David W Graham

List of Publications by Year
in descending order

116 papers	9,460 citations	41344 49 h-index	39675 94 g-index
121 all docs	121 docs citations	121 times ranked	10099 citing authors

#	Article	IF	Citations
1	Evidence of Increasing Antibiotic Resistance Gene Abundances in Archived Soils since 1940. Environmental Science & Technology, 2010, 44, 580-587.	10.0	665
2	Management Options for Reducing the Release of Antibiotics and Antibiotic Resistance Genes to the Environment. Environmental Health Perspectives, 2013, 121, 878-885.	6.0	657
3	The Scourge of Antibiotic Resistance: The Important Role of the Environment. Clinical Infectious Diseases, 2013, 57, 704-710.	5.8	487
4	Antibiotic Resistance Gene Abundances Correlate with Metal and Geochemical Conditions in Archived Scottish Soils. PLoS ONE, 2011, 6, e27300.	2.5	310
5	Methanobactin, a Copper-Acquisition Compound from Methane-Oxidizing Bacteria. Science, 2004, 305, 1612-1615.	12.6	303
6	A Review of Phosphorus Removal Technologies and Their Applicability to Small-Scale Domestic Wastewater Treatment Systems. Frontiers in Environmental Science, 2018, 6, .	3.3	303
7	Abundance of six tetracycline resistance genes in wastewater lagoons at cattle feedlots with different antibiotic use strategies. Environmental Microbiology, 2007, 9, 143-151.	3.8	297
8	Shedding of SARS-CoV-2 in feces and urine and its potential role in person-to-person transmission and the environment-based spread of COVID-19. Science of the Total Environment, 2020, 749, 141364.	8.0	293
9	Antibiotic Resistance Gene Abundances Associated with Waste Discharges to the Almendares River near Havana, Cuba. Environmental Science & Technology, 2011, 45, 418-424.	10.0	264
10	Relationships between Antibiotics and Antibiotic Resistance Gene Levels in Municipal Solid Waste Leachates in Shanghai, China. Environmental Science & Technology, 2015, 49, 4122-4128.	10.0	254
11	Making waves: Wastewater-based epidemiology for COVID-19 â€“ approaches and challenges for surveillance and prediction. Water Research, 2020, 186, 116404.	11.3	250
12	Experimental demonstration of chaotic instability in biological nitrification. ISME Journal, 2007, 1, 385-393.	9.8	247
13	Factors affecting competition between type I and type II methanotrophs in two-organism, continuous-flow reactors. Microbial Ecology, 1993, 25, 1-17.	2.8	226
14	Assessment of heavy metal levels in Almendares River sedimentsâ€”Havana City, Cuba. Water Research, 2005, 39, 3945-3953.	11.3	184
15	Quantification of Tetracycline Resistance Genes in Feedlot Lagoons by Real-Time PCR. Applied and Environmental Microbiology, 2004, 70, 7372-7377.	3.1	167
16	Antibiotic Resistance Genes and Associated Microbial Community Conditions in Aging Landfill Systems. Environmental Science & Technology, 2017, 51, 12859-12867.	10.0	154
17	Metagenomics Shows That Low-Energy Anaerobicâ€“Aerobic Treatment Reactors Reduce Antibiotic Resistance Gene Levels from Domestic Wastewater. Environmental Science & Technology, 2015, 49, 2577-2584.	10.0	147
18	Understanding drivers of antibiotic resistance genes in High Arctic soil ecosystems. Environment International, 2019, 125, 497-504.	10.0	137

