Mark D Kurz

List of Publications by Year
in descending order

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109 papers	9,437 citations	23567 58 h-index	37204 96 g-index
114 all docs	114 docs citations	114 times ranked	4299 citing authors

#	Article	IF	Citations
1	Helium isotopic systematics of oceanic islands and mantle heterogeneity. Nature, 1982, 297, 43-47.	27.8	479
2	Constraints on evolution of Earth's mantle from rare gas systematics. Nature, 1983, 303, 762-766.	27.8	420
3	Helium isotopic variations in volcanic rocks from Loihi Seamount and the Island of Hawaii. Earth and Planetary Science Letters, 1983, 66, 388-406.	4.4	303
4	Examination of surface exposure ages of Antarctic moraines using in situ produced 10Be and 26Al. Geochimica Et Cosmochimica Acta, 1991, 55, 2269-2283.	3.9	295
5	The return of subducted continental crust in Samoan lavas. Nature, 2007, 448, 684-687.	27.8	280
6	Cosmogenic helium in a terrestrial igneous rock. Nature, 1986, 320, 435-439.	27.8	240
7	In situ production of terrestrial cosmogenic helium and some applications to geochronology. Geochimica Et Cosmochimica Acta, 1986, 50, 2855-2862.	3.9	214
8	Isotope and trace element characteristics of a super-fast spreading ridge: East Pacific rise, 13â€“23Â°S. Earth and Planetary Science Letters, 1994, 121, 173-193.	4.4	213
9	Helium isotopic variations in the mantle beneath the central North Atlantic Ocean. Earth and Planetary Science Letters, 1982, 58, 1-14.	4.4	208
10	The distribution of helium in oceanic basalt glasses. Earth and Planetary Science Letters, 1981, 53, 41-54.	4.4	204
11	Experimental measurements of 3He and 4He mobility in olivine and clinopyroxene at magmatic temperatures. Geochimica Et Cosmochimica Acta, 1993, 57, 1313-1324.	3.9	179
12	Tungsten-182 heterogeneity in modern ocean island basalts. Science, 2017, 356, 66-69.	12.6	171
13	Dynamics of the Galapagos hotspot from helium isotope geochemistry. Geochimica Et Cosmochimica Acta, 1999, 63, 4139-4156.	3.9	155
14	Evidence for the survival of the oldest terrestrial mantle reservoir. Nature, 2010, 466, 853-856.	27.8	151
15	Cosmic ray exposure dating with in situ produced cosmogenic 3He: Results from young Hawaiian lava flows. Earth and Planetary Science Letters, 1990, 97, 177-189.	4.4	148
16	Cosmogenic nuclide chronology of millennial-scale glacial advances during O-isotope stage 2 in Patagonia. Bulletin of the Geological Society of America, 2004, 116, 308.	3.3	142
17	Diverse styles of submarine venting on the ultraslow spreading Mid-Cayman Rise. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14020-14025.	7.1	140
18	The CRONUS-Earth Project: A synthesis. Quaternary Geochronology, 2016, 31, 119-154.	1.4	138

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19	Helium isotope geochemistry of some volcanic rocks from Saint Helena. Earth and Planetary Science Letters, 1992, 110, 121-131.	4.4	136
20	Diffusion of cosmogenic3He in olivine and quartz: implications for surface exposure dating. Earth and Planetary Science Letters, 1991, 103, 241-256.	4.4	135
21	He, Pb, Sr and Nd isotope constraints on magma genesis and mantle heterogeneity beneath young Pacific seamounts. Contributions To Mineralogy and Petrology, 1988, 99, 446-463.	3.1	134
22	Helium and lead isotope geochemistry of the Azores Archipelago. Earth and Planetary Science Letters, 1999, 169, 189-205.	4.4	127
23	Chronology of Taylor Glacier Advances in Arena Valley, Antarctica, Using in Situ Cosmogenic 3He and 10Be. Quaternary Research, 1993, 39, 11-23.	1.7	126
24	Effective attenuation lengths of cosmic rays producing ¹⁰Be AND ²⁶Al in quartz: Implications for exposure age dating. Geophysical Research Letters, 1992, 19, 369-372.	4.0	125
25	Helium solubility in olivine and implications for high 3He/4He in ocean island basalts. Nature, 2005, 437, 1140-1143.	27.8	125
26	Pb-Sr-He isotope and trace element geochemistry of the Cape Verde Archipelago. Geochimica Et Cosmochimica Acta, 2003, 67, 3717-3733.	3.9	123
27	Helium isotopic evolution of Mauna Kea Volcano: First results from the 1-km drill core. Journal of Geophysical Research, 1996, 101, 11781-11791.	3.3	116
28	New Samoan lavas from Ofu Island reveal a hemispherically heterogeneous high 3He/4He mantle. Earth and Planetary Science Letters, 2007, 264, 360-374.	4.4	116
29	Solar neon in the Icelandic mantle: new evidence for an undegassed lower mantle. Earth and Planetary Science Letters, 2001, 185, 15-23.	4.4	115
30	Primitive neon from the center of the GalÃ¡pagos hotspot. Earth and Planetary Science Letters, 2009, 286, 23-34.	4.4	107
31	A reevaluation of in situ cosmogenic 3He production rates. Quaternary Geochronology, 2010, 5, 410-418.	1.4	105
32	New noble-gas data on glass samples from Loihi Seamount and Hualalai and on dunite samples from Loihi and RÃ©union Island. Chemical Geology, 1986, 56, 193-205.	3.3	103
33	Calibration of cosmogenic 3He production rates from Holocene lava flows in Oregon, USA, and effects of the Earth's magnetic field. Earth and Planetary Science Letters, 1999, 172, 261-271.	4.4	102
34	Helium isotopic systematics within the neovolcanic zones of Iceland. Earth and Planetary Science Letters, 1985, 74, 291-305.	4.4	101
35	Helium isotope geochemistry of mid-ocean ridge basalts from the South Atlantic. Earth and Planetary Science Letters, 1992, 110, 133-147.	4.4	101
36	Constraints on age, erosion, and uplift of Neogene glacial deposits in the Transantarctic Mountains determined from in situ cosmogenic 10Be and 26Al. Geology, 1995, 23, 1063.	4.4	101

