

Kevin Burton

List of Publications by Year in descending order

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112
papers

8,657
citations

30070

54
h-index

43889

91
g-index

112
all docs

112
docs citations

112
times ranked

5343
citing authors

#	ARTICLE	IF	CITATIONS
1	Decoupling of inorganic and organic carbon during slab mantle devolatilisation. <i>Nature Communications</i> , 2022, 13, 308.	12.8	12
2	The chondritic neodymium stable isotope composition of the Earth inferred from mid-ocean ridge, ocean island and arc basalts. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 293, 575-597.	3.9	10
3	Fossil records of early solar irradiation and cosmolocation of the CAI factory: A reappraisal. <i>Science Advances</i> , 2021, 7, eabg8329.	10.3	4
4	The lithium isotope response to the variable weathering of soils in Iceland. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 313, 55-73.	3.9	11
5	Simultaneous measurement of neodymium stable and radiogenic isotopes from a single aliquot using a double spike. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 388-402.	3.0	18
6	Ge and Si Isotope Behavior During Intense Tropical Weathering and Ecosystem Cycling. <i>Global Biogeochemical Cycles</i> , 2020, 34, e2019GB006522.	4.9	12
7	The Neodymium Stable Isotope Composition of the Oceanic Crust: Reconciling the Mismatch Between Erupted Mid-Ocean Ridge Basalts and Lower Crustal Gabbros. <i>Frontiers in Earth Science</i> , 2020, 8, .	1.8	13
8	Hydrothermal and Cold Spring Water and Primary Productivity Effects on Magnesium Isotopes: Lake Myvatn, Iceland. <i>Frontiers in Earth Science</i> , 2020, 8, .	1.8	4
9	Carbon dioxide emissions by rock organic carbon oxidation and the net geochemical carbon budget of the Mackenzie River Basin. <i>Numerische Mathematik</i> , 2019, 319, 473-499.	1.4	45
10	Controlling Mechanisms for Molybdenum Isotope Fractionation in Porphyry Deposits: The Qulong Example. <i>Economic Geology</i> , 2019, 114, 981-992.	3.8	19
11	Release of oxidizing fluids in subduction zones recorded by iron isotope zonation in garnet. <i>Nature Geoscience</i> , 2019, 12, 1029-1033.	12.9	32
12	Extensive crustal extraction in Earth's early history inferred from molybdenum isotopes. <i>Nature Geoscience</i> , 2019, 12, 946-951.	12.9	55
13	Using Mg Isotopes to Estimate Natural Calcite Compositions and Precipitation Rates During the 2010 Eyjafjallajökull Eruption. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	14
14	Rapid CO ₂ mineralisation into calcite at the CarbFix storage site quantified using calcium isotopes. <i>Nature Communications</i> , 2019, 10, 1983.	12.8	68
15	Reply to comment by Thomas M. Blattmann on "Carbon dioxide emissions by rock organic carbon oxidation and the next geochemical carbon budget of the Mackenzie River Basin", v. 319, n. 6, p. 473-499.. <i>Numerische Mathematik</i> , 2019, 319, 905-906.	1.4	0
16	Molybdenum isotope behaviour in groundwaters and terrestrial hydrothermal systems, Iceland. <i>Earth and Planetary Science Letters</i> , 2018, 486, 108-118.	4.4	37
17	Tracing the Impact of Coastal Water Geochemistry on the Re ¹⁸⁷ O Systematics of Macroalgae: Insights From the Basaltic Terrain of Iceland. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2018, 123, 2791-2806.	3.0	6
18	Osmium uptake, distribution, and 187Os/188Os and 187Re/188Os compositions in Phaeophyceae macroalgae, <i>Fucus vesiculosus</i> : Implications for determining the 187Os/188Os composition of seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 199, 48-57.	3.9	14