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19	Increased Waterborne bla_{NDM-1} Resistance Gene Abundances Associated with Seasonal Human Pilgrimages to the Upper Ganges River. Environmental Science & Technology, 2014, 48, 3014-3020.	10.0	133
20	Factors Affecting the Fate of Ciprofloxacin in Aquatic Field Systems. Water, Air, and Soil Pollution, 2005, 161, 383-398.	2.4	122
21	Appearance of Î²-lactam Resistance Genes in Agricultural Soils and Clinical Isolates over the 20th Century. Scientific Reports, 2016, 6, 21550.	3.3	119
22	Complexities in understanding antimicrobial resistance across domesticated animal, human, and environmental systems. Annals of the New York Academy of Sciences, 2019, 1441, 17-30.	3.8	112
23	Indirect Evidence of Transposon-Mediated Selection of Antibiotic Resistance Genes in Aquatic Systems at Low-Level Oxytetracycline Exposures. Environmental Science & Technology, 2008, 42, 5348-5353.	10.0	111
24	Spatial ecology of a wastewater network defines the antibiotic resistance genes in downstream receiving waters. Water Research, 2019, 162, 347-357.	11.3	108
25	Hospital Wastewater Releases of Carbapenem-Resistance Pathogens and Genes in Urban India. Environmental Science & Technology, 2017, 51, 13906-13912.	10.0	107
26	Understanding and managing uncertainty and variability for wastewater monitoring beyond the pandemic: Lessons learned from the United Kingdom national COVID-19 surveillance programmes. Journal of Hazardous Materials, 2022, 424, 127456.	12.4	105
27	A conceptual framework for invasion in microbial communities. ISME Journal, 2016, 10, 2773-2779.	9.8	100
28	Application of Resource-Ratio Theory to Hydrocarbon Biodegradation. Environmental Science & Technology, 1998, 32, 3386-3395.	10.0	96
29	Peer Reviewed: Theoretical Ecology for Engineering Biology. Environmental Science & Technology, 2003, 37, 64A-70A.	10.0	96
30	Fate of Tetracycline Resistance Genes in Aquatic Systems: Migration from the Water Column to Peripheral Biofilms. Environmental Science & Technology, 2008, 42, 5131-5136.	10.0	95
31	Methane monooxygenase gene expression mediated by methanobactin in the presence of mineral copper sources. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 12040-12045.	7.1	94
32	Copper-Binding Compounds from Methylosinus trichosporium OB3b. Journal of Bacteriology, 1998, 180, 3606-3613.	2.2	93
33	Fate and Effects of Enrofloxacin in Aquatic Systems under Different Light Conditions. Environmental Science & Technology, 2005, 39, 9140-9146.	10.0	90
34	Critically important antibiotics: criteria and approaches for measuring and reducing their use in food animal agriculture. Annals of the New York Academy of Sciences, 2019, 1441, 8-16.	3.8	88
35	Reusing Treated Wastewater: Consideration of the Safety Aspects Associated with Antibiotic-Resistant Bacteria and Antibiotic Resistance Genes. Water (Switzerland), 2018, 10, 244.	2.7	83
36	Variations in methanobactin structure influences copper utilization by methane-oxidizing bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8400-8404.	7.1	81

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37	Low-Dissolved-Oxygen Nitrifying Systems Exploit Ammonia-Oxidizing Bacteria with Unusually High Yields. Applied and Environmental Microbiology, 2011, 77, 7787-7796.	3.1	80
38	Seasonal Variations in Antibiotic Resistance Gene Transport in the Almendares River, Havana, Cuba. Frontiers in Microbiology, 2012, 3, 396.	3.5	80
39	Influence of isolation on the recovery of pond mesocosms from the application of an insecticide. II. Benthic macroinvertebrate responses. Environmental Toxicology and Chemistry, 2007, 26, 1280-1290.	4.3	76
40	Copper-Binding Properties and Structures of Methanobactins from Methylosinus trichosporium OB3b. Inorganic Chemistry, 2011, 50, 1378-1391.	4.0	76
41	Purification and Physicalâ˜Chemical Properties of Methanobactin:Â A Chalkophore fromMethylosinus trichosporiumOB3bâ€. Biochemistry, 2005, 44, 5140-5148.	2.5	75
42	Spatial Heterogeneity of Denitrification Genes in a Highly Homogenous Urban Stream. Environmental Science & Technology, 2009, 43, 4273-4279.	10.0	74
43	Correlations between in situ denitrification activity and nir-gene abundances in pristine and impacted prairie streams. Environmental Pollution, 2010, 158, 3225-3229.	7.5	72
44	Differential fate of erythromycin and beta-lactam resistance genes from swine lagoon waste under different aquatic conditions. Environmental Pollution, 2010, 158, 1506-1512.	7.5	70
45	Zinc-induced antibiotic resistance in activated sludge bioreactors. Water Research, 2010, 44, 3829-3836.	11.3	69
46	Metolachlor and Alachlor Breakdown Product Formation Patterns in Aquatic Field Mesocosms. Environmental Science & Technology, 1999, 33, 4471-4476.	10.0	65
47	Dominant and novel clades of Candidatus Accumulibacter phosphatis in 18 globally distributed full-scale wastewater treatment plants. Scientific Reports, 2015, 5, 11857.	3.3	64
48	Fate of Organics during Column Studies of Soil Aquiferâ€‰Treatment. Journal of Environmental Engineering, ASCE, 1996, 122, 314-321.	1.4	54
49	Isolation of Copper Biochelates from Methylosinus trichosporium OB3b and Soluble Methane Monooxygenase Mutants. Applied and Environmental Microbiology, 1998, 64, 1115-1122.	3.1	54
50	Effect of feeding frequency and organic loading rate on biomethane production in the anaerobic digestion of rice straw. Applied Energy, 2017, 207, 156-165.	10.1	52
51	Nitrite-oxidizing bacteria guild ecology associated with nitrification failure in a continuous-flow reactor. FEMS Microbiology Ecology, 2007, 62, 195-201.	2.7	50
52	Influence of isolation on the recovery of pond mesocosms from the application of an insecticide. I. Study design and planktonic community responses. Environmental Toxicology and Chemistry, 2007, 26, 1265-1279.	4.3	49
53	Accumulation of Tetracycline Resistance Genes in Aquatic Biofilms Due to Periodic Waste Loadings from Swine Lagoons. Environmental Science & Technology, 2009, 43, 7643-7650.	10.0	46
54	Carbapenem resistance exposures via wastewaters across New Delhi. Environment International, 2018, 119, 302-308.	10.0	45