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37	Measurements of Past Ice Sheet Elevations in Interior West Antarctica. Science, 1999, 286, 276-280.	12.6	101
38	Rapid helium isotopic variability in Mauna Kea shield lavas from the Hawaiian Scientific Drilling Project. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	2.5	96
39	Mapping out the conduit of the Iceland mantle plume with helium isotopes. Earth and Planetary Science Letters, 2000, 176, 45-55.	4.4	95
40	Isotopic evolution of Mauna Loa volcano. Earth and Planetary Science Letters, 1991, 103, 257-269.	4.4	93
41	Temporal helium isotopic variations within Hawaiian volcanoes: Basalts from Mauna Loa and Haleakala. Geochimica Et Cosmochimica Acta, 1987, 51, 2905-2914.	3.9	90
42	Helium and lead isotopes reveal the geochemical geometry of the Samoan plume. Nature, 2014, 514, 355-358.	27.8	90
43	Cosmogenic 3He and 10Be chronologies of the late Pinedale northern Yellowstone ice cap, Montana, USA. Geology, 2001, 29, 1095.	4.4	81
44	Long-term cosmogenic 3 He production rates from 40 Ar/ 39 Ar and Kâ€“Ar dated Patagonian lava flows at 47Â°S. Earth and Planetary Science Letters, 2003, 210, 119-136.	4.4	81
45	The volatile contents of the Galapagos plume; evidence for H2O and F open system behavior in melt inclusions. Earth and Planetary Science Letters, 2009, 287, 442-452.	4.4	78
46	Samoan hot spot track on a â€œhot spot highwayâ€• Implications for mantle plumes and a deep Samoan mantle source. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	77
47	The role of lithospheric gabbros on the composition of Galapagos lavas. Earth and Planetary Science Letters, 2007, 257, 391-406.	4.4	76
48	Globally elevated titanium, tantalum, and niobium (TITAN) in ocean island basalts with high ³He/⁴He. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	73
49	Subducted oceanic lithosphere and the origin of the â€˜high Î¼â€™ basalt helium isotopic signature. Earth and Planetary Science Letters, 2001, 189, 49-57.	4.4	69
50	Compositional Characteristics and Spatial Distribution of Enriched Icelandic Mantle Components. Journal of Petrology, 2010, 51, 1447-1475.	2.8	68
51	Submarine Fernandina: Magmatism at the leading edge of the GalÃ¡pagos hot spot. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	66
52	Glacial and volcanic history of Icelandic table mountains from cosmogenic 3He exposure ages. Quaternary Science Reviews, 2007, 26, 1529-1546.	3.0	66
53	Physical volcanology and structural development of Sierra Negra volcano, Isabela Island, GalÂ´apagos archipelago. Bulletin of the Geological Society of America, 1995, 107, 1398-1410.	3.3	64
54	Helium isotope disequilibrium and geochronology of glassy submarine basalts. Nature, 1987, 326, 384-386.	27.8	62

