David L Valentine

List of Publications by Year
in descending order

106	10,020	57758	36028
papers	citations	44 h-index	97 g-index

115	115	115	10047
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Functional metagenomic profiling of nine biomes. Nature, 2008, 452, 629-632.	27.8	842
2	Fate of Dispersants Associated with the Deepwater Horizon Oil Spill. Environmental Science & Technology, 2011, 45, 1298-1306.	10.0	771
3	Adaptations to energy stress dictate the ecology and evolution of the Archaea. Nature Reviews Microbiology, 2007, 5, 316-323.	28.6	661
4	Propane Respiration Jump-Starts Microbial Response to a Deep Oil Spill. Science, 2010, 330, 208-211.	12.6	444
5	A Persistent Oxygen Anomaly Reveals the Fate of Spilled Methane in the Deep Gulf of Mexico. Science, 2011, 331, 312-315.	12.6	420
6	New perspectives on anaerobic methane oxidation. Environmental Microbiology, 2000, 2, 477-484.	3.8	410
7	Natural gas and temperature structured a microbial community response to the Deepwater Horizon oil spill. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20292-20297.	7.1	373
8	Biogeochemistry and microbial ecology of methane oxidation in anoxic environments: a review. Antonie Van Leeuwenhoek, 2002, 81, 271-282.	1.7	301
9	Oil Weathering after the Deepwater Horizon Disaster Led to the Formation of Oxygenated Residues. Environmental Science & Technology, 2012, 46, 8799-8807.	10.0	290
10	Carbon and hydrogen isotope fractionation by moderately thermophilic methanogens 1 1Associate editor: N. E. Ostrom. Geochimica Et Cosmochimica Acta, 2004, 68, 1571-1590.	3.9	284
11	Chemical data quantify Deepwater Horizon hydrocarbon flow rate and environmental distribution. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20246-20253.	7.1	258
12	Biodiversity and biogeography of phages in modern stromatolites and thrombolites. Nature, 2008, 452, 340-343.	27.8	251
13	Water column methane oxidation adjacent to an area of active hydrate dissociation, Eel river Basin. Geochimica Et Cosmochimica Acta, 2001, 65, 2633-2640.	3.9	247
14	Fallout plume of submerged oil from Deepwater Horizon. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15906-15911.	7.1	242
15	Omega-3 fatty acids in cellular membranes: a unified concept. Progress in Lipid Research, 2004, 43, 383-402.	11.6	219
16	Carbon and hydrogen isotope fractionation associated with the aerobic microbial oxidation of methane, ethane, propane and butane. Geochimica Et Cosmochimica Acta, 2007, 71, 271-283.	3.9	173
17	Dynamic autoinoculation and the microbial ecology of a deep water hydrocarbon irruption. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20286-20291.	7.1	156
18	Recalcitrance and Degradation of Petroleum Biomarkers upon Abiotic and Biotic Natural Weathering of Deepwater Horizon Oil. Environmental Science & Technology, 2014, 48, 6726-6734.	10.0	148

#	Article	IF	Citations
19	Distinguishing and understanding thermogenic and biogenic sources of methane using multiply substituted isotopologues. Geochimica Et Cosmochimica Acta, 2015, 161, 219-247.	3.9	141
20	Emerging Topics in Marine Methane Biogeochemistry. Annual Review of Marine Science, 2011, 3, 147-171.	11.6	138
21	Combined 13Câ€“D and Dâ€“D clumping in methane: Methods and preliminary results. Geochimica Et Cosmochimica Acta, 2014, 126, 169-191.	3.9	129
22	Identification of Novel Methane-, Ethane-, and Propane-Oxidizing Bacteria at Marine Hydrocarbon Seeps by Stable Isotope Probing. Applied and Environmental Microbiology, 2010, 76, 6412-6422.	3.1	124
