

Charles H Langmuir

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98
papers

15,978
citations

55
h-index

107
g-index

107
ext. papers

17,562
ext. citations

14.4
avg, IF

6.6
L-index

#	Paper	IF	Citations
98	Oxidized primary arc magmas: Constraints from Cu/Zr systematics in global arc volcanics.. <i>Science Advances</i> , 2022 , 8, eabk0718	14.3	1
97	Sediment and ocean crust both melt at subduction zones. <i>Earth and Planetary Science Letters</i> , 2022 , 584, 117424	5.3	2
96	A quantitative framework for global variations in arc geochemistry. <i>Earth and Planetary Science Letters</i> , 2022 , 584, 117411	5.3	1
95	Multi-stage melting of enriched mantle components along the eastern Gakkel Ridge. <i>Chemical Geology</i> , 2021 , 586, 120594	4.2	1
94	A subduction influence on ocean ridge basalts outside the Pacific subduction shield. <i>Nature Communications</i> , 2021 , 12, 4757	17.4	6
93	Do sea level variations influence mid-ocean ridge magma supply? A test using crustal thickness and bathymetry data from the East Pacific Rise. <i>Earth and Planetary Science Letters</i> , 2020 , 535, 116121	5.3	12
92	The spatial footprint of hydrothermal scavenging on ²³⁰ ThXS-derived mass accumulation rates. <i>Geochimica Et Cosmochimica Acta</i> , 2020 , 272, 218-234	5.5	2
91	An isotopically distinct Zealandia Antarctic mantle domain in the Southern Ocean. <i>Nature Geoscience</i> , 2019 , 12, 206-214	18.3	24
90	Geochemical Variability Along the Northern East Pacific Rise: Coincident Source Composition and Ridge Segmentation. <i>Geochemistry, Geophysics, Geosystems</i> , 2019 , 20, 1889-1911	3.6	11
89	Carbon Fluxes and Primary Magma CO ₂ Contents Along the Global Mid-Ocean Ridge System. <i>Geochemistry, Geophysics, Geosystems</i> , 2019 , 20, 1387-1424	3.6	36
88	Trace element (Mn, Zn, Ni, V) and authigenic uranium (aU) geochemistry reveal sedimentary redox history on the Juan de Fuca Ridge, North Pacific Ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2018 , 236, 79-98	5.5	24
87	Vanadium isotope compositions of mid-ocean ridge lavas and altered oceanic crust. <i>Earth and Planetary Science Letters</i> , 2018 , 493, 128-139	5.3	17
86	Millennial-scale variations in dustiness recorded in Mid-Atlantic sediments from 0 to 70 ka. <i>Earth and Planetary Science Letters</i> , 2018 , 482, 12-22	5.3	14
85	Petrogenesis of the Late Mesozoic Magnesian and Ferroan Granites in Northwest Zhejiang, Southeast China, and Their Implications. <i>Journal of Geology</i> , 2018 , 126, 407-425	2	3
84	The importance of mantle wedge heterogeneity to subduction zone magmatism and the origin of EM1. <i>Earth and Planetary Science Letters</i> , 2017 , 472, 216-228	5.3	41
83	A 65 k.y. time series from sediment-hosted glasses reveals rapid transitions in ocean ridge magmas. <i>Geology</i> , 2017 , 45, 491-494	5	9
82	Hydrothermal deposition on the Juan de Fuca Ridge over multiple glacial/interglacial cycles. <i>Earth and Planetary Science Letters</i> , 2017 , 479, 120-132	5.3	18