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55	Helium isotopic variability within single diamonds from the Orapa kimberlite pipe. Earth and Planetary Science Letters, 1987, 86, 57-68.	4.4	60
56	Patagonian Glacier Response During the Late Glacialâ€“Holocene Transition. Science, 2008, 321, 392-395.	12.6	60
57	Low 3He/4He ratios in basalt glasses from the western Southwest Indian Ridge (10Â°-24Â°E). Earth and Planetary Science Letters, 2003, 206, 509-528.	4.4	59
58	Correlated helium, neon, and melt production on the super-fast spreading East Pacific Rise near 17Â°S. Earth and Planetary Science Letters, 2005, 232, 125-142.	4.4	59
59	Isotope Geochemistry of the Oceanic Mantle Near the Bouvet Triple Junction. Geochimica Et Cosmochimica Acta, 1998, 62, 841-852.	3.9	56
60	Age and uplift rates of Sirius Group sediments in the Dominion Range, Antarctica, from surface exposure dating and geomorphology. Global and Planetary Change, 2004, 42, 207-225.	3.5	56
61	Cosmogenic 3He production rates from Holocene lava flows in Iceland. Earth and Planetary Science Letters, 2006, 246, 251-264.	4.4	56
62	Wolf Volcano, GalÃ¡pagos Archipelago: Melting and Magmatic Evolution at the Margins of a Mantle Plume. Journal of Petrology, 2005, 46, 2197-2224.	2.8	55
63	Grand Comore Island: A well-constrained â€œlow 3He/4Heâ€•mantle plume. Earth and Planetary Science Letters, 2005, 233, 391-409.	4.4	55
64	Barium isotope evidence for pervasive sediment recycling in the upper mantle. Science Advances, 2018, 4, eaas8675.	10.3	55
65	Isotopic evolution of Mauna Loa Volcano: A view from the submarine southwest rift zone. Geophysical Monograph Series, 1995, , 289-306.	0.1	54
66	Surface-Exposure Chronology Using in Situ Cosmogenic 3He in Antarctic Quartz Sandstone Boulders. Quaternary Research, 1993, 39, 1-10.	1.7	53
67	Genovesa Submarine Ridge: A manifestation of plume-ridge interaction in the northern GalÃ¡pagos Islands. Geochemistry, Geophysics, Geosystems, 2003, 4, n/a-n/a.	2.5	48
68	Cosmogenic nuclide exposure ages and glacial history of late Quaternary Ross Sea drift in McMurdo Sound, Antarctica. Earth and Planetary Science Letters, 1995, 131, 41-56.	4.4	46
69	Post-breakup basaltic magmatism along the East Greenland Tertiary rifted margin. Earth and Planetary Science Letters, 1998, 160, 845-862.	4.4	45
70	Helium and neon isotopes in phenocrysts from Samoan lavas: Evidence for heterogeneity in the terrestrial high 3He/4He mantle. Earth and Planetary Science Letters, 2009, 287, 519-528.	4.4	44
71	He and Ne isotopes in oceanic crust: implications for noble gas recycling in the mantle. Earth and Planetary Science Letters, 2003, 216, 635-643.	4.4	43
72	Melt migration and mantle chromatography, 2: a time-series Os isotope study of Mauna Loa volcano, Hawaii. Earth and Planetary Science Letters, 1997, 153, 21-36.	4.4	42

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73	Ancient helium and tungsten isotopic signatures preserved in mantle domains least modified by crustal recycling. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30993-31001.	7.1	41
74	Alfred Nier and the sector field mass spectrometer. Journal of Mass Spectrometry, 2006, 41, 847-854.	1.6	40
75	Genesis of active sandâ€filled polygons in lower and central Beacon Valley, Antarctica. Permafrost and Periglacial Processes, 2009, 20, 295-308.	3.4	38
76	Construction of the GalÃ¡pagos platform by large submarine volcanic terraces. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	37
77	Chemical and isotopic variations in Mauna Loa tholeiites. Earth and Planetary Science Letters, 1996, 143, 111-124.	4.4	36
78	Scale length of mantle heterogeneities: Constraints from helium diffusion. Earth and Planetary Science Letters, 2008, 269, 508-517.	4.4	36
79	Volcanic evolution in the GalÃ¡pagos: The dissected shield of Volcan Ecuador. Geochemistry, Geophysics, Geosystems, 2002, 3, 1 of 32-32 of 32.	2.5	34
80	Evidence for a broadly distributed Samoan-plume signature in the northern Lau and North Fiji Basins. Geochemistry, Geophysics, Geosystems, 2014, 15, 986-1008.	2.5	34
81	He and Sr isotopic constraints on subduction contributions to Woodlark Basin volcanism, Solomon Islands. Geochimica Et Cosmochimica Acta, 1990, 54, 441-453.	3.9	31
82	Accretion of interplanetary dust in polar ice. Geophysical Research Letters, 2000, 27, 3145-3148.	4.0	31
83	Neon isotopic composition of the mantle constrained by single vesicle analyses. Earth and Planetary Science Letters, 2016, 449, 145-154.	4.4	31
84	Using submarine lava pillars to record mid-ocean ridge eruption dynamics. Earth and Planetary Science Letters, 2000, 178, 195-214.	4.4	28
85	Mantle deformation and noble gases: Helium and neon in oceanic mylonites. Chemical Geology, 2009, 266, 10-18.	3.3	26
86	Effects of deglaciation on the petrology and eruptive history of the Western Volcanic Zone, Iceland. Bulletin of Volcanology, 2015, 77, 1.	3.0	24
87	Geochemical evidence in the northeast Lau Basin for subduction of the Cookâ€Austral volcanic chain in the Tonga Trench. Geochemistry, Geophysics, Geosystems, 2016, 17, 1694-1724.	2.5	23
88	Mahukona: The missing Hawaiian volcano. Geology, 1990, 18, 1111.	4.4	22
89	Measurements of Helium in Electrolyzed Palladium. Fusion Science and Technology, 1990, 18, 659-668.	0.6	22
90	The emergence of a GalÃ¡pagos shield volcano, Roca Redonda. Contributions To Mineralogy and Petrology, 1998, 133, 136-148.	3.1	22