23	Genomic and functional analyses of fungal and bacterial consortia that enable lignocellulose breakdown in goat gut microbiomes. Nature Microbiology, 2021, 6, 499-511.	13.3	116
24	Archaeal and Bacterial Communities Respond Differently to Environmental Gradients in Anoxic Sediments of a California Hypersaline Lake, the Salton Sea. Applied and Environmental Microbiology, 2010, 76, 757-768.	3.1	115
25	Methane clumped isotopes: Progress and potential for a new isotopic tracer. Organic Geochemistry, 2017, 113, 262-282.	1.8	100
26	Diversity of Archaea in Marine Sediments from Skan Bay, Alaska, Including Cultivated Methanogens, and Description of Methanogenium boonei sp. nov.. Applied and Environmental Microbiology, 2007, 73, 407-414.	3.1	99
27	Partial Photochemical Oxidation Was a Dominant Fate of Deepwater Horizon Surface Oil. Environmental Science & Technology, 2018, 52, 1797-1805.	10.0	94
28	Persistence and biodegradation of oil at the ocean floor following Deepwater Horizon. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9-E18.	7.1	93
29	Isotopic evidence for the incorporation of methane-derived carbon into foraminifera from modern methane seeps, Hydrate Ridge, Northeast Pacific. Geochimica Et Cosmochimica Acta, 2004, 68, 4619-4627.	3.9	89
30	Unprecedented Ultrahigh Resolution FT-ICR Mass Spectrometry and Parts-Per-Billion Mass Accuracy Enable Direct Characterization of Nickel and Vanadyl Porphyrins in Petroleum from Natural Seeps. Energy & Fuels, 2014, 28, 2454-2464.	5.1	88
31	Dissolved methane distributions and airâ€sea flux in the plume of a massive seep field, Coal Oil Point, California. Geophysical Research Letters, 2007, 34, .	4.0	82
32	Short-chain alkanes fuel mussel and sponge Cycloclasticus symbionts from deep-sea gas and oil seeps. Nature Microbiology, 2017, 2, 17093.	13.3	80
33	Methanogenium marinum sp. nov., a H2-using methanogen from Skan Bay, Alaska, and kinetics of H2 utilization. Antonie Van Leeuwenhoek, 2002, 81, 263-270.	1.7	79
34	Top-Down Enrichment Guides in Formation of Synthetic Microbial Consortia for Biomass Degradation. ACS Synthetic Biology, 2019, 8, 2174-2185.	3.8	74
35	Hydrogen-isotopic variability in lipids from Santa Barbara Basin sediments. Geochimica Et Cosmochimica Acta, 2009, 73, 4803-4823.	3.9	73
36	Disentangling Oil Weathering at a Marine Seep Using GCÃ—GC: Broad Metabolic Specificity Accompanies Subsurface Petroleum Biodegradation. Environmental Science & Technology, 2008, 42, 7166-7173.	10.0	69

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37	Methanogens rapidly transition from methane production to iron reduction. Geobiology, 2016, 14, 190-203.	2.4	65
38	Targeted diversity generation by intraterrestrial archaea and archaeal viruses. Nature Communications, 2015, 6, 6585.	12.8	63
39	Retroelement-guided protein diversification abounds in vast lineages of Bacteria and Archaea. Nature Microbiology, 2017, 2, 17045.	13.3	62
40	Hydrogen production by methanogens under low-hydrogen conditions. Archives of Microbiology, 2000, 174, 415-421.	2.2	57
41	Weathering and the Fallout Plume of Heavy Oil from Strong Petroleum Seeps Near Coal Oil Point, CA. Environmental Science & Technology, 2009, 43, 3542-3548.	10.0	57
42	Microbial production and consumption of hydrocarbons in the global ocean. Nature Microbiology, 2021, 6, 489-498.	13.3	56
