.	4.2	63
49	Bacterial Diversity of the Broadbalk â€˜Classicalâ€™ Winter Wheat Experiment in Relation to Long-Term Fertilizer Inputs. Microbial Ecology, 2008, 56, 525-537.	1.4	62
50	Wheat dwarfing influences selection of the rhizosphere microbiome. Scientific Reports, 2020, 10, 1452.	1.6	62
51	Century long fertilization reduces stochasticity controlling grassland microbial community succession. Soil Biology and Biochemistry, 2020, 151, 108023.	4.2	60
52	The Importance of the Microbial NÂCycle in Soil for Crop Plant Nutrition. Advances in Applied Microbiology, 2015, 93, 45-71.	1.3	59
53	Over 150ÂYears of Long-Term Fertilization Alters Spatial Scaling of Microbial Biodiversity. MBio, 2015, 6, .	1.8	57
54	Soil resilience and recovery: rapid community responses to management changes. Plant and Soil, 2017, 412, 283-297.	1.8	57

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55	Pochonia chlamydosporia: Advances and Challenges to Improve Its Performance as a Biological Control Agent of Sedentary Endo-parasitic Nematodes. Journal of Nematology, 2013, 45, 1-7.	0.4	55
56	The influence of season, agricultural management, and soil properties on gross nitrogen transformations and bacterial community structure. Soil Research, 2006, 44, 453.	0.6	53
57	Soil organic matter and the extracellular microbial matrix show contrasting responses to C and N availability. Soil Biology and Biochemistry, 2015, 88, 257-267.	4.2	53
58	Life in earth: the impact of GM plants on soil ecology?. Trends in Biotechnology, 2006, 24, 9-14.	4.9	52
59	The founding charter of the Genomic Observatories Network. GigaScience, 2014, 3, 2.	3.3	51
60	Plant genotype, micronutrient fertilization and take-all infection influence bacterial populations in the rhizosphere of wheat. Plant and Soil, 1996, 183, 269-277.	1.8	50
61	Changes in the population structure of Î²-group autotrophic ammonia oxidising bacteria in arable soils in response to agricultural practice. Soil Biology and Biochemistry, 2002, 34, 1479-1485.	4.2	48
62	An analysis of <scp>P</scp>seudomonas genomic diversity in takeâ€all infected wheat fields reveals the lasting impact of wheat cultivars on the soil microbiota. Environmental Microbiology, 2015, 17, 4764-4778.	1.8	48
63	Construction of a Tn5 derivative determining resistance to gentamicin and spectinomycin using a fragment cloned from R1033. Gene, 1986, 48, 203-209.	1.0	47
64	Distribution of Environmental Mycobacteria in Karonga District, Northern Malawi. Applied and Environmental Microbiology, 2006, 72, 2343-2350.	1.4	47
65	Effects of urease and nitrification inhibitors on soil N, nitrifier abundance and activity in a sandy loam soil. Biology and Fertility of Soils, 2020, 56, 185-194.	2.3	47
66	The Pochonia chlamydosporia Serine Protease Gene vcp1 Is Subject to Regulation by Carbon, Nitrogen and pH: Implications for Nematode Biocontrol. PLoS ONE, 2012, 7, e35657.	1.1	47
67	Plant genotype and micronutrient status influence colonization of wheat roots by soil bacteria. Journal of Plant Nutrition, 1998, 21, 99-113.	0.9	46
68	Pseudomonas spp. diversity is negatively associated with suppression of the wheat take-all pathogen. Scientific Reports, 2016, 6, 29905.	1.6	46
69	Wheat seed embryo excision enables the creation of axenic seedlings and Kochâ€™s postulates testing of putative bacterial endophytes. Scientific Reports, 2016, 6, 25581.	1.6	45
70	Survival and dispersion of genetically modified rhizobia in the field and genetic interactions with native strains. FEMS Microbiology Ecology, 1994, 15, 147-159.	1.3	44
71	PCR-based DNA fingerprinting indicates host-related genetic variation in the nematophagous fungus Pochonia chlamydosporia. Mycological Research, 2003, 107, 198-205.	2.5	43
72	Novel European free-living, non-diazotrophic Bradyrhizobium isolates from contrasting soils that lack nodulation and nitrogen fixation genes â€“ a genome comparison. Scientific Reports, 2016, 6, 25858.	1.6	43