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91	Age, geology, geophysics, and geochemistry of Mahukona Volcano, Hawaï¨i. Bulletin of Volcanology, 2012, 74, 1445-1463.	3.0	21
92	Controls on interior West Antarctic Ice Sheet Elevations: inferences from geologic constraints and ice sheet modeling. Quaternary Science Reviews, 2013, 65, 26-38.	3.0	21
93	1998 Eruption at Volcï¿½n Cerro Azul, Galï¿½pagos Islands: I. Syn-Eruptive Petrogenesis. Bulletin of Volcanology, 2005, 67, 170-185.	3.0	20
94	Flux and size fractionation of 3He in interplanetary dust from Antarctic ice core samples. Earth and Planetary Science Letters, 2009, 286, 565-569.	4.4	19
95	A new Holocene eruptive history of Erebus volcano, Antarctica using cosmogenic 3He and 36Cl exposure ages. Quaternary Geochronology, 2015, 30, 114-131.	1.4	19
96	Deep-mantle krypton reveals Earthâ€™s early accretion of carbonaceous matter. Nature, 2021, 600, 462-467.	27.8	19
97	Geochronology and paleoclimatic implications of the last deglaciation of the Mauna Kea Ice Cap, Hawaii. Earth and Planetary Science Letters, 2010, 297, 234-248.	4.4	16
98	Hot and Heterogenous Highâ€‹sup›3‹/sup›He/‹sup›4‹/sup›He Components: New Constraints From Protoâ€‹celand Plume Lavas From Baffin Island. Geochemistry, Geophysics, Geosystems, 2019, 20, 5939-5967.	2.5	15
99	Low-3He/4He sublithospheric mantle source for the most magnesian magmas of the Karoo large igneous province. Earth and Planetary Science Letters, 2015, 426, 305-315.	4.4	14
100	Geodynamic implications for zonal and meridional isotopic patterns across the northern ‹scp›L‹/scp›au and ‹scp›N‹/scp›orth ‹scp›F‹/scp›iji ‹scp›B‹/scp›asins. Geochemistry, Geophysics, Geosystems, 2017, 18, 1013-1042.	2.5	14
101	Noble gas systematics in new popping rocks from the Mid-Atlantic Ridge (14Â°N): Evidence for small-scale upper mantle heterogeneities. Earth and Planetary Science Letters, 2019, 519, 70-82.	4.4	13
102	No evidence of extraterrestrial noble metal and helium anomalies at Marinoan glacial termination. Earth and Planetary Science Letters, 2016, 437, 76-88.	4.4	6
103	Noble gas isotopic compositions of seamount lavas from the central Chile trench: Implications for petit-spot volcanism and the lithosphere asthenosphere boundary. Earth and Planetary Science Letters, 2020, 552, 116611.	4.4	6
104	Primordial neon in high-3He/4He Baffin Island olivines. Earth and Planetary Science Letters, 2021, 558, 116762.	4.4	5
105	Comment and Reply on "Mahukona: The missing Hawaiian volcano". Geology, 1991, 19, 1049.	4.4	4
106	Helium partitioning in basaltic glass: Reply to comment by R. Poreda. Earth and Planetary Science Letters, 1982, 59, 439-440.	4.4	3
107	Reply to comment on â€œCO2 variability in mid-ocean ridge basalts from syn-emplacement degassing: Constraints on eruption dynamicsâ€•by Soule et al. [Earth Planet. Sci. Lett. (2012) 327â€“328, 39â€“49]. Earth and Planetary Science Letters, 2013, 374, 254-255.	4.4	3
108	Mantle noble gas abundance ratios inferred from oceanic basalts and model estimates. Physics of the Earth and Planetary Interiors, 2022, 327, 106875.	1.9	2

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109	Determining the noble gas cosmic ray exposure ages of 23 meteorites (8 chondrites and 15) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 1542-1569.	1.6	2