Ashley E Franks

List of Publications by Year
in descending order

133 papers	12,427 citations	47006 47 h-index	25787 108 g-index
139 all docs	139 docs citations	139 times ranked	11181 citing authors

#	Article	IF	Citations
1	Bacterial endophytes: recent developments and applications. FEMS Microbiology Letters, 2008, 278, 1-9.	1.8	1,202
2	Microbial Electrosynthesis: Feeding Microbes Electricity To Convert Carbon Dioxide and Water to Multicarbon Extracellular Organic Compounds. MBio, 2010, 1, .	4.1	815
3	Direct Exchange of Electrons Within Aggregates of an Evolved Syntrophic Coculture of Anaerobic Bacteria. Science, 2010, 330, 1413-1415.	12.6	791
4	Tunable metallic-like conductivity in microbial nanowire networks. Nature Nanotechnology, 2011, 6, 573-579.	31.5	762
5	Electrosynthesis of Organic Compounds from Carbon Dioxide Is Catalyzed by a Diversity of Acetogenic Microorganisms. Applied and Environmental Microbiology, 2011, 77, 2882-2886.	3.1	625
6	Geobacter. Advances in Microbial Physiology, 2011, 59, 1-100.	2.4	541
7	Potential for Direct Interspecies Electron Transfer in Methanogenic Wastewater Digester Aggregates. MBio, 2011, 2, e00159-11.	4.1	472
8	Selection of a variant of Geobacter sulfurreducens with enhanced capacity for current production in microbial fuel cells. Biosensors and Bioelectronics, 2009, 24, 3498-3503.	10.1	383
9	Anode Biofilm Transcriptomics Reveals Outer Surface Components Essential for High Density Current Production in Geobacter sulfurreducens Fuel Cells. PLoS ONE, 2009, 4, e5628.	2.5	373
10	Microbial Fuel Cells, A Current Review. Energies, 2010, 3, 899-919.	3.1	358
11	Improved cathode materials for microbial electrosynthesis. Energy and Environmental Science, 2013, 6, 217-224.	30.8	339
12	Stimulating the anaerobic degradation of aromatic hydrocarbons in contaminated sediments by providing an electrode as the electron acceptor. Environmental Microbiology, 2010, 12, 1011-1020.	3.8	269
13	Transcriptome profiling of bacterial responses to root exudates identifies genes involved in microbe-plant interactions. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 17454-17459.	7.1	232
14	Novel strategy for three-dimensional real-time imaging of microbial fuel cell communities: monitoring the inhibitory effects of proton accumulation within the anode biofilm. Energy and Environmental Science, 2009, 2, 113-119.	30.8	225
15	Specific localization of the câ€type cytochrome OmcZ at the anode surface in currentâ€producing biofilms of Geobacter sulfurreducens. Environmental Microbiology Reports, 2011, 3, 211-217.	2.4	214
16	PGPR enhanced phytoremediation of petroleum contaminated soil and rhizosphere microbial community response. Chemosphere, 2015, 138, 592-598.	8.2	183
17	Environmental Sensing of Heavy Metals Through Whole Cell Microbial Biosensors: A Synthetic Biology Approach. ACS Synthetic Biology, 2015, 4, 535-546.	3.8	172
18	Chemical and biological immobilization mechanisms of potentially toxic elements in biochar-amended soils. Critical Reviews in Environmental Science and Technology, 2020, 50, 903-978.	12.8	157

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19	Correlation between microbial community and granule conductivity in anaerobic bioreactors for brewery wastewater treatment. Bioresource Technology, 2014, 174, 306-310.	9.6	137
20	Engineering Geobacter sulfurreducens to produce a highly cohesive conductive matrix with enhanced capacity for current production. Energy and Environmental Science, 2013, 6, 1901.	30.8	134
21	Microtoming coupled to microarray analysis to evaluate the spatial metabolic status of Geobacter sulfurreducens biofilms. ISME Journal, 2010, 4, 509-519.	9.8	128
