## David A Butterfield

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Multi-stage evolution of the Lost City hydrothermal vent fluids. Geochimica Et Cosmochimica Acta, 2022, 332, 239-262.	3.9	5
2	Organic Biogeochemistry in West Mata, NE Lau Hydrothermal Vent Fields. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009481.	2.5	0
3	Seafloor Incubation Experiment with Deep-Sea Hydrothermal Vent Fluid Reveals Effect of Pressure and Lag Time on Autotrophic Microbial Communities. Applied and Environmental Microbiology, 2021, 87, .	3.1	12
4	Extensive decentralized hydrogen export from the Atlantis Massif. Geology, 2021, 49, 851-856.	4.4	5
5	A New Insight Into Seawater-Basalt Exchange Reactions Based on Combined δ18O—Δâ€217O—87Sr/86Sr Valu of Hydrothermal Fluids From the Axial Seamount Volcano, Pacific Ocean. Frontiers in Earth Science, 2021, 9, .	ıes 1.8	8
6	Validating the Cyc2 Neutrophilic Iron Oxidation Pathway Using Meta-omics of <i>Zetaproteobacteria</i> Iron Mats at Marine Hydrothermal Vents. MSystems, 2020, 5, .	3.8	65
7	Unique Solid Phase Microextraction Sampler Reveals Distinctive Biogeochemical Profiles among Various Deep-Sea Hydrothermal Vents. Scientific Reports, 2020, 10, 1360.	3.3	8
8	Hydrothermal Chimney Distribution on the Endeavour Segment, Juan de Fuca Ridge. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC008917.	2.5	13
9	Hydroacoustic, Seismic, and Bathymetric Observations of the 2014 Submarine Eruption at Ahyi Seamount, Mariana Arc. Geochemistry, Geophysics, Geosystems, 2019, 20, 3608-3627.	2.5	14
10	Active subseafloor microbial communities from Mariana back-arc venting fluids share metabolic strategies across different thermal niches and taxa. ISME Journal, 2019, 13, 2264-2279.	9.8	38
11	Fluid geochemistry, local hydrology, and metabolic activity define methanogen community size and composition in deep-sea hydrothermal vents. ISME Journal, 2019, 13, 1711-1721.	9.8	29
12	Posteruption Enhancement of Hydrothermal Activity: A 33‥ear, Multieruption Time Series at Axial Seamount (Juan de Fuca Ridge). Geochemistry, Geophysics, Geosystems, 2019, 20, 814-828.	2.5	9
13	Spatially distinct, temporally stable microbial populations mediate biogeochemical cycling at and below the seafloor in hydrothermal vent fluids. Environmental Microbiology, 2018, 20, 769-784.	3.8	71
14	A Recent Volcanic Eruption Discovered on the Central Mariana Back-Arc Spreading Center. Frontiers in Earth Science, 2018, 6, .	1.8	22
15	Deep-Sea Volcanic Eruptions Create Unique Chemical and Biological Linkages Between the Subsurface Lithosphere and the Oceanic Hydrosphere. Oceanography, 2018, 31, 128-135.	1.0	13
16	Rapid variations in fluid chemistry constrain hydrothermal phase separation at the Main Endeavour Field. Geochemistry, Geophysics, Geosystems, 2017, 18, 531-543.	2.5	6
17	Geological interpretation of volcanism and segmentation of the <scp>M</scp> ariana backâ€arc spreading center between 12.7° <scp>N</scp> and 18.3° <scp>N</scp> . Geochemistry, Geophysics, Geosystems, 2017, 18, 2240-2274.	2.5	25
18	The Effect of Arc Proximity on Hydrothermal Activity Along Spreading Centers: New Evidence From the Mariana Back Arc (12.7°N–18.3°N). Geochemistry, Geophysics, Geosystems, 2017, 18, 4211-4228.	2.5	15

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19	Community Structure of Lithotrophically-Driven Hydrothermal Microbial Mats from the Mariana Arc and Back-Arc. Frontiers in Microbiology, 2017, 8, 1578.	3.5	32