81	Light Stable Isotopic Compositions of Enriched Mantle Sources: Resolving the Dehydration Paradox. <i>Geochemistry, Geophysics, Geosystems</i> , 2017 , 18, 3801-3839	3.6	49
80	Delayed CO ₂ emissions from mid-ocean ridge volcanism as a possible cause of late-Pleistocene glacial cycles. <i>Earth and Planetary Science Letters</i> , 2017 , 457, 238-249	5.3	31
79	Parental arc magma compositions dominantly controlled by mantle-wedge thermal structure. <i>Nature Geoscience</i> , 2016 , 9, 772-776	18.3	56
78	Estimating the parental magma composition and temperature of the Xiaohaizi cumulate-bearing ultramafic rock: Implication for magma evolution of the Tarim large igneous province, northwestern China. <i>Journal of Earth Science (Wuhan, China)</i> , 2016 , 27, 519-528	2.2	4
77	Hydrothermal iron flux variability following rapid sea level changes. <i>Geophysical Research Letters</i> , 2016 , 43, 3848-3856	4.9	30
76	The global chemical systematics of arc front stratovolcanoes: Evaluating the role of crustal processes. <i>Earth and Planetary Science Letters</i> , 2015 , 422, 182-193	5.3	88
75	What processes control the chemical compositions of arc front stratovolcanoes?. <i>Geochemistry, Geophysics, Geosystems</i> , 2015 , 16, 1865-1893	3.6	65
74	Glacial cycles drive variations in the production of oceanic crust. <i>Science</i> , 2015 , 347, 1237-40	33.3	84
73	Trace element mineral/melt partitioning for basaltic and basaltic andesitic melts: An experimental and laser ICP-MS study with application to the oxidation state of mantle source regions. <i>Earth and Planetary Science Letters</i> , 2014 , 392, 265-278	5.3	110
72	The Global Systematics of Ocean Ridge Basalts and their Origin. <i>Journal of Petrology</i> , 2014 , 55, 1051-1082	3.9	77
71	A genetic link between silicic slab components and calc-alkaline arc volcanism in central Mexico. <i>Geological Society Special Publication</i> , 2014 , 385, 31-64	1.7	18
70	Origin of the Early Permian zircons in Keping basalts and magma evolution of the Tarim Large Igneous Province (northwestern China). <i>Lithos</i> , 2014 , 204, 47-58	2.9	21
69	Hafnium isotope evidence for slab melt contributions in the Central Mexican Volcanic Belt and implications for slab melting in hot and cold slab arcs. <i>Chemical Geology</i> , 2014 , 377, 45-55	4.2	32
68	Geophysical and geochemical evidence for deep temperature variations beneath mid-ocean ridges. <i>Science</i> , 2014 , 344, 80-3	33.3	125
67	Constraints on melting processes and plume-ridge interaction from comprehensive study of the FAMOUS and North Famous segments, Mid-Atlantic Ridge. <i>Earth and Planetary Science Letters</i> , 2013 , 365, 209-220	5.3	43
66	Zircon U/Pb geochronology and geochemistry of two episodes of granitoids from the northwestern Zhejiang Province, SE China: Implication for magmatic evolution and tectonic transition. <i>Lithos</i> , 2013 , 179, 334-352	2.9	49
65	The magma plumbing system of Bezymianny Volcano: Insights from a 54-year time series of trace element whole-rock geochemistry and amphibole compositions. <i>Journal of Volcanology and Geothermal Research</i> , 2013 , 263, 108-121	2.8	42
64	The mean composition of ocean ridge basalts. <i>Geochemistry, Geophysics, Geosystems</i> , 2013 , 14, 489-518	3.6	798

63	The Processes of Melt Differentiation in Arc Volcanic Rocks: Insights from OIB-type Arc Magmas in the Central Mexican Volcanic Belt. <i>Journal of Petrology</i> , 2013 , 54, 665-701	3.9	38
62	The Processes of Melt Differentiation in Arc Volcanic Rock: Insights from OIB-type Arc Magmas in the Central Mexican Volcanic Belt: Reply to a Critical Comment by Claus Siebe (2013). <i>Journal of Petrology</i> , 2013 , 54, 1551-1554	3.9	1
61	Petrological Systematics of Mid-Ocean Ridge Basalts: Constraints on Melt Generation Beneath Ocean Ridges. <i>Geophysical Monograph Series</i> , 2013 , 183-280	1.1	342
60	Platinum-group elements and geochemical characteristics of the Permian continental flood basalts in the Tarim Basin, northwest China: Implications for the evolution of the Tarim Large Igneous Province. <i>Chemical Geology</i> , 2012 , 328, 278-289	4.2	45
59	Hf isotopic characteristics of the Tarim Permian large igneous province rocks of NW China: Implication for the magmatic source and evolution. <i>Journal of Asian Earth Sciences</i> , 2012 , 49, 191-202	2.8	52
58	Links from Mantle to Microbe at the Lau Integrated Study Site: Insights from a Back-Arc Spreading Center. <i>Oceanography</i> , 2012 , 25, 62-77	2.3	23
57	Melting and Crustal Processes at the FAMOUS Segment (Mid-Atlantic Ridge): New Insights from Olivine-hosted Melt Inclusions from Multiple Samples. <i>Journal of Petrology</i> , 2012 , 53, 665-698	3.9	43
56	Enriched basalts at segment centers: The Lucky Strike (37°17'N) and Menez Gwen (37°50'N) segments of the Mid-Atlantic Ridge. <i>Geochemistry, Geophysics, Geosystems</i> , 2011 , 12, n/a-n/a	3.6	38
55	Climate change and the integrity of science. <i>Science</i> , 2010 , 328, 689-90	33.3	116
54	Lithium isotopes in Guatemalan and Franciscan HPIT rocks: Insights into the role of sediment-derived fluids during subduction. <i>Geochimica Et Cosmochimica Acta</i> , 2010 , 74, 3621-3641	5.5	54
53	Feedback between deglaciation, volcanism, and atmospheric CO ₂ . <i>Earth and Planetary Science Letters</i> , 2009 , 286, 479-491	5.3	204
52	Mantle source variations beneath the Eastern Lau Spreading Center and the nature of subduction components in the Lau basin-Tonga arc system. <i>Geochemistry, Geophysics, Geosystems</i> , 2009 , 10, n/a-n/a	3.6	74
51	Origins of chemical diversity of back-arc basin basalts: A segment-scale study of the Eastern Lau Spreading Center. <i>Journal of Geophysical Research</i> , 2009 , 114,		58
50	Origin of a Southern Hemisphere geochemical signature in the Arctic upper mantle. <i>Nature</i> , 2008 , 453, 89-93	50.4	83
49	Central role of detachment faults in accretion of slow-spreading oceanic lithosphere. <i>Nature</i> , 2008 , 455, 790-4	50.4	318
48	Hydrothermal exploration with the Autonomous Benthic Explorer. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2008 , 55, 203-219	2.5	107
47	Lithium isotopes in global mid-ocean ridge basalts. <i>Geochimica Et Cosmochimica Acta</i> , 2008 , 72, 1626-1637	3.5	152
46	Mantle Melting Beneath Mid-Ocean Ridges. <i>Oceanography</i> , 2007 , 20, 78-89	2.3	27