22	Microbial catalysis in bioelectrochemical technologies: status quo, challenges and perspectives. Applied Microbiology and Biotechnology, 2014, 98, 509-518.	3.6	127
23	Reductive dechlorination of 2â€chlorophenol by Anaeromyxobacter dehalogenans with an electrode serving as the electron donor. Environmental Microbiology Reports, 2010, 2, 289-294.	2.4	126
24	Antifouling activities expressed by marine surface associated Pseudoalteromonas species. FEMS Microbiology Ecology, 2002, 41, 47-58.	2.7	124
25	Bacteriophages in Natural and Artificial Environments. Pathogens, 2019, 8, 100.	2.8	124
26	Mechanisms for the removal of Cd(II) and Cu(II) from aqueous solution and mine water by biochars derived from agricultural wastes. Chemosphere, 2020, 254, 126745.	8.2	115
27	The Role of the Gastrointestinal Mucus System in Intestinal Homeostasis: Implications for Neurological Disorders. Frontiers in Cellular and Infection Microbiology, 2020, 10, 248.	3.9	109
28	Presence of Selected Methanogens, Fibrolytic Bacteria, and Proteobacteria in the Gastrointestinal Tract of Neonatal Dairy Calves from Birth to 72 Hours. PLoS ONE, 2015, 10, e0133048.	2.5	109
29	Electrical Conductivity in a Mixed-Species Biofilm. Applied and Environmental Microbiology, 2012, 78, 5967-5971.	3.1	106
30	Isolation and Structure Elucidation of a Novel Yellow Pigment from the Marine Bacterium Pseudoalteromonas tunicata. Molecules, 2005, 10, 1286-1291.	3.8	95
31	Bacterial biofilms: the powerhouse of a microbial fuel cell. Biofuels, 2010, 1, 589-604.	2.4	94
32	Microbial associated plant growth and heavy metal accumulation toÂimprove phytoextraction of contaminated soils. Soil Biology and Biochemistry, 2016, 103, 131-137.	8.8	94
33	Oropouche Fever: A Review. Viruses, 2018, 10, 175.	3.3	90
34	Metabolic flexibility allows bacterial habitat generalists to become dominant in a frequently disturbed ecosystem. ISME Journal, 2021, 15, 2986-3004.	9.8	89
35	Electrode-Based Approach for Monitoring In Situ Microbial Activity During Subsurface Bioremediation. Environmental Science & Technology, 2010, 44, 47-54.	10.0	85
36	Going Wireless: Fe(III) Oxide Reduction without Pili by Geobacter sulfurreducens Strain JS-1. Applied and Environmental Microbiology, 2014, 80, 4331-4340.	3.1	84

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37	The Low Conductivity of Geobacter uraniireducens Pili Suggests a Diversity of Extracellular Electron Transfer Mechanisms in the Genus Geobacter. Frontiers in Microbiology, 2016, 07, 980.	3.5	84
38	Exploiting New Systems-Based Strategies to Elucidate Plant-Bacterial Interactions in the Rhizosphere. Microbial Ecology, 2006, 51, 257-266.	2.8	76
39	Attribution of crop yield responses to application of organic amendments: A critical review. Soil and Tillage Research, 2019, 186, 135-145.	5.6	76
40	Plant growth-promoting rhizobacteria enhance the growth and Cd uptake of Sedum plumbizincicola in a Cd-contaminated soil. Journal of Soils and Sediments, 2015, 15, 1191-1199.	3.0	72
41	Changes in the abundance and structure of bacterial communities under long-term fertilization treatments in a peanut monocropping system. Plant and Soil, 2015, 395, 415-427.	3.7	67
42	Long-term effects of elevated CO2 on carbon and nitrogen functional capacity of microbial communities in three contrasting soils. Soil Biology and Biochemistry, 2016, 97, 157-167.	8.8	65
43	Gastrointestinal dysfunction in patients and mice expressing the autismâ€associated R451C mutation in neuroliginâ€3. Autism Research, 2019, 12, 1043-1056.	3.8	63
44	Inhibition of Fungal Colonization by Pseudoalteromonas tunicata Provides a Competitive Advantage during Surface Colonization. Applied and Environmental Microbiology, 2006, 72, 6079-6087.	3.1	60