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55	Underappreciated Role of Regionally Poor Water Quality on Globally Increasing Antibiotic Resistance. Environmental Science & Technology, 2014, 48, 11746-11747.	10.0	44
56	Designed ecosystem services: application of ecological principles in wastewater treatment engineering. Frontiers in Ecology and the Environment, 2004, 2, 199-206.	4.0	42
57	Disappearance of oxytetracycline resistance genes in aquatic systems. FEMS Microbiology Letters, 2006, 263, 176-182.	1.8	42
58	Soil geochemistry confines microbial abundances across an arctic landscape; implications for net carbon exchange with the atmosphere. Biogeochemistry, 2014, 120, 307-317.	3.5	38
59	Site Specific Relationships between COVID-19 Cases and SARS-CoV-2 Viral Load in Wastewater Treatment Plant Influent. Environmental Science & Technology, 2021, 55, 15276-15286.	10.0	38
60	Microbial Communities in a High Arctic Polar Desert Landscape. Frontiers in Microbiology, 2016, 7, 419.	3.5	37
61	RESPONSES OF MOLECULAR INDICATORS OF EXPOSURE IN MESOCOSMS: COMMON CARP (CYPRINUS) Tj ETQq1 1 0.784314 rgBT /O Chemistry, 2005, 24, 190.	4.3	34
62	Climatic, Geographic and Operational Determinants of Trihalomethanes (THMs) in Drinking Water Systems. Scientific Reports, 2016, 6, 35027.	3.3	34
63	Effects of heavy metals pollution on the co-selection of metal and antibiotic resistance in urban rivers in UK and India. Environmental Pollution, 2022, 306, 119326.	7.5	34
64	Alachlor transformation patterns in aquatic field mesocosms under variable oxygen and nutrient conditions. Water Research, 2000, 34, 4054-4062.	11.3	33
65	Separations coupled with NMR detection. TrAC - Trends in Analytical Chemistry, 2003, 22, 766-775.	11.4	32
66	Methanobactin-promoted dissolution of Cu-substituted borosilicate glass. Geobiology, 2007, 5, 251-263.	2.4	32
67	Multidrug-resistant bacteria and microbial communities in a river estuary with fragmented suburban waste management. Journal of Hazardous Materials, 2021, 405, 124687.	12.4	32
68	Condition assessment and preservation of open-air rock art panels during environmental change. Journal of Cultural Heritage, 2014, 15, 49-56.	3.3	30
69	Predicted Impact of Climate Change on Trihalomethanes Formation in Drinking Water Treatment. Scientific Reports, 2019, 9, 9967.	3.3	30
70	Impact of Redox Conditions on Antibiotic Resistance Conjugative Gene Transfer Frequency and Plasmid Fate in Wastewater Ecosystems. Environmental Science & Technology, 2020, 54, 14984-14993.	10.0	29
71	Nutrient level, microbial activity, and alachlor transformation in aerobic aquatic systems. Water Research, 2003, 37, 4761-4769.	11.3	28
72	Seasonal dynamics of tetracycline resistance gene transport in the Sumas River agricultural watershed of British Columbia, Canada. Science of the Total Environment, 2018, 628-629, 490-498.	8.0	28

