David L Valentine

List of Publications by Year
in descending order

106 papers	10,020 citations	57758 44 h-index	36028 97 g-index
115 all docs	115 docs citations	115 times ranked	10047 citing authors

#	Article	IF	Citations
1	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
2	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
3	Microbial production and consumption of hydrocarbons in the global ocean. Nature Microbiology, 2021, 6, 489-498.	13.3	56
4	An Ecological Basis for Dual Genetic Code Expansion in Marine Deltaproteobacteria. Frontiers in Microbiology, 2021, 12, 680620.	3.5	4
5	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
6	Radiocarbon in Marine Methane Reveals Patchy Impact of Seeps on Surface Waters. Geophysical Research Letters, 2020, 47, e2020GL089516.	4.0	6
7	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
8	The first decade of scientific insights from the Deepwater Horizon oil release. Nature Reviews Earth & Environment, 2020, 1, 237-250.	29.7	52
9	Role of diversity-generating retroelements for regulatory pathway tuning in cyanobacteria. BMC Genomics, 2020, 21, 664.	2.8	13
10	Ideas and perspectives: A strategic assessment of methane and nitrous oxide measurements in the marine environment. Biogeosciences, 2020, 17, 5809-5828.	3.3	16
11	Top-Down Enrichment Guides in Formation of Synthetic Microbial Consortia for Biomass Degradation. ACS Synthetic Biology, 2019, 8, 2174-2185.	3.8	74
12	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
13	Oxygen Isotopes (Î´¹⁸O) Trace Photochemical Hydrocarbon Oxidation at the Sea Surface. Geophysical Research Letters, 2019, 46, 6745-6754.	4.0	18
14	Ocean Dumping of Containerized DDT Waste Was a Sloppy Process. Environmental Science & Technology, 2019, 53, 2971-2980.	10.0	23
15	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
16	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
17	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
18	Microbial Communities Responding to Deep-Sea Hydrocarbon Spills. , 2019, , 1-17.		1

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19	Microbial Communities Responding to Deep-Sea Hydrocarbon Spills. , 2019, , 1-17.		0
20	Complete Genome Sequence of Cycloclasticus sp. Strain PY97N, Which Includes Two Heavy Metal Resistance Genomic Islands. Microbiology Resource Announcements, 2019, 8, .	0.6	1
21	Genome Sequence of a Marine Alkane Degrader, Alcanivorax sp. Strain 97CO-6. Genome Announcements, 2018, 6, .	0.8	3
22	The Waxâ€"Liquid Transition Modulates Hydrocarbon Respiration Rates in <i>Alcanivorax borkumensis</i> SK2. Environmental Science and Technology Letters, 2018, 5, 277-282.	8.7	3
23	Partial Photochemical Oxidation Was a Dominant Fate of <i>Deepwater Horizon</i> Surface Oil. Environmental Science & Technology, 2018, 52, 1797-1805.	10.0	94
24	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
25	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
26	Short-chain alkanes fuel mussel and sponge Cycloclasticus symbionts from deep-sea gas and oil seeps. Nature Microbiology, 2017, 2, 17093.	13.3	80
27	Retroelement-guided protein diversification abounds in vast lineages of Bacteria and Archaea. Nature Microbiology, 2017, 2, 17045.	13.3	62
28	Persistence and biodegradation of oil at the ocean floor following <i>Deepwater Horizon</i>. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9-E18.	7.1	93
29	Methane clumped isotopes: Progress and potential for a new isotopic tracer. Organic Geochemistry, 2017, 113, 262-282.	1.8	100
30	Starvation and recovery in the deepâ€sea methanotroph <scp><i>M</i></scp><i>ethyloprofundus sedimenti</i>. Molecular Microbiology, 2017, 103, 242-252.	2.5	40
31	Genomic analysis ofÂmethanogenic archaeaÂreveals a shift towards energy conservation. BMC Genomics, 2017, 18, 639.	2.8	41
32	Methane-Oxidizing Bacteria Shunt Carbon to Microbial Mats at a Marine Hydrocarbon Seep. Frontiers in Microbiology, 2017, 8, 186.	3.5	39
33	Minimal Influence of [NiFe] Hydrogenase on Hydrogen Isotope Fractionation in H2-Oxidizing Cupriavidus necator. Frontiers in Microbiology, 2017, 8, 1886.	3.5	6
34	Methanogens rapidly transition from methane production to iron reduction. Geobiology, 2016, 14, 190-203.	2.4	65
35	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
36	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