45	Competitive Traits Are More Important than Stress-Tolerance Traits in a Cadmium-Contaminated Rhizosphere: A Role for Trait Theory in Microbial Ecology. Frontiers in Microbiology, 2018, 9, 121.	3.5	60
46	Plasma levels of trimethylamine-N-oxide can be increased with â€˜healthyâ€™ and â€˜unhealthyâ€™ diets and do not correlate with the extent of atherosclerosis but with plaque instability. Cardiovascular Research, 2021, 117, 435-449.	3.8	58
47	Environmental hotspots for antibiotic resistance genes. MicrobiologyOpen, 2021, 10, e1197.	3.0	56
48	A lipid membrane intercalating conjugated oligoelectrolyte enables electrode driven succinate production in Shewanella. Energy and Environmental Science, 2013, 6, 1761.	30.8	54
49	Antarctic Cryptoendolithic Fungal Communities Are Highly Adapted and Dominated by Lecanoromycetes and Dothideomycetes. Frontiers in Microbiology, 2018, 9, 1392.	3.5	53
50	Ammonia-Oxidizing Archaea Show More Distinct Biogeographic Distribution Patterns than Ammonia-Oxidizing Bacteria across the Black Soil Zone of Northeast China. Frontiers in Microbiology, 2018, 9, 171.	3.5	51
51	TCF-1 limits the formation of Tc17 cells via repression of the MAFâ€“RORÎ³t axis. Journal of Experimental Medicine, 2019, 216, 1682-1699.	8.5	48
52	Realâ€Time Spatial Gene Expression Analysis within Currentâ€Producing Biofilms. ChemSusChem, 2012, 5, 1092-1098.	6.8	47
53	Development and Application of a Synthetically-Derived Lead Biosensor Construct for Use in Gram-Negative Bacteria. Sensors, 2016, 16, 2174.	3.8	46
54	Metabolic modeling of spatial heterogeneity of biofilms in microbial fuel cells reveals substrate limitations in electrical current generation. Biotechnology Journal, 2014, 9, 1350-1361.	3.5	44

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55	Increased microbial activity contributes to phosphorus immobilization in the rhizosphere of wheat under elevated CO2. Soil Biology and Biochemistry, 2014, 75, 292-299.	8.8	42
56	Anaerobes unleashed: Aerobic fuel cells of Geobacter sulfurreducens. Journal of Power Sources, 2011, 196, 7514-7518.	7.8	38
57	Microorganisms in heavy metal bioremediation: strategies for applying microbial-community engineering to remediate soils. AIMS Bioengineering, 2016, 3, 211-229.	1.1	38
58	Direct comparison of Arabidopsis gene expression reveals different responses to melatonin versus auxin. BMC Plant Biology, 2019, 19, 567.	3.6	37
59	Delving through electrogenic biofilms: from anodes to cathodes to microbes. AIMS Bioengineering, 2015, 2, 222-248.	1.1	35
60	A pioneer calf foetus microbiome. Scientific Reports, 2020, 10, 17712.	3.3	34
61	Long-term CO2 enrichment alters the diversity and function of the microbial community in soils with high organic carbon. Soil Biology and Biochemistry, 2020, 144, 107780.	8.8	33
62	Loss of microbial diversity does not decrease Î³-HCH degradation but increases methanogenesis in flooded paddy soil. Soil Biology and Biochemistry, 2021, 156, 108210.	8.8	33
63	Functional characterization of Gram-negative bacteria from different genera as multiplex cadmium biosensors. Biosensors and Bioelectronics, 2017, 94, 380-387.	10.1	32
64	Dynamic processes in conjunction with microbial response to disclose the biochar effect on pentachlorophenol degradation under both aerobic and anaerobic conditions. Journal of Hazardous Materials, 2020, 384, 121503.	12.4	32
65	Innovative biological approaches for monitoring and improving water quality. Frontiers in Microbiology, 2015, 6, 826.	3.5	29
66	Production of pilus-like filaments in Geobacter sulfurreducens in the absence of the type IV pilin protein PilA. FEMS Microbiology Letters, 2010, 310, 62-68.	1.8	27
67	Growth ofCaenorhabditis elegansin Defined Media Is Dependent on Presence of Particulate Matter. G3: Genes, Genomes, Genetics, 2018, 8, 567-575.	1.8	27