20	Hydrogen Limitation and Syntrophic Growth among Natural Assemblages of Thermophilic Methanogens at Deep-sea Hydrothermal Vents. Frontiers in Microbiology, 2016, 7, 1240.	3.5	35
21	Precipitation and growth of barite within hydrothermal vent deposits from the Endeavour Segment, Juan de Fuca Ridge. Geochimica Et Cosmochimica Acta, 2016, 173, 64-85.	3.9	55
22	Linkages between mineralogy, fluid chemistry, and microbial communities within hydrothermal chimneys from the <scp>E</scp> ndeavour <scp>S</scp> egment, <scp>J</scp> uan de <scp>F</scp> uca <scp>R</scp> idge. Geochemistry, Geophysics, Geosystems, 2016, 17, 300-323.	2.5	25
23	Hydrogen and thiosulfate limits for growth of a thermophilic, autotrophic <i>Desulfurobacterium</i> species from a deepâ€sea hydrothermal vent. Environmental Microbiology Reports, 2016, 8, 196-200.	2.4	7
24	Helium isotope, <scp>C</scp> / <sup>3</sup> <scp>H</scp> e, and <scp>B</scp> aâ€ <scp>N</scp> bâ€ <scp>T</scp> i signatures in the northern <scp>L</scp> au <scp>B</scp> asin: Distinguishing arc, backâ€arc, and hotspot affinities. Geochemistry, Geophysics, Geosystems, 2015, 16, 1133-1155.	2.5	50
25	Efficient removal of recalcitrant deep-ocean dissolved organic matter during hydrothermalÂcirculation. Nature Geoscience, 2015, 8, 856-860.	12.9	104
26	Diversity and abundance of Bacteria and nirS-encoding denitrifiers associated with the Juan de Fuca Ridge hydrothermal system. Annals of Microbiology, 2014, 64, 1691-1705.	2.6	20
27	Metallogenesis and Mineralization of Intraoceanic Arcs II: The Aeolian, Izu-Bonin, Mariana, and Kermadec Arcs, and the Manus Backarc BasinIntroduction. Economic Geology, 2014, 109, 2073-2077.	3.8	15
28	Understanding a submarine eruption through time series hydrothermal plume sampling of dissolved and particulate constituents: <scp>W</scp> est <scp>M</scp> ata, 2008–2012. Geochemistry, Geophysics, Geosystems, 2014, 15, 4631-4650.	2.5	31
29	Sources of organic nitrogen at the serpentiniteâ€hosted <scp>L</scp> ost <scp>C</scp> ity hydrothermal field. Geobiology, 2013, 11, 154-169.	2.4	48
30	Phylogenetic diversity and functional gene patterns of sulfur-oxidizing subseafloor Epsilonproteobacteria in diffuse hydrothermal vent fluids. Frontiers in Microbiology, 2013, 4, 185.	3.5	110
31	Growth kinetics and energetics of a deepâ€sea hyperthermophilic methanogen under varying environmental conditions. Environmental Microbiology Reports, 2013, 5, 665-671.	2.4	32
32	Geologic history of the summit of Axial Seamount, Juan de Fuca Ridge. Geochemistry, Geophysics, Geosystems, 2013, 14, 4403-4443.	2.5	47
33	The 1998 eruption of Axial Seamount: New insights on submarine lava flow emplacement from highâ€resolution mapping. Geochemistry, Geophysics, Geosystems, 2013, 14, 3939-3968.	2.5	62
34	Seafloor deformation and forecasts of the April 2011 eruption at Axial Seamount. Nature Geoscience, 2012, 5, 474-477.	12.9	104
35	Submarine Magmatic-Hydrothermal Systems at the Monowai Volcanic Center, Kermadec Arc. Economic Geology, 2012, 107, 1669-1694.	3.8	33
36	Hydrogen-limited growth of hyperthermophilic methanogens at deep-sea hydrothermal vents. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13674-13679	7.1	81

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37	Metallogenesis and Mineralization of Intraoceanic Arcs I: Kermadec ArcIntroduction. Economic Geology, 2012, 107, 1521-1525.	3.8	19