43	Asphalt volcanoes as a potential source of methane to late Pleistocene coastal waters. Nature Geoscience, 2010, 3, 345-348.	12.9	55
44	The first decade of scientific insights from the Deepwater Horizon oil release. Nature Reviews Earth & Environment, 2020, 1, 237-250.	29.7	52
45	Hydrogen isotope fractionation during H2/CO2 acetogenesis: hydrogen utilization efficiency and the origin of lipid-bound hydrogen. Geobiology, 2004, 2, 179-188.	2.4	51
46	Important roles for membrane lipids in haloarchaeal bioenergetics. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 2940-2956.	2.6	49
47	A comparison of isotope fractionation of carbon and hydrogen from paddy field rice roots and soil bacterial enrichments during CO2/H2 methanogenesis. Geochimica Et Cosmochimica Acta, 2002, 66, 983-995.	3.9	46
48	Hydrogen isotopic fractionation in lipid biosynthesis by H2-consuming Desulfobacterium autotrophicum. Geochimica Et Cosmochimica Acta, 2009, 73, 2744-2757.	3.9	45
49	Rapid rates of aerobic methane oxidation at the feather edge of gas hydrate stability in the waters of Hudson Canyon, US Atlantic Margin. Geochimica Et Cosmochimica Acta, 2017, 204, 375-387.	3.9	43
50	Genomic analysis ofÂmethanogenic archaeaÂreveals a shift towards energy conservation. BMC Genomics, 2017, 18, 639.	2.8	41
51	Biogeochemical investigations of marine methane seeps, Hydrate Ridge, Oregon. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	40
52	Quantification of CH4 loss and transport in dissolved plumes of the Santa Barbara Channel, California. Continental Shelf Research, 2012, 32, 110-120.	1.8	40
53	Starvation and recovery in the deepâ€sea methanotroph <scp>M</scp>ethyloprofundus sedimenti. Molecular Microbiology, 2017, 103, 242-252.	2.5	40
54	Pure-Culture Growth of Fermentative Bacteria, Facilitated by H 2 Removal: Bioenergetics and H 2 Production. Applied and Environmental Microbiology, 2006, 72, 1079-1085.	3.1	39

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55	Methane-Oxidizing Bacteria Shunt Carbon to Microbial Mats at a Marine Hydrocarbon Seep. Frontiers in Microbiology, 2017, 8, 186.	3.5	39
56	A culture apparatus for maintaining H2 at sub-nanomolar concentrations. Journal of Microbiological Methods, 2000, 39, 243-251.	1.6	37
57	Methanotrophic bacteria occupy benthic microbial mats in shallow marine hydrocarbon seeps, Coal Oil Point, California. Journal of Geophysical Research, 2008, 113, .	3.3	34
58	D/H ratios of fatty acids from marine particulate organic matter in the California Borderland Basins. Organic Geochemistry, 2008, 39, 485-500.	1.8	33
59	A method for measuring methane oxidation rates using lowlevels of 14Câ€labeled methane and accelerator mass spectrometry. Limnology and Oceanography: Methods, 2011, 9, 245-260.	2.0	33
60	A survey of methane isotope abundance (¹⁴C, ¹³C, ²H) from five nearshore marine basins that reveals unusual radiocarbon levels in subsurface waters. Journal of Geophysical Research, 2008, 113, .	3.3	32
61	Biodegradation preference for isomers of alkylated naphthalenes and benzothiophenes in marine sediment contaminated with crude oil. Organic Geochemistry, 2011, 42, 630-639.	1.8	31
62	Recurrent Oil Sheens at the Deepwater Horizon Disaster Site Fingerprinted with Synthetic Hydrocarbon Drilling Fluids. Environmental Science & Technology, 2013, 47, 8211-8219.	10.0	31
63	Methane oxidation in the eastern tropical North Pacific Ocean water column. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1078-1092.	3.0	31