68	Microbial communities in top- and subsoil of repacked soil columns respond differently to amendments but their diversity is negatively correlated with plant productivity. Scientific Reports, 2019, 9, 8890.	3.3	27
69	Biogeographic Distribution Patterns of the Archaeal Communities Across the Black Soil Zone of Northeast China. Frontiers in Microbiology, 2019, 10, 23.	3.5	27
70	Improved synergistic dechlorination of PCP in flooded soil microcosms with supplementary electron donors, as revealed by strengthened connections of functional microbial interactome. Soil Biology and Biochemistry, 2019, 136, 107515.	8.8	27
71	Fire regime, not time-since-fire, affects soil fungal community diversity and composition in temperate grasslands. FEMS Microbiology Letters, 2016, 363, fnw196.	1.8	26
72	Maize straw biochar addition inhibited pentachlorophenol dechlorination by strengthening the predominant soil reduction processes in flooded soil. Journal of Hazardous Materials, 2020, 386, 122002.	12.4	26

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73	Using Animal Models to Study the Role of the Gutâ€“Brain Axis in Autism. Current Developmental Disorders Reports, 2017, 4, 28-36.	2.1	24
74	Deciphering the electric code of Geobacter sulfurreducens in cocultures with Pseudomonas aeruginosa via SWATH-MS proteomics. Bioelectrochemistry, 2018, 119, 150-160.	4.6	24
75	Biochar aging alters the bioavailability of cadmium and microbial activity in acid contaminated soils. Journal of Hazardous Materials, 2021, 420, 126666.	12.4	24
76	Elevated atmospheric CO2 alters the microbial community composition and metabolic potential to mineralize organic phosphorus in the rhizosphere of wheat. Microbiome, 2022, 10, 12.	11.1	24
77	Bioengineering microbial communities: Their potential to help, hinder and disgust. Bioengineered, 2016, 7, 137-144.	3.2	23
78	Uptake of milk with and without solid feed during the monogastric phase: Effect on fibrolytic and methanogenic microorganisms in the gastrointestinal tract of calves. Animal Science Journal, 2016, 87, 378-388.	1.4	23
79	Comparative analysis of microbial communities during enrichment and isolation of DDT-degrading bacteria by culture-dependent and -independent methods. Science of the Total Environment, 2017, 590-591, 297-303.	8.0	23
80	Bacterial and Fungal Communities Are Differentially Modified by Melatonin in Agricultural Soils Under Abiotic Stress. Frontiers in Microbiology, 2019, 10, 2616.	3.5	23
81	Investigating microbial activities of electrode-associated microorganisms in real-time. Frontiers in Microbiology, 2014, 5, 663.	3.5	22
82	Crop yield responses to surface and subsoil applications of poultry litter and inorganic fertiliser in south-eastern Australia. Crop and Pasture Science, 2018, 69, 303.	1.5	22
83	Inhibitory Effects of Sulfate and Nitrate Reduction on Reductive Dechlorination of PCP in a Flooded Paddy Soil. Frontiers in Microbiology, 2018, 9, 567.	3.5	22
84	Pentachlorophenol alters the acetate-assimilating microbial community and redox cycling in anoxic soils. Soil Biology and Biochemistry, 2019, 131, 133-140.	8.8	21
85	Elevated CO2 increases the abundance but simplifies networks of soybean rhizosphere fungal community in Mollisol soils. Agriculture, Ecosystems and Environment, 2018, 264, 94-98.	5.3	20
86	Microbial Fuel Cells, Related Technologies, and Their Applications. Applied Sciences (Switzerland), 2018, 8, 2384.	2.5	19
87	Exercise improves metabolic function and alters the microbiome in rats with gestational diabetes. FASEB Journal, 2020, 34, 1728-1744.	0.5	19
88	Long-lasting effect of mercury contamination on the soil microbiota and its co-selection of antibiotic resistance. Environmental Pollution, 2020, 265, 115057.	7.5	19