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73	Enhanced denitrification in Downflow Hanging Sponge reactors for decentralised domestic wastewater treatment. Bioresource Technology, 2017, 226, 1-8.	9.6	27
74	Strategic Approach for Prioritising Local and Regional Sanitation Interventions for Reducing Global Antibiotic Resistance. Water (Switzerland), 2019, 11, 27.	2.7	26
75	Extended-Spectrum Î²-Lactamase and Carbapenemase Genes are Substantially and Sequentially Reduced during Conveyance and Treatment of Urban Sewage. Environmental Science & Technology, 2021, 55, 5939-5949.	10.0	24
76	Influence of Autochthonous Dissolved Organic Carbon and Nutrient Limitation on Alachlor Biotransformation in Aerobic Aquatic Systems. Environmental Science & Technology, 2003, 37, 4157-4162.	10.0	23
77	Microbial community composition and diversity in rice straw digestion bioreactors with and without dairy manure. Applied Microbiology and Biotechnology, 2018, 102, 8599-8612.	3.6	23
78	Response of water column microbial communities to sudden exposure to deltamethrin in aquatic mesocosms. FEMS Microbiology Ecology, 2005, 54, 157-165.	2.7	21
79	Developing Surrogate Markers for Predicting Antibiotic Resistance â€œHot Spotsâ€•in Rivers Where Limited Data Are Available. Environmental Science & Technology, 2021, 55, 7466-7478.	10.0	21
80	Water Hyacinths (Eichhornia crassipes) as Indicators of Heavy Metal Impact of a Large Landfill on the Almendares River near Havana, Cuba. Bulletin of Environmental Contamination and Toxicology, 2007, 79, 583-587.	2.7	18
81	Dynamics of integron structures across a wastewater network â€“ Implications to resistance gene transfer. Water Research, 2021, 206, 117720.	11.3	18
82	PHYSICAL AND CHEMICAL CONDITIONS SURROUNDING THE DIURNAL VERTICAL MIGRATION OF CRYPTOMONAS SPP. (CRYPTOPHYCEAE) IN A SEASONALLY STRATIFIED MIDWESTERN RESERVIOR (USA). Journal of Phycology, 2003, 39, 855-861.	2.3	17
83	Stimulation of Methanotroph Activity by Cu-Substituted Borosilicate Glass. Geomicrobiology Journal, 2011, 28, 1-10.	2.0	17
84	Retrofitting options for wastewater networks to achieve climate change reduction targets. Applied Energy, 2018, 218, 430-441.	10.1	17
85	Co-optimization of sponge-core bioreactors for removing total nitrogen and antibiotic resistance genes from domestic wastewater. Science of the Total Environment, 2018, 634, 1417-1423.	8.0	16
86	Effects of copper mineralogy and methanobactin on cell growth and sMMO activity in <i>Methylosinus trichosporium</i> OB3b. Biogeosciences, 2011, 8, 2887-2894.	3.3	15
87	Mercury Levels in Sediments and Mangrove Oysters, Crassostrea rizophorae, from the North Coast of Villa Clara, Cuba. Bulletin of Environmental Contamination and Toxicology, 2012, 88, 589-593.	2.7	15
88	Genetic sequencing detected the SARS-CoV-2 delta variant in wastewater a month prior to the first COVID-19 case in Ahmedabad (India). Environmental Pollution, 2022, 310, 119757.	7.5	15
89	Effects of eutrophication on vitellogenin gene expression in male fathead minnows (Pimephales) Tj ETQq1 1 0.784314 rgBT /Overlock 1 559-566.	7.5	14
90	A Simple Approach to Predicting the Reliability of Small Wastewater Treatment Plants. Water (Switzerland), 2019, 11, 2397.	2.7	13