38	Microbial utilization of abiogenic carbon and hydrogen in a serpentinite-hosted system. Geochimica Et Cosmochimica Acta, 2012, 92, 82-99.	3.9	105
39	Seismic precursors and magma ascent before the April 2011 eruption at Axial Seamount. Nature Geoscience, 2012, 5, 478-482.	12.9	59
40	Subseafloor nitrogen transformations in diffuse hydrothermal vent fluids of the Juan de Fuca Ridge evidenced by the isotopic composition of nitrate and ammonium. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	60
41	Activity and abundance of denitrifying bacteria in the subsurface biosphere of diffuse hydrothermal vents of the Juan de Fuca Ridge. Biogeosciences, 2012, 9, 4661-4678.	3.3	37
42	Calcification and organic production on a Hawaiian coral reef. Marine Chemistry, 2011, 127, 64-75.	2.3	163
43	Submarine hydrothermal activity and gold-rich mineralization at Brothers Volcano, Kermadec Arc, New Zealand. Mineralium Deposita, 2011, 46, 541-584.	4.1	219
44	Active submarine eruption of boninite in the northeastern Lau Basin. Nature Geoscience, 2011, 4, 799-806.	12.9	163
45	High SO2 flux, sulfur accumulation, and gas fractionation at an erupting submarine volcano. Geology, 2011, 39, 803-806.	4.4	87
46	Isolated communities of Epsilonproteobacteria in hydrothermal vent fluids of the Mariana Arc seamounts. FEMS Microbiology Ecology, 2010, 73, no-no.	2.7	99
47	Spotlight: Northwest Rota-1 Seamount. Oceanography, 2010, 23, 182-183.	1.0	3
48	Spotlight: Axial Seamount. Oceanography, 2010, 23, 38-39.	1.0	10
49	A seismic swarm and regional hydrothermal and hydrologic perturbations: The northern Endeavour segment, February 2005. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	20
50	Elevated concentrations of formate, acetate and dissolved organic carbon found at the Lost City hydrothermal field. Geochimica Et Cosmochimica Acta, 2010, 74, 941-952.	3.9	300
51	Survival of mussels in extremely acidic waters on a submarine volcano. Nature Geoscience, 2009, 2, 344-348.	12.9	139
52	Individual hydrothermal vents at Axial Seamount harbor distinct subseafloor microbial communities. FEMS Microbiology Ecology, 2009, 70, 413-424.	2.7	64
53	Variability in Microbial Communities in Black Smoker Chimneys at the NW Caldera Vent Field, Brothers Volcano, Kermadec Arc. Geomicrobiology Journal, 2009, 26, 552-569.	2.0	46
54	Post-eruption succession of macrofaunal communities at diffuse flow hydrothermal vents on Axial Volcano, Juan de Fuca Ridge, Northeast Pacific. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 1586-1598.	1.4	62

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55	Chemistry of hydrothermal plumes above submarine volcanoes of the Mariana Arc. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	62
56	A Siâ€Cl geothermobarometer for the reaction zone of highâ€temperature, basalticâ€hosted midâ€ocean ridge hydrothermal systems. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	43
57	Venting of a separate CO <sub>2</sub> â€rich gas phase from submarine arc volcanoes: Examples from the Mariana and Tongaâ€Kermadec arcs. Journal of Geophysical Research, 2008, 113, .	3.3	68
58	Spatial and temporal patterns of colonization by deep-sea hydrothermal vent invertebrates on the Juan de Fuca Ridge, NE Pacific. Aquatic Biology, 2007, 1, 1-16.	1.4	40
59	Physical controls on the salinity of mid-ocean ridge hydrothermal vent fluids. Earth and Planetary Science Letters, 2007, 257, 132-145.	4.4	44
60	Environmental differences in hemoglobin gene expression in the hydrothermal vent tubeworm, Ridgeia piscesae. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2007, 146, 326-337.	1.6	24