89	Assembly and variation of root-associated microbiota of rice during their vegetative growth phase with and without lindane pollutant. Soil Ecology Letters, 2021, 3, 207-219.	4.5	19
90	Significance of a Posttranslational Modification of the PilA Protein of Geobacter sulfurreducens for Surface Attachment, Biofilm Formation, and Growth on Insoluble Extracellular Electron Acceptors. Journal of Bacteriology, 2017, 199, .	2.2	18

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91	Seeking the needle in the haystack: Undetectability of mycorrhizal fungi outside of the plant rhizosphere associated with an endangered Australian orchid. Fungal Ecology, 2018, 33, 13-23.	1.6	17
92	Altered Caecal Neuroimmune Interactions in the Neuroligin-3R451C Mouse Model of Autism. Frontiers in Cellular Neuroscience, 2020, 14, 85.	3.7	16
93	Comparing the Gut Microbiome in Autism and Preclinical Models: A Systematic Review. Frontiers in Cellular and Infection Microbiology, 0, 12, .	3.9	16
94	The development and analyses of several Gram-negative arsenic biosensors using a synthetic biology approach. Sensors and Actuators B: Chemical, 2018, 256, 117-125.	7.8	15
95	The shift of bacterial community composition magnifies over time in response to different sources of soybean residues. Applied Soil Ecology, 2019, 136, 163-167.	4.3	15
96	The effects of biochar aging on rhizosphere microbial communities in cadmium-contaminated acid soil. Chemosphere, 2022, 303, 135153.	8.2	15
97	Characteristics of metal-tolerant plant growth-promoting yeast (Cryptococcus sp. NSE1) and its influence on Cd hyperaccumulator Sedum plumbizincicola. Environmental Science and Pollution Research, 2016, 23, 18621-18629.	5.3	13
98	The microbiology of microbial electrolysis cells. Microbiology Australia, 2014, 35, 201.	0.4	12
99	Comparative Analysis of Structural Variations Due to Genome Shuffling of Bacillus Subtilis VS15 for Improved Cellulase Production. International Journal of Molecular Sciences, 2020, 21, 1299.	4.1	12
100	Interactive effects of biochar type and pH on the bioavailability of As and Cd and microbial activities in co-contaminated soils. Environmental Technology and Innovation, 2021, 23, 101767.	6.1	12
101	Composition of soil organic matter drives total loss of dieldrin and dichlorodiphenyltrichloroethane in high-value pastures over thirty years. Science of the Total Environment, 2019, 691, 135-145.	8.0	11
102	Autism-associated synaptic mutations impact the gut-brain axis in mice. Brain, Behavior, and Immunity, 2020, 88, 275-282.	4.1	11
103	Highly decomposed organic carbon mediates the assembly of soil communities with traits for the biodegradation of chlorinated pollutants. Journal of Hazardous Materials, 2021, 404, 124077.	12.4	11
104	Draft Genome Sequence of Bacillus cereus LCR12, a Plant Growthâ€“Promoting Rhizobacterium Isolated from a Heavy Metalâ€“Contaminated Environment. Genome Announcements, 2016, 4, .	0.8	8
105	Delving into the dark ecology: A continent-wide assessment of patterns of composition in soil fungal communities from Australian tussock grasslands. Fungal Ecology, 2019, 39, 356-370.	1.6	8
106	Towards Identifying Genetic Biomarkers for Gastrointestinal Dysfunction in Autism. Journal of Autism and Developmental Disorders, 2020, 50, 76-86.	2.7	8
107	Town-scale microbial sewer community and H2S emissions response to common chemical and biological dosing treatments. Journal of Environmental Sciences, 2020, 87, 133-148.	6.1	8
108	The antimicrobial resistance crisis: management through gene monitoring. Open Biology, 2016, 6, 160236.	3.6	7

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109	A single application of fertiliser or manure to a cropping field has limited long-term effects on soil microbial communities. Soil Research, 2019, 57, 228.	1.1	7