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91	Development of small outdoor microcosms for studying contaminant transformation rates and mechanisms under various water column conditions. Environmental Toxicology and Chemistry, 1999, 18, 1124-1132.	4.3	11
92	Alachlor and metolachlor transformation pattern in corn and soil. Weed Science, 2002, 50, 581-586.	1.5	11
93	A deep maximum of green sulphur bacteria ('Chlorochromatium aggregatum') in a strongly stratified reservoir. Freshwater Biology, 2004, 49, 1337-1354.	2.4	11
94	Nitrification in hybrid bioreactors treating simulated domestic wastewater. Journal of Applied Microbiology, 2013, 115, 621-630.	3.1	11
95	Effect of oxygen level on simultaneous nitrogenase and sMMO expression and activity in Methylosinus trichosporium OB3b and its sMMOC mutant, PP319: aerotolerant N2 fixation in PP319. FEMS Microbiology Letters, 2001, 201, 133-138.	1.8	10
96	A preliminary and qualitative study of resource ratio theory to nitrifying labâ€scale bioreactors. Microbial Biotechnology, 2015, 8, 590-603.	4.2	10
97	Effects of oxygen and nitrogen conditions on the transformation kinetics of 1,2-dichloroethenes by Methylosinus trichosporium OB3b and its sMMOC mutant. Biodegradation, 2003, 14, 407-414.	3.0	9
98	Birth, growth and death as structuring operators in bacterial population dynamics. Journal of Theoretical Biology, 2010, 264, 45-54.	1.7	9
99	Development of alternate ssu-rRNA probing strategies for characterizing aquatic microbial communities. Journal of Microbiological Methods, 2004, 56, 323-330.	1.6	8
100	Assessment of Total Mercury Levels in Clarias gariepinus from the Sagua la Grande River, Cuba. Bulletin of Environmental Contamination and Toxicology, 2009, 82, 101-105.	2.7	8
101	Production, Isolation, Purification, and Functional Characterization of Methanobactins. Methods in Enzymology, 2011, 495, 227-245.	1.0	7
102	A 21-year record of vertically migrating subepilimnetic populations of Cryptomonas spp.. Inland Waters, 2016, 6, 173-184.	2.2	7
103	The Effect of Feeding Frequency and Organic Loading Rate on the Anaerobic Digestion of Chinese Rice Straw. Energy Procedia, 2017, 105, 62-67.	1.8	7
104	Molecular microbial ecology of stable versus failing rice straw anaerobic digesters. Microbial Biotechnology, 2019, 12, 879-891.	4.2	7
105	Feasibility tests for treating shampoo and hair colorant wastewaters using anaerobic processes. Water Science and Technology, 2012, 65, 303-308.	2.5	6
106	Non-linear population dynamics in chemostats associated with liveâ€“dead cell cycling in Escherichia coli strain K12-MG1655. Applied Microbiology and Biotechnology, 2011, 89, 791-798.	3.6	5
107	Conditional confined oscillatory dynamics of Escherichia coli strain K12-MG1655 in chemostat systems. Applied Microbiology and Biotechnology, 2012, 94, 185-192.	3.6	4
108	Improved quantitative microbiome profiling for environmental antibiotic resistance surveillance. Environmental Microbiomes, 2021, 16, 21.	5.0	4

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109	Impact of Cold Temperatures on Nitrogen Removal in Denitrifying Down-Flow Hanging Sponge (DDHS) Reactors. Water (Switzerland), 2020, 12, 2029.	2.7	3
110	Seasonal influences on the use of genetic markers as performance indicators for small wastewater treatment plants. Science of the Total Environment, 2020, 739, 139928.	8.0	3
111	Antibiotic Resistance in the Environment: Not the Usual Suspects. Chemistry and Biology, 2015, 22, 805-806.	6.0	2
112	Effect of Î² -lactamases associated to the resistance of Î² -lactam antibiotics on the treatment of wastewater. Journal of Environmental Chemical Engineering, 2020, 8, 102247.	6.7	2
113	Wastewater systems assessment. , 0, , 134-157.		1
114	Environmental impact evaluation of decentralized sewage treatment technologies: A life cycle assessment approach. Water and Environment Journal, 0, , .	2.2	1
115	A comparative assessment of molecular biological and direct microscopic techniques for assessing aquatic systems. Environmental Monitoring and Assessment, 2008, 145, 465-473.	2.7	0
116	Strategic value of interviewer training and local community-based organisations for WaSH and antibiotic resistance surveys. Journal of Water Sanitation and Hygiene for Development, 2021, 11, 535-545.	1.8	0