45	Adakitic Dacites Formed by Intracrustal Crystal Fractionation of Water-rich Parent Magmas at Nevado de Longaví Volcano (36°S; Andean Southern Volcanic Zone, Central Chile). <i>Journal of Petrology</i> , 2007 , 48, 2033-2061	3.9	128
44	A hydrous melting and fractionation model for mid-ocean ridge basalts: Application to the Mid-Atlantic Ridge near the Azores. <i>Geochemistry, Geophysics, Geosystems</i> , 2004 , 5, n/a-n/a	3.6	233
43	Origin of enriched ocean ridge basalts and implications for mantle dynamics. <i>Earth and Planetary Science Letters</i> , 2004 , 226, 347-366	5.3	277
42	Oxygen isotope evidence for the origin of enriched mantle beneath the mid-Atlantic ridge. <i>Earth and Planetary Science Letters</i> , 2004 , 220, 297-316	5.3	59
41	Discovery of abundant hydrothermal venting on the ultraslow-spreading Gakkel ridge in the Arctic Ocean. <i>Nature</i> , 2003 , 421, 252-6	50.4	171
40	The importance of water to oceanic mantle melting regimes. <i>Nature</i> , 2003 , 421, 815-20	50.4	287
39	Magmatic and amagmatic seafloor generation at the ultraslow-spreading Gakkel ridge, Arctic Ocean. <i>Nature</i> , 2003 , 423, 956-61	50.4	313
38	Vapour undersaturation in primitive mid-ocean-ridge basalt and the volatile content of Earth's upper mantle. <i>Nature</i> , 2002 , 419, 451-5	50.4	590
37	Recycled dehydrated lithosphere observed in plume-influenced mid-ocean-ridge basalt. <i>Nature</i> , 2002 , 420, 385-9	50.4	385
36	Sr-Nd-Pb-Hf Isotope Results from ODP Leg 187: Evidence for Mantle Dynamics of the Australian-Antarctic Discordance and Origin of the Indian MORB Source. <i>Geochemistry, Geophysics, Geosystems</i> , 2002 , 3, 1-35	3.6	119
35	Cadmium, indium, tin, tellurium, and sulfur in oceanic basalts: Implications for chalcophile element fractionation in the Earth. <i>Journal of Geophysical Research</i> , 2000 , 105, 18927-18948		107
34	Identification and implications of off-axis lava flows around the East Pacific Rise. <i>Geochemistry, Geophysics, Geosystems</i> , 2000 , 1, n/a-n/a	3.6	26
33	Evidence from ¹⁰ Be and U series disequilibria on the possible contamination of mid-ocean ridge basalt glasses by sedimentary material. <i>Geochemistry, Geophysics, Geosystems</i> , 2000 , 1, n/a-n/a	3.6	23
32	The age and distribution of mantle heterogeneity along the Mid-Atlantic Ridge (31°N). <i>Earth and Planetary Science Letters</i> , 1999 , 170, 269-286	5.3	148
31	Geochemical Earth Reference Model (GERM): description of the initiative. <i>Chemical Geology</i> , 1998 , 145, 153-159	4.2	20
30	The chemical composition of subducting sediment and its consequences for the crust and mantle. <i>Chemical Geology</i> , 1998 , 145, 325-394	4.2	2583
29	Petrological systematics of the Mid-Atlantic Ridge south of Kane: Implications for ocean crust formation. <i>Journal of Geophysical Research</i> , 1997 , 102, 14915-14946		58
28	The origin of abyssal peridotites: a new perspective. <i>Earth and Planetary Science Letters</i> , 1997 , 152, 251-365		162