110	Organic and inorganic amendments did not affect microbial community composition in the bulk soil differently but did change the relative abundance of selected taxa. European Journal of Soil Science, 2019, 70, 796-806.	3.9	7
111	Transcriptional analysis in microbial fuel cells: common pitfalls in global gene expression studies of microbial biofilms. FEMS Microbiology Letters, 2010, 307, 111-112.	1.8	6
112	Draft Genome Sequence of Enterobacter ludwigii NCR3, a Heavy Metalâ€“Resistant Rhizobacterium. Genome Announcements, 2016, 4, .	0.8	5
113	Adaptive Evolution of Geobacter sulfurreducens in Coculture with Pseudomonas aeruginosa. MBio, 2020, 11, .	4.1	5
114	Biochar reduced extractable dieldrin concentrations and promoted oligotrophic growth including microbial degraders of chlorinated pollutants. Journal of Hazardous Materials, 2022, 423, 127156.	12.4	5
115	A putative RNAâ€binding protein has a role in virulence in Ralstonia solanacearum GMI1000. Molecular Plant Pathology, 2008, 9, 67-72.	4.2	4
116	Coupling anaerobic bacteria and microbial fuel cells as whole-cell environmental biosensors. Microbiology Australia, 2015, 36, 129.	0.4	4
117	Draft Genome Sequence of Leifsonia sp. Strain NCR5, a Rhizobacterium Isolated from Cadmium-Contaminated Soil. Genome Announcements, 2017, 5, .	0.8	4
118	Reviewing microbial electrical systems and bacteriophage biocontrol as targeted novel treatments for reducing hydrogen sulfide emissions in urban sewer systems. Reviews in Environmental Science and Biotechnology, 2018, 17, 749-764.	8.1	4
119	High doses of melatonin confer abiotic stress tolerance to phytopathogenic fungi grown in vitro. Melatonin Research, 2020, 3, 187-193.	1.1	4
120	Whatâ€™s Current with Electric Microbes?. Journal of Bacteriology & Parasitology, 2012, 03, .	0.2	4
121	Understanding microbiomes through trait-based ecology. Microbiology Australia, 2018, 39, 53.	0.4	4
122	Linking microscopic interactions with macroscopic effects. Journal of Vegetation Science, 2017, 28, 462-463.	2.2	3
123	Incorporating fungal community ecology into invasion biology: challenges and opportunities. Microbiology Australia, 2018, 39, 56.	0.4	3
124	An Insight Into the Effect of Organic Amendments on the Transpiration Efficiency of Wheat Plant in a Sodic Duplex Soil. Frontiers in Plant Science, 2021, 12, 722000.	3.6	3
125	Electron Transfer Between Bacteria and Electrodes. , 2017, , 93-170.		2
126	Potential Determinants of Gastrointestinal Dysfunction in Autism Spectrum Disorders. Review Journal of Autism and Developmental Disorders, 2020, 7, 182-196.	3.4	2

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127	Editorial: Interactions of the Nervous System With Bacteria. Frontiers in Neuroscience, 2021, 15, 682744.	2.8	2
128	Interactions of the Gut Nervous System with Bacteria. , 2021, , 339-372.		2
129	Draft Genome Sequence of Rhodococcus erythropolis NSX2, an Actinobacterium Isolated from a Cadmium-Contaminated Environment. Genome Announcements, 2016, 4, .	0.8	1
130	Enhanced Growth of Pilin-Deficient Geobacter sulfurreducens Mutants in Carbon Poor and Electron Donor Limiting Conditions. Microbial Ecology, 2019, 78, 618-630.	2.8	1
131	Exercise before and during pregnancy in females born growth restricted on a high-fat diet alters the microbiome and glucose intolerance to a greater extent than exercise during pregnancy only. Placenta, 2017, 57, 287.	1.5	0
132	A preliminary study of pharmacogenetic biomarkers for individuals with autism and gastrointestinal dysfunction. Research in Autism Spectrum Disorders, 2020, 71, 101516.	1.5	0
133	Plugging in microbial metabolism for industrial applications. Microbiology Australia, 2017, 38, 89.	0.4	0