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73	The biocontrol fungus Pochonia chlamydosporia shows nematode host preference at the infraspecific level. Mycological Research, 2004, 108, 161-169.	2.5	37
74	Advantages of the metagenomic approach for soil exploration: reply from Vogel et al.. Nature Reviews Microbiology, 2009, 7, 756-757.	13.6	35
75	The effects of pesticides on the diversity of culturable soil bacteria. Journal of Applied Microbiology, 1998, 84, 551-558.	1.4	34
76	Phylogenetic distribution, biogeography and the effects of land management upon bacterial non-specific Acid phosphatase Gene diversity and abundance. Plant and Soil, 2018, 427, 175-189.	1.8	34
77	The PCR amplification of non-tuberculous mycobacterial 16S rRNA sequences from soil. FEMS Microbiology Letters, 2000, 185, 189-192.	0.7	33
78	The Unique Contribution of Rothamsted to Ecological Research at Large Temporal Scales. Advances in Ecological Research, 2016, , 3-42.	1.4	31
79	Characterization of two novel Rhizobium leguminosarum bacteriophages from a field release site of genetically-modified rhizobia. Antonie Van Leeuwenhoek, 2001, 79, 189-197.	0.7	30
80	Methods for studying the nematophagous fungus Verticillium chlamydosporium in the root environment. Plant and Soil, 2001, 232, 21-30.	1.8	30
81	The short-term effects of nitrification inhibitors on the abundance and expression of ammonia and nitrite oxidizers in a long-term field experiment comparing land management. Biology and Fertility of Soils, 2018, 54, 163-172.	2.3	30
82	The detection of Gram-negative bacterial mRNA from soil by RT-PCR. FEMS Microbiology Letters, 1998, 164, 369-373.	0.7	29
83	Metagenomic approaches reveal differences in genetic diversity and relative abundance of nitrifying bacteria and archaea in contrasting soils. Scientific Reports, 2021, 11, 15905.	1.6	28
84	Genetic factors in Rhizobium affecting the symbiotic carbon costs of N₂ fixation and host plant biomass production. Journal of Applied Bacteriology, 1986, 61, 239-246.	1.1	27
85	Release of transgenic bacterial inoculants - rhizobia as a case study. Plant and Soil, 2005, 266, 1-10.	1.8	27
86	A novel method for sampling bacteria on plant root and soil surfaces at the microhabitat scale. Journal of Microbiological Methods, 2008, 75, 12-18.	0.7	26
87	Responses of microbial community from tropical pristine coastal soil to crude oil contamination. PeerJ, 2016, 4, e1733.	0.9	26
88	Transcriptome analysis shows differential gene expression in the saprotrophic to parasitic transition of Pochonia chlamydosporia. Applied Microbiology and Biotechnology, 2011, 90, 1981-1994.	1.7	25
89	Development of a Real-Time PCR Assay for Detection and Quantification of Rhizobium leguminosarum Bacteria and Discrimination between Different Biovars in Zinc-Contaminated Soil. Applied and Environmental Microbiology, 2011, 77, 4626-4633.	1.4	24
90	Use of realâ€time quantitative PCR to investigate root and gall colonisation by coâ€inoculated isolates of the nematophagous fungus Pochonia chlamydosporia. Annals of Applied Biology, 2009, 155, 143-152.	1.3	23

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91	Monitoring genetically modified rhizobia in field soils using the polymerase chain reaction. Journal of Applied Microbiology, 1998, 84, 1025-1034.	1.4	22
92	Pasteuria endospores from Heterodera cajani (Nematoda: Heteroderidae) exhibit inverted attachment and altered germination in cross-infection studies with Globodera pallida (Nematoda: Heteroderidae). FEMS Microbiology Ecology, 2012, 79, 675-684.	1.3	22
93	Theory of microbial coexistence in promoting soilâ€“plant ecosystem health. Biology and Fertility of Soils, 2021, 57, 897-911.	2.3	21
94	Genetic Engineering and Nitrogen Fixation. Biotechnology and Genetic Engineering Reviews, 1984, 1, 65-88.	2.4	20
95	Linking rhizoplane pH and bacterial density at the microhabitat scale. Journal of Microbiological Methods, 2009, 76, 101-104.	0.7	19
96	Relative impact of soil, metal source and metal concentration on bacterial community structure and community tolerance. Soil Biology and Biochemistry, 2010, 42, 1408-1417.	4.2	19
97	Transfer of Symbiotic Genes with Bacteriocinogenic Plasmids in Rhizobium leguminosarum. Microbiology (United Kingdom), 1980, 116, 261-270.	0.7	18
98	Development of a transformation system for the nematophagous fungus Pochonia chlamydosporia. Mycological Research, 2004, 108, 654-661.	2.5	18
99	Potential mineralization and nitrification in volcanic grassland soils in Chile. Soil Science and Plant Nutrition, 2013, 59, 380-391.	0.8	18
100	Land Management and Microbial Seed Load Effect on Rhizosphere and Endosphere Bacterial Community Assembly in Wheat. Frontiers in Microbiology, 2019, 10, 2625.	1.5	18
101	Measuring abundance, diversity and parasitic ability in two populations of the nematophagous fungusPochoniachlamydosporiavar.chlamydosporia. Biocontrol Science and Technology, 2009, 19, 391-406.	0.5	17
102	Microbiome Aggregated Traits and Assembly Are More Sensitive to Soil Management than Diversity. MSystems, 2021, 6, e0105620.	1.7	17
103	Biodiesel Co-Product (BCP) Decreases Soil Nitrogen (N) Losses to Groundwater. Water, Air, and Soil Pollution, 2014, 225, 1831.	1.1	16
104	Construction and characterization of aRhizobium leguminosarumbiovarviciaestrain designed to assess horizontal gene transfer in the environment. FEMS Microbiology Letters, 1995, 128, 255-263.	0.7	15
105	Assessment of core and accessory genetic variation in Rhizobium leguminosarum symbiovar trifolii strains from diverse locations and host plants using PCR-based methods. Letters in Applied Microbiology, 2014, 59, 238-246.	1.0	15
106	Occurrence of flavonoids and nucleosides in agricultural soils. Applied and Environmental Microbiology, 1997, 63, 4573-4577.	1.4	15
107	Rapid and reliable DNA extraction and PCR fingerprinting methods to discriminate multiple biotypes of the nematophagous fungusPochonia chlamydosporiaisolated from plant rhizospheres. Letters in Applied Microbiology, 2009, 48, 71-76.	1.0	13
108	Ecology of Pochonia chlamydosporia in the Rhizosphere at the Population, Whole Organism and Molecular Scales. , 2011, , 171-182.		13