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19	High precision osmium stable isotope measurements by double spike MC-ICP-MS and N-TIMS. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 749-765.	3.0	20
20	Continental weathering and terrestrial (oxyhydr)oxide export: Comparing glacial and non-glacial catchments in Iceland. <i>Chemical Geology</i> , 2017, 462, 55-66.	3.3	13
21	The behavior of iron and zinc stable isotopes accompanying the subduction of mafic oceanic crust: A case study from western Alpine ophiolites. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 2562-2579.	2.5	68
22	The influence of weathering and soil organic matter on Zn isotopes in soils. <i>Chemical Geology</i> , 2017, 466, 140-148.	3.3	36
23	Mountain glaciation drives rapid oxidation of rock-bound organic carbon. <i>Science Advances</i> , 2017, 3, e1701107.	10.3	52
24	Iron and silicon isotope behaviour accompanying weathering in Icelandic soils, and the implications for iron export from peatlands. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 217, 273-291.	3.9	39
25	Impact of glacial activity on the weathering of Hf isotopes – Observations from Southwest Greenland. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 215, 295-316.	3.9	12
26	The neodymium stable isotope composition of the silicate Earth and chondrites. <i>Earth and Planetary Science Letters</i> , 2017, 480, 121-132.	4.4	28
27	Highly siderophile element and ^{182}W evidence for a partial late veneer in the source of 3.8 Ga rocks from Isua, Greenland. <i>Earth and Planetary Science Letters</i> , 2017, 458, 394-404.	4.4	60
28	Molybdenum isotope fractionation in the mantle. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 199, 91-111.	3.9	76
29	Highly Siderophile Element and Os Isotope Systematics of Volcanic Rocks at Divergent and Convergent Plate Boundaries and in Intraplate Settings. , 2016, , 651-724.		0
30	The effect of hydrothermal spring weathering processes and primary productivity on lithium isotopes: Lake Myvatn, Iceland. <i>Chemical Geology</i> , 2016, 445, 4-13.	3.3	62
31	Titanium stable isotope investigation of magmatic processes on the Earth and Moon. <i>Earth and Planetary Science Letters</i> , 2016, 449, 197-205.	4.4	99
32	Insights into combined radiogenic and stable strontium isotopes as tracers for weathering processes in subglacial environments. <i>Chemical Geology</i> , 2016, 429, 33-43.	3.3	43
33	Highly Siderophile Element and Os Isotope Systematics of Volcanic Rocks at Divergent and Convergent Plate Boundaries and in Intraplate Settings. <i>Reviews in Mineralogy and Geochemistry</i> , 2016, 81, 651-724.	4.8	54
34	Characterising the stable ($^{88}\text{Sr}/^{86}\text{Sr}$) and radiogenic ($^{87}\text{Sr}/^{86}\text{Sr}$) isotopic composition of strontium in rainwater. <i>Chemical Geology</i> , 2015, 409, 54-60.	3.3	26
35	Reassessing the stable ($^{88}\text{Sr}/^{86}\text{Sr}$) and radiogenic ($^{87}\text{Sr}/^{86}\text{Sr}$) strontium isotopic composition of marine inputs. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 157, 125-146.	3.9	89
36	High-precision radiogenic strontium isotope measurements of the modern and glacial ocean: Limits on glacial-interglacial variations in continental weathering. <i>Earth and Planetary Science Letters</i> , 2015, 415, 111-120.	4.4	91

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37	Persistence of deeply sourced iron in the Pacific Ocean. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1292-1297.	7.1	49
38	Molybdenum isotope fractionation in soils: Influence of redox conditions, organic matter, and atmospheric inputs. Geochimica Et Cosmochimica Acta, 2015, 162, 1-24.	3.9	71
39	High precision osmium elemental and isotope measurements of North Atlantic seawater. Journal of Analytical Atomic Spectrometry, 2014, 29, 2330-2342.	3.0	21
40	Chemical weathering processes in the Great Artesian Basin: Evidence from lithium and silicon isotopes. Earth and Planetary Science Letters, 2014, 406, 24-36.	4.4	66
41	Magnesium retention on the soil exchange complex controlling Mg isotope variations in soils, soil solutions and vegetation in volcanic soils, Iceland. Geochimica Et Cosmochimica Acta, 2014, 125, 110-130.	3.9	99
42	Quantifying the impact of riverine particulate dissolution in seawater on ocean chemistry. Earth and Planetary Science Letters, 2014, 395, 91-100.	4.4	45
43	Controls on stable strontium isotope fractionation in coccolithophores with implications for the marine Sr cycle. Geochimica Et Cosmochimica Acta, 2014, 128, 225-235.	3.9	75
44	Osmium isotope variations accompanying the eruption of a single lava flow field in the Columbia River Flood Basalt Province. Earth and Planetary Science Letters, 2013, 368, 183-194.	4.4	16
45	The stable calcium isotopic composition of rivers draining basaltic catchments in Iceland. Earth and Planetary Science Letters, 2013, 374, 173-184.	4.4	43
46	Deciphering the Trace Element Characteristics in Kilbourne Hole Peridotite Xenoliths: Melt-Rock Interaction and Metasomatism beneath the Rio Grande Rift, SW USA. Journal of Petrology, 2012, 53, 1709-1742.	2.8	42
47	Lithium Isotopes as Tracers in Marine and Terrestrial Environments. Advances in Isotope Geochemistry, 2012, , 41-59.	1.4	27
48	Lithium, magnesium and silicon isotope behaviour accompanying weathering in a basaltic soil and pore water profile in Iceland. Earth and Planetary Science Letters, 2012, 339-340, 11-23.	4.4	172
49	Late Accretion on the Earliest Planetesimals Revealed by the Highly Siderophile Elements. Science, 2012, 336, 72-75.	12.6	95
50	Unradiogenic lead in Earth's upper mantle. Nature Geoscience, 2012, 5, 570-573.	12.9	56
51	New age for ferromanganese crust 109D and implications for isotopic records of lead, neodymium, hafnium, and thallium in the Pliocene Indian Ocean. Paleoceanography, 2011, 26, .	3.0	28
52	Silicon isotopes in allophane as a proxy for mineral formation in volcanic soils. Applied Geochemistry, 2011, 26, S115-S118.	3.0	25
53	Osmium mass balance in peridotite and the effects of mantle-derived sulphides on basalt petrogenesis. Geochimica Et Cosmochimica Acta, 2011, 75, 5574-5596.	3.9	81
54	Silicon isotope fractionation during magmatic differentiation. Geochimica Et Cosmochimica Acta, 2011, 75, 6124-6139.	3.9	137