61	Search for the proverbial mantle osmium sources to the oceans: Hydrothermal alteration of mid-ocean ridge basalt. Geochimica Et Cosmochimica Acta, 2007, 71, 4655-4667.	3.9	41
62	Application of radium isotopes to determine crustal residence times of hydrothermal fluids from two sites on the Reykjanes Peninsula, Iceland. Geochimica Et Cosmochimica Acta, 2007, 71, 6019-6029.	3.9	35
63	Microbial Population Structures in the Deep Marine Biosphere. Science, 2007, 318, 97-100.	12.6	802
64	Exploring the Submarine Ring of Fire: Mariana Arc - Western Pacific. Oceanography, 2007, 20, 68-79.	1.0	75
65	Submarine venting of liquid carbon dioxide on a Mariana Arc volcano. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	139
66	Diversity and distribution of subseafloor Thermococcales populations in diffuse hydrothermal vents at an active deep-sea volcano in the northeast Pacific Ocean. Journal of Geophysical Research, 2006, 111, .	3.3	33
67	Hydrothermal fluid fluxes calculated from the isotopic mass balance of thallium in the ocean crust. Earth and Planetary Science Letters, 2006, 251, 120-133.	4.4	145
68	Formation and evolution of carbonate chimneys at the Lost City Hydrothermal Field. Geochimica Et Cosmochimica Acta, 2006, 70, 3625-3645.	3.9	207
69	Dissolved organic carbon in ridge-axis and ridge-flank hydrothermal systems. Geochimica Et Cosmochimica Acta, 2006, 70, 3830-3842.	3.9	162
70	Microbial life in ridge flank crustal fluids. Environmental Microbiology, 2006, 8, 88-99.	3.8	169
71	Long-term eruptive activity at a submarine arc volcano. Nature, 2006, 441, 494-497.	27.8	141
72	Hydrothermal Vent Geology and Biology at Earth's Fastest Spreading Rates. Marine Geophysical Researches, 2006, 27, 137-153.	1.2	15

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73	A Serpentinite-Hosted Ecosystem: The Lost City Hydrothermal Field. Science, 2005, 307, 1428-1434.	12.6	1,037
74	Mixing, reaction and microbial activity in the sub-seafloor revealed by temporal and spatial variation in diffuse flow vents at axial volcano. Geophysical Monograph Series, 2004, , 269-289.	0.1	98
75	Fluids from Aging Ocean Crust That Support Microbial Life. Science, 2003, 299, 120-123.	12.6	259
76	Bacterial diversity in a subseafloor habitat following a deep-sea volcanic eruption. FEMS Microbiology Ecology, 2003, 43, 393-409.	2.7	190
77	Magmatic events can produce rapid changes in hydrothermal vent chemistry. Nature, 2003, 422, 878-881.	27.8	221
78	30,000 Years of Hydrothermal Activity at the Lost City Vent Field. Science, 2003, 301, 495-498.	12.6	361
79	Phylogenetic Diversity of Nitrogenase (nifH) Genes in Deep-Sea and Hydrothermal Vent Environments of the Juan de Fuca Ridge. Applied and Environmental Microbiology, 2003, 69, 960-970.	3.1	173
80	Bacterial diversity in a subseafloor habitat following a deep-sea volcanic eruption. FEMS Microbiology Ecology, 2003, 43, 393-409.	2.7	11
81	Temporal Changes in Archaeal Diversity and Chemistry in a Mid-Ocean Ridge Subseafloor Habitat. Applied and Environmental Microbiology, 2002, 68, 1585-1594.	3.1	220
82	Evidence for basaltic Sr in midocean ridge-flank hydrothermal systems and implications for the global oceanic Sr isotope balance. Geochimica Et Cosmochimica Acta, 2001, 65, 4141-4153.	3.9	58
83	An off-axis hydrothermal vent field near the Mid-Atlantic Ridge at 30° N. Nature, 2001, 412, 145-149.	27.8	997