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109	Bacterial and archaeal taxa are reliable indicators of soil restoration across distributed calcareous grasslands. European Journal of Soil Science, 2021, 72, 2430-2444.	1.8	12
110	Factors limiting gene transfer in bacteria. , 1990, , 31-40.		12
111	Development of a defined compost system for the study of plant-microbe interactions. Scientific Reports, 2020, 10, 7521.	1.6	11
112	A method for release and multiple strand amplification of small quantities of DNA from endospores of the fastidious bacteriumPasteuria penetrans. Letters in Applied Microbiology, 2010, 50, 515-521.	1.0	10
113	Identification of New Single Nucleotide Polymorphism-Based Markers for Inter- and Intraspecies Discrimination of Obligate Bacterial Parasites (Pasteuria spp.) of Invertebrates. Applied and Environmental Microbiology, 2011, 77, 6388-6394.	1.4	10
114	Is there sufficient Ensifer and Rhizobium species diversity in UK farmland soils to support red clover (Trifolium pratense), white clover (T. repens), lucerne (Medicago sativa) and black medic (M.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 537	2.1	10
115	The influence of the root-knot nematodeMeloidogyne incognita, the nematicide aldicarb and the nematophagous fungusPochonia chlamydosporiaon heterotrophic bacteria in soil and the rhizosphere. European Journal of Soil Science, 2003, 54, 759-766.	1.8	9
116	Agrobacterium tumefaciens T-DNA in the yeast Saccharomyces cerevisiae. Molecular Genetics and Genomics, 1984, 195, 209-214.	2.4	8
117	The influence of the symbiotic plasmid pRL1JI on the distribution of GM rhizobia in soil and crop rhizospheres, and implications for gene flow. Antonie Van Leeuwenhoek, 2002, 81, 607-616.	0.7	8
118	Engineering soil organic matter quality: Biodiesel Co-Product (BCP) stimulates exudation of nitrogenous microbial biopolymers. Geoderma, 2015, 259-260, 205-212.	2.3	8
119	Rhizobium Leguminosarum as a Model for Investigating Gene Transfer in Soil. , 1988, , 10-17.		7
120	Impact of the nematophagous fungus Pochonia chlamydosporia on nematode and microbial populations. Communications in Agricultural and Applied Biological Sciences, 2005, 70, 81-6.	0.0	7
121	Gene transfer in bacteria from soils contaminated with heavy metals. Letters in Applied Microbiology, 1999, 28, 317-320.	1.0	6
122	Host Plant Effects on Hybrids of Rhizobium leguminosarum Biovars viceae and trifolii. Microbiology (United Kingdom), 1986, 132, 2063-2070.	0.7	5
123	A combined cryo-scanning electron microscopy/cryoplaning approach to study the infection of Meloidogyne incognita eggs by Pochonia chlamydosporia. Nematology, 2014, 16, 1059-1067.	0.2	5
124	Old meets new: most probable number validation of metagenomic and metatranscriptomic datasets in soil. Letters in Applied Microbiology, 2018, 66, 14-18.	1.0	4
125	Misguided phylogenetic comparisons using DGGE excised bands may contaminate public sequence databases. Journal of Microbiological Methods, 2016, 126, 18-23.	0.7	3
126	The role of soil microorganisms in soil organic matter conservation in the tropics. , 2001, , 41-51.		3

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127	Edaphic factors and plants influence denitrification in soils from a long-term arable experiment. Scientific Reports, 2020, 10, 16053.	1.6	2
128	Monitoring Survival of Genetically-Modified Rhizobium in the Field. , 1992, , 217-219.		2
129	Land Management Legacy Affects Abundance and Function of the acdS Gene in Wheat Root Associated Pseudomonads. Frontiers in Microbiology, 2021, 12, 611339.	1.5	2
130	Microorganisms Cycling Soil Nutrients. , 2019, , 179-192.		1
131	Digging the dirt. Nature Microbiology, 2016, 1, 16136.	5.9	0
132	Methods for studying the nematophagous fungus Verticillium chlamydosporium in the root environment. , 2002, , 21-30.		0
133	Soil microorganisms: role in soil health. Burleigh Dodds Series in Agricultural Science, 2018, , 169-196.	0.1	0
134	Culture-based Methods for Studying the Bacterial Root Microbiome of Wheat. Methods in Molecular Biology, 2021, 2232, 53-60.	0.4	0