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55	Transport and exchange of U-series nuclides between suspended material, dissolved load and colloids in rivers draining basaltic terrains. <i>Earth and Planetary Science Letters</i> , 2011, 301, 125-136.	4.4	18
56	The behaviour of magnesium and its isotopes during glacial weathering in an ancient shield terrain in West Greenland. <i>Earth and Planetary Science Letters</i> , 2011, 304, 260-269.	4.4	89
57	Quantifying the impact of freshwater diatom productivity on silicon isotopes and silicon fluxes: Lake Myvatn, Iceland. <i>Earth and Planetary Science Letters</i> , 2011, 305, 73-82.	4.4	53
58	Chiastolite. <i>Gondwana Research</i> , 2010, 18, 222-229.	6.0	8
59	Unravelling the effects of melt depletion and secondary infiltration on mantle Reâ€“Os isotopes beneath the French Massif Central. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 293-320.	3.9	63
60	The behaviour of Li and Mg isotopes during primary phase dissolution and secondary mineral formation in basalt. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 5259-5279.	3.9	214
61	Glacial effects on weathering processes: New insights from the elemental and lithium isotopic composition of West Greenland rivers. <i>Earth and Planetary Science Letters</i> , 2010, 290, 427-437.	4.4	109
62	Climate driven glacialâ€“interglacial variations in the osmium isotope composition of seawater recorded by planktic foraminifera. <i>Earth and Planetary Science Letters</i> , 2010, 295, 58-68.	4.4	22
63	Molybdenum isotope behaviour accompanying weathering and riverine transport in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2010, 295, 104-114.	4.4	101
64	Assessing the role of climate on uranium and lithium isotope behaviour in rivers draining a basaltic terrain. <i>Chemical Geology</i> , 2010, 270, 227-239.	3.3	109
65	Hf and Nd isotopes in marine sediments: Constraints on global silicate weathering. <i>Earth and Planetary Science Letters</i> , 2009, 277, 318-326.	4.4	112
66	Thallium isotope evidence for a permanent increase in marine organic carbon export in the early Eocene. <i>Earth and Planetary Science Letters</i> , 2009, 278, 297-307.	4.4	106
67	The relationship between riverine lithium isotope composition and silicate weathering rates in Iceland. <i>Earth and Planetary Science Letters</i> , 2009, 287, 434-441.	4.4	150
68	Highly siderophile element behaviour accompanying subduction of oceanic crust: Whole rock and mineral-scale insights from a high-pressure terrain. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 1394-1416.	3.9	86
69	Molybdenum isotope evidence for global ocean anoxia coupled with perturbations to the carbon cycle during the Early Jurassic. <i>Geology</i> , 2008, 36, 231.	4.4	216
70	Lithium, magnesium and uranium isotope behaviour in the estuarine environment of basaltic islands. <i>Earth and Planetary Science Letters</i> , 2008, 274, 462-471.	4.4	112
71	The influence of weathering processes on riverine magnesium isotopes in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2008, 276, 187-197.	4.4	209
72	Rheniumâ€“osmium isotope and elemental behaviour during subduction of oceanic crust and the implications for mantle recycling. <i>Earth and Planetary Science Letters</i> , 2007, 253, 211-225.	4.4	66

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73	The scale and origin of the osmium isotope variations in mid-ocean ridge basalts. <i>Earth and Planetary Science Letters</i> , 2007, 259, 541-556.	4.4	133
74	Rhenium and osmium isotope and elemental behaviour accompanying laterite formation in the Deccan region of India. <i>Earth and Planetary Science Letters</i> , 2007, 261, 239-258.	4.4	54
75	Silicon isotope variations accompanying basalt weathering in Iceland. <i>Earth and Planetary Science Letters</i> , 2007, 261, 476-490.	4.4	179
76	The influence of weathering process on riverine osmium isotopes in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2006, 243, 732-748.	4.4	34
77	Ancient melt extraction from the oceanic upper mantle revealed by Re-Os isotopes in abyssal peridotites from the Mid-Atlantic ridge. <i>Earth and Planetary Science Letters</i> , 2006, 244, 606-621.	4.4	267
78	The relationship between riverine U-series disequilibria and erosion rates in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2006, 249, 258-273.	4.4	79
79	Riverine behaviour of uranium and lithium isotopes in an actively glaciated basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2006, 251, 134-147.	4.4	172
80	Constraining erosional input and deep-water formation in the North Atlantic using Nd isotopes. <i>Chemical Geology</i> , 2006, 226, 253-263.	3.3	3
81	Global weathering variations inferred from marine radiogenic isotope records. <i>Journal of Geochemical