84	Osmium isotopes in hydrothermal fluids from the Juan de Fuca Ridge. Earth and Planetary Science Letters, 2000, 179, 139-152.	4.4	67
85	Seafloor eruptions and evolution of hydrothermal fluid chemistry. , 1999, , 153-170.		4
86	The relationship of hydrothermal fluid composition and crustal residence time to maturity of vent fields on the Juan de Fuca Ridge. Geochimica Et Cosmochimica Acta, 1998, 62, 1521-1533.	3.9	62
87	Geological, chemical, and biological evidence for recent volcanism at 17.5°S: East Pacific Rise. Earth and Planetary Science Letters, 1998, 163, 131-147.	4.4	29
88	The Quantum Event of Oceanic Crustal Accretion: Impacts of Diking at Mid-Ocean Ridges. , 1998, 281, 222-230.		172
89	The quantum event of oceanic crustal accretion: impacts of diking at mid-ocean ridges. Science, 1998, 281, 222-30.	12.6	18
90	Seafloor eruptions and evolution of hydrothermal fluid chemistry. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1997, 355, 369-386.	3.4	220

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91	Biological colonization of new hydrothermal vents following an eruption on Juan de Fuca Ridge. Deep-Sea Research Part I: Oceanographic Research Papers, 1997, 44, 1627-1644.	1.4	143
92	Initial results of the rapid response to the 1993 CoAxial event: Relationships between hydrothermal and volcanic processes. Geophysical Research Letters, 1995, 22, 143-146.	4.0	115
93	Observations of manganese and iron at the CoAxial Seafloor Eruption Site, Juan de Fuca Ridge. Geophysical Research Letters, 1995, 22, 151-154.	4.0	35
94	Variations in water-column ³He/heat ratios associated with the 1993 CoAxial event, Juan de Fuca Ridge. Geophysical Research Letters, 1995, 22, 155-158.	4.0	40
95	Trace metals in hydrothermal solutions from Cleft segment on the southern Juan de Fuca Ridge. Journal of Geophysical Research, 1994, 99, 4925-4935.	3.3	94
96	Geochemistry of north Cleft segment vent fluids: Temporal changes in chlorinity and their possible relation to recent volcanism. Journal of Geophysical Research, 1994, 99, 4951-4968.	3.3	183
97	Temporal and spatial variability of hydrothermal manganese and iron at Cleft segment, Juan de Fuca Ridge. Journal of Geophysical Research, 1994, 99, 4905-4923.	3.3	77
98	Gradients in the composition of hydrothermal fluids from the Endeavour segment vent field: Phase separation and brine loss. Journal of Geophysical Research, 1994, 99, 9561-9583.	3.3	233
99	Boron and halide systematics in submarine hydrothermal systems: Effects of phase separation and sedimentary contributions. Earth and Planetary Science Letters, 1994, 123, 227-238.	4.4	100
100	Anomalous CH4 and NH4+ concentrations at an unsedimented mid-ocean-ridge hydrothermal system. Nature, 1993, 364, 45-47.	27.8	312
101	Silica and germanium in Pacific Ocean hydrothermal vents and plumes. Earth and Planetary Science Letters, 1993, 119, 365-378.	4.4	117
102	Geochemistry of hydrothermal fluids from Axial Seamount hydrothermal emissions study vent field, Juan de Fuca Ridge: Subseafloor boiling and subsequent fluidâ€rock interaction. Journal of Geophysical Research, 1990, 95, 12895-12921.	3.3	311
103	Submarine venting of phase-separated hydrothermal fluids at Axial Volcano, Juan de Fuca Ridge. Nature, 1989, 340, 702-705.	27.8	145
104	The Chemistry of Diffuse-Flow Vent Fluids on the Galapagos Rift (86°W)° Temporal Variability and Subseafloor Phase Equilibria Controls. Geophysical Monograph Series, 0, , 123-144.	0.1	5