64	Latent hydrocarbons from cyanobacteria. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13434-13435.	7.1	30
65	Climatically driven emissions of hydrocarbons from marine sediments during deglaciation. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 13570-13574.	7.1	28
66	Gas flux and carbonate occurrence at a shallow seep of thermogenic natural gas. Geo-Marine Letters, 2010, 30, 355-365.	1.1	27
67	Physical control on methanotrophic potential in waters of the Santa Monica Basin, Southern California. Limnology and Oceanography, 2012, 57, 420-432.	3.1	25
68	Ocean Dumping of Containerized DDT Waste Was a Sloppy Process. Environmental Science & Technology, 2019, 53, 2971-2980.	10.0	23
69	Anaerobic propane oxidation in marine hydrocarbon seep sediments. Geochimica Et Cosmochimica Acta, 2011, 75, 2159-2169.	3.9	22
70	Applications of comprehensive two-dimensional gas chromatography (GCÂÃ—ÂGC) inÂstudying the source, transport, andÂfate of petroleum hydrocarbons inÂthe environment. , 2016, , 399-448.		20
71	D/H variation in terrestrial lipids from Santa Barbara Basin over the past 1400years: A preliminary assessment of paleoclimatic relevance. Organic Geochemistry, 2011, 42, 15-24.	1.8	19
72	Determining the flux of methane into <scp>H</scp>udson <scp>C</scp>anyon at the edge of methane clathrate hydrate stability. Geochemistry, Geophysics, Geosystems, 2016, 17, 3882-3892.	2.5	19

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73	Phospholipids and glycolipids mediate proton containment and circulation along the surface of energy-transducing membranes. Progress in Lipid Research, 2016, 64, 1-15.	11.6	18
74	Oxygen Isotopes (Î´¹⁸O) Trace Photochemical Hydrocarbon Oxidation at the Sea Surface. Geophysical Research Letters, 2019, 46, 6745-6754.	4.0	18
75	Modern Assessment of Natural Hydrocarbon Gas Flux at the Coal Oil Point Seep Field, Santa Barbara, California. Journal of Geophysical Research: Oceans, 2019, 124, 2472-2484.	2.6	16
76	Ideas and perspectives: A strategic assessment of methane and nitrous oxide measurements in the marine environment. Biogeosciences, 2020, 17, 5809-5828.	3.3	16
77	Isotopic remembrance of metabolism past. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 12565-12566.	7.1	15
78	High Resolution Measurements of Methane and Carbon Dioxide in Surface Waters over a Natural Seep Reveal Dynamics of Dissolved Phase Airâ€“Sea Flux. Environmental Science & Technology, 2014, 48, 10165-10173.	10.0	15
79	Conservation of the C-type lectin fold for accommodating massive sequence variation in archaeal diversity-generating retroelements. BMC Structural Biology, 2016, 16, 13.	2.3	15
80	Gaseous emission rates from natural petroleum seeps in the Upper Ojai Valley, California. Environmental Geosciences, 2007, 14, 197-207.	0.6	15
81	Evidence for salt diffusion from sediments contributing to increasing salinity in the Salton Sea, California. Hydrobiologia, 2005, 533, 77-85.	2.0	14
82	Response to Comment on â€œA Persistent Oxygen Anomaly Reveals the Fate of Spilled Methane in the Deep Gulf of Mexicoâ€• Science, 2011, 332, 1033-1033.	12.6	14
83	Autonomous Marine Robotic Technology Reveals an Expansive Benthic Bacterial Community Relevant to Regional Nitrogen Biogeochemistry. Environmental Science & Technology, 2016, 50, 11057-11065.	10.0	14
84	Role of diversity-generating retroelements for regulatory pathway tuning in cyanobacteria. BMC Genomics, 2020, 21, 664.	2.8	13
85	Examining Inputs of Biogenic and Oil-Derived Hydrocarbons in Surface Waters Following the Deepwater Horizon Oil Spill. ACS Earth and Space Chemistry, 2019, 3, 1329-1337.	2.7	12
86	Investigations of Aerobic Methane Oxidation in Two Marine Seep Environments: Part 1â€”Chemical Kinetics. Journal of Geophysical Research: Oceans, 2019, 124, 8852-8868.	2.6	11
87	Marine microbes rapidly adapt to consume ethane, propane, and butane within the dissolved hydrocarbon plume of a natural seep. Journal of Geophysical Research: Oceans, 2015, 120, 1937-1953.	2.6	9
88	Compositional variability and air-sea flux of ethane and propane in the plume of a large, marine seep field near Coal Oil Point, CA. Geo-Marine Letters, 2010, 30, 367-378.	1.1	8
89	Occurrence and distribution of cyclic-alkane-consuming psychrophilic bacteria in the Yellow Sea and East China Sea. Journal of Hazardous Materials, 2022, 427, 128129.	12.4	7
90	Minimal Influence of [NiFe] Hydrogenase on Hydrogen Isotope Fractionation in H2-Oxidizing Cupriavidus necator. Frontiers in Microbiology, 2017, 8, 1886.	3.5	6

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91	Radiocarbon in Marine Methane Reveals Patchy Impact of Seeps on Surface Waters. Geophysical Research Letters, 2020, 47, e2020GL089516.	4.0	6
92	Measure methane to quantify the oil spill. Nature, 2010, 465, 421-421.	27.8	5
93	Thermodynamic Ecology of Hydrogen-Based Syntrophy. , 2001, , 147-161.		4
94	Intraterrestrial lifestyles. Nature, 2013, 496, 176-177.	27.8	4
95	Microscale Measurement and Visualization of Sulfide Î´³⁴S Using Photographic Film Sulfide Capture Coupled with Laser Ablation Multicollector Inductively Coupled Plasma Mass Spectrometry. Analytical Chemistry, 2016, 88, 10126-10133.	6.5	4
96	Investigations of Aerobic Methane Oxidation in Two Marine Seep Environments: Part 2â€"Isotopic Kinetics. Journal of Geophysical Research: Oceans, 2019, 124, 8392-8399.	2.6	4
97	Harnessing a decade of data to inform future decisions: Insights into the ongoing hydrocarbon release at Taylor Energy's Mississippi Canyon Block 20 (MC20) site. Marine Pollution Bulletin, 2020, 155, 111056.	5.0	4
98	An Ecological Basis for Dual Genetic Code Expansion in Marine Deltaproteobacteria. Frontiers in Microbiology, 2021, 12, 680620.	3.5	4
99	Genome Sequence of a Marine Alkane Degrader, Alcanivorax sp. Strain 97CO-6. Genome Announcements, 2018, 6, .	0.8	3
100	The Waxâ€"Liquid Transition Modulates Hydrocarbon Respiration Rates in Alcanivorax borkumensis SK2. Environmental Science and Technology Letters, 2018, 5, 277-282.	8.7	3
101	Pelagic tar balls collected in the North Atlantic Ocean and Caribbean Sea from 1988 to 2016 have natural and anthropogenic origins. Marine Pollution Bulletin, 2018, 137, 352-359.	5.0	2
102	Production of Two Highly Abundant 2-Methyl-Branched Fatty Acids by Blooms of the Globally Significant Marine Cyanobacteria Trichodesmium erythraeum. ACS Omega, 2021, 6, 22803-22810.	3.5	2
103	Comprehensive Two-Dimensional Gas Chromatography to Assess Petroleum Product Weathering. Springer Protocols, 2016, , 129-149.	0.3	1
104	Microbial Communities Responding to Deep-Sea Hydrocarbon Spills. , 2019, , 1-17.		1
105	Complete Genome Sequence of Cycloclasticus sp. Strain PY97N, Which Includes Two Heavy Metal Resistance Genomic Islands. Microbiology Resource Announcements, 2019, 8, .	0.6	1
106	Microbial Communities Responding to Deep-Sea Hydrocarbon Spills. , 2019, , 1-17.		0