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37	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
38	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
39	Important roles for membrane lipids in haloarchaeal bioenergetics. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 2940-2956.	2.6	49
40	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
41	Applications of comprehensive two-dimensional gas chromatography (GCÂÃ—ÂGC) inÂstudying the source, transport, andÂfate of petroleum hydrocarbons inÂthe environment. , 2016, , 399-448.		20
42	Comprehensive Two-Dimensional Gas Chromatography to Assess Petroleum Product Weathering. Springer Protocols, 2016, , 129-149.	0.3	1
43	Methane oxidation in the eastern tropical North Pacific Ocean water column. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1078-1092.	3.0	31
44	Distinguishing and understanding thermogenic and biogenic sources of methane using multiply substituted isotopologues. Geochimica Et Cosmochimica Acta, 2015, 161, 219-247.	3.9	141
45	Targeted diversity generation by intraterrestrial archaea and archaeal viruses. Nature Communications, 2015, 6, 6585.	12.8	63
46	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
47	Latent hydrocarbons from cyanobacteria. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13434-13435.	7.1	30
48	Combined 13Câ€“D and Dâ€“D clumping in methane: Methods and preliminary results. Geochimica Et Cosmochimica Acta, 2014, 126, 169-191.	3.9	129
49	Fallout plume of submerged oil from <i>Deepwater Horizon</i>. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15906-15911.	7.1	242
50	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
51	Recalcitrance and Degradation of Petroleum Biomarkers upon Abiotic and Biotic Natural Weathering of <i>Deepwater Horizon</i> Oil. Environmental Science & Technology, 2014, 48, 6726-6734.	10.0	148
52	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
53	Intraterrestrial lifestyles. Nature, 2013, 496, 176-177.	27.8	4
54	Recurrent Oil Sheens at the <i>Deepwater Horizon</i> Disaster Site Fingerprinted with Synthetic Hydrocarbon Drilling Fluids. Environmental Science & Technology, 2013, 47, 8211-8219.	10.0	31

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55	Natural gas and temperature structured a microbial community response to the <i>Deepwater Horizon</i> oil spill. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20292-20297.	7.1	373
56	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
57	Chemical data quantify <i>Deepwater Horizon</i> 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
58	Physical control on methanotrophic potential in waters of the Santa Monica Basin, Southern California. Limnology and Oceanography, 2012, 57, 420-432.	3.1	25
59	Oil Weathering after the <i>Deepwater Horizon</i> Disaster Led to the Formation of Oxygenated Residues. Environmental Science & Technology, 2012, 46, 8799-8807.	10.0	290
60	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
61	A Persistent Oxygen Anomaly Reveals the Fate of Spilled Methane in the Deep Gulf of Mexico. Science, 2011, 331, 312-315.	12.6	420
62	Fate of Dispersants Associated with the Deepwater Horizon Oil Spill. Environmental Science & Technology, 2011, 45, 1298-1306.	10.0	771
63	Anaerobic propane oxidation in marine hydrocarbon seep sediments. Geochimica Et Cosmochimica Acta, 2011, 75, 2159-2169.	3.9	22
64	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
65	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
66	Emerging Topics in Marine Methane Biogeochemistry. Annual Review of Marine Science, 2011, 3, 147-171.	11.6	138
67	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
68	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
69	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
70	Gas flux and carbonate occurrence at a shallow seep of thermogenic natural gas. Geo-Marine Letters, 2010, 30, 355-365.	1.1	27
71	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
72	Measure methane to quantify the oil spill. Nature, 2010, 465, 421-421.	27.8	5

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73	Asphalt volcanoes as a potential source of methane to late Pleistocene coastal waters. Nature Geoscience, 2010, 3, 345-348.	12.9	55
74	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
75	Propane Respiration Jump-Starts Microbial Response to a Deep Oil Spill. Science, 2010, 330, 208-211.	12.6	444
76	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
77	Hydrogen isotopic fractionation in lipid biosynthesis by H2-consuming Desulfobacterium autotrophicum. Geochimica Et Cosmochimica Acta, 2009, 73, 2744-2757.	3.9	45
78	Hydrogen-isotopic variability in lipids from Santa Barbara Basin sediments. Geochimica Et Cosmochimica Acta, 2009, 73, 4803-4823.	3.9	73
79	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
80	Biodiversity and biogeography of phages in modern stromatolites and thrombolites. Nature, 2008, 452, 340-343.	27.8	251
81	Functional metagenomic profiling of nine biomes. Nature, 2008, 452, 629-632.	27.8	842
82	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
83	Methanotrophic bacteria occupy benthic microbial mats in shallow marine hydrocarbon seeps, Coal Oil Point, California. Journal of Geophysical Research, 2008, 113, .	3.3	34
84	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
85	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
86	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
87	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
88	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
89	Adaptations to energy stress dictate the ecology and evolution of the Archaea. Nature Reviews Microbiology, 2007, 5, 316-323.	28.6	661
90	Gaseous emission rates from natural petroleum seeps in the Upper Ojai Valley, California. Environmental Geosciences, 2007, 14, 197-207.	0.6	15

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91	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
92	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
93	Evidence for salt diffusion from sediments contributing to increasing salinity in the Salton Sea, California. Hydrobiologia, 2005, 533, 77-85.	2.0	14
94	Biogeochemical investigations of marine methane seeps, Hydrate Ridge, Oregon. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	40
95	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
96	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
97	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
98	Omega-3 fatty acids in cellular membranes: a unified concept. Progress in Lipid Research, 2004, 43, 383-402.	11.6	219
99	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
100	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
101	Biogeochemistry and microbial ecology of methane oxidation in anoxic environments: a review. Antonie Van Leeuwenhoek, 2002, 81, 271-282.	1.7	301
102	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
103	Thermodynamic Ecology of Hydrogen-Based Syntrophy. , 2001, , 147-161.		4
104	New perspectives on anaerobic methane oxidation. Environmental Microbiology, 2000, 2, 477-484.	3.8	410
105	Hydrogen production by methanogens under low-hydrogen conditions. Archives of Microbiology, 2000, 174, 415-421.	2.2	57
106	A culture apparatus for maintaining H2 at sub-nanomolar concentrations. Journal of Microbiological Methods, 2000, 39, 243-251.	1.6	37