27	The boron systematics of intraplate lavas: Implications for crust and mantle evolution. <i>Geochimica Et Cosmochimica Acta</i> , 1996 , 60, 415-422	5.5	93
26	Biology of the Lucky Strike hydrothermal field. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 1996 , 43, 1509-1529	2.5	44
25	Constraints on mantle melting at mid-ocean ridges from global $^{238}\text{U}/^{230}\text{Th}$ disequilibrium data. <i>Nature</i> , 1996 , 384, 231-235	50.4	102
24	Small-scale spatial and temporal variations in mid-ocean ridge crest magmatic processes. <i>Geology</i> , 1994 , 22, 375-379	5	177
23	Automated XY plots from Microsoft Excel. <i>Computers and Geosciences</i> , 1994 , 20, 47-52	4.5	5
22	A view from the Sunda arc. <i>Nature</i> , 1994 , 367, 224-225	50.4	
21	Cerium/lead and lead isotope ratios in arc magmas and the enrichment of lead in the continents. <i>Nature</i> , 1994 , 368, 514-520	50.4	300
20	The systematics of boron abundances in young volcanic rocks. <i>Geochimica Et Cosmochimica Acta</i> , 1993 , 57, 1489-1498	5.5	207
19	Tracing trace elements from sediment input to volcanic output at subduction zones. <i>Nature</i> , 1993 , 362, 739-743	50.4	585
18	Spatial and temporal variability in the geochemistry of basalts from the East Pacific Rise. <i>Nature</i> , 1992 , 359, 493-499	50.4	109
17	Geochemistry of basalts from the southeast Indian Ridge, 115°E – 138°E . <i>Journal of Geophysical Research</i> , 1991 , 96, 2089		129
16	Calculation of phase equilibrium in mineral-melt systems. <i>Computers and Geosciences</i> , 1990 , 16, 1-19	4.5	136
15	Petrology and geochemistry of lavas from the Sumisu and Torishima backarc rifts. <i>Earth and Planetary Science Letters</i> , 1990 , 100, 161-178	5.3	103
14	Geochemical consequences of in situ crystallization. <i>Nature</i> , 1989 , 340, 199-205	50.4	312
13	Isotope evidence of a mantle convection boundary at the Australian-Antarctic Discordance. <i>Nature</i> , 1988 , 333, 623-629	50.4	158
12	An evaluation of the global variations in the major element chemistry of arc basalts. <i>Earth and Planetary Science Letters</i> , 1988 , 90, 349-370	5.3	369
11	Beryllium systematics in young volcanic rocks: Implications for ^{10}Be . <i>Geochimica Et Cosmochimica Acta</i> , 1988 , 52, 237-244	5.5	83
10	The systematics of lithium abundances in young volcanic rocks. <i>Geochimica Et Cosmochimica Acta</i> , 1987 , 51, 1727-1741	5.5	210

9	Global correlations of ocean ridge basalt chemistry with axial depth and crustal thickness. <i>Journal of Geophysical Research</i> , 1987 , 92, 8089		1199
8	Three-component isotopic heterogeneity near the Oceanographer transform, Mid-Atlantic Ridge. <i>Nature</i> , 1987 , 325, 217-223	50.4	113
7	The significance of unusual zoning in olivines from FAMOUS area basalt 527-1-1. <i>Contributions To Mineralogy and Petrology</i> , 1986 , 93, 1-8	3.5	31
6	Petrological and tectonic segmentation of the East Pacific Rise, 5°30'–14°30' N. <i>Nature</i> , 1986 , 322, 422-429	50.4	365
5	Oxidation states of mid-ocean ridge basalt glasses. <i>Earth and Planetary Science Letters</i> , 1986 , 79, 397-411	5.3	390
4	Petrogenesis of Basalt Glasses from the Tamayo Region, East Pacific Rise. <i>Journal of Petrology</i> , 1984 , 25, 213-254	3.9	167
3	The geochemistry of oceanic basalts in the vicinity of transform faults: Observations and implications. <i>Earth and Planetary Science Letters</i> , 1984 , 69, 107-127	5.3	136
2	Modelling of major elements in mantle-melt systems using trace element approaches. <i>Geochimica Et Cosmochimica Acta</i> , 1978 , 42, 725-741	5.5	212
1	A general mixing equation with applications to Icelandic basalts. <i>Earth and Planetary Science Letters</i> , 1978 , 37, 380-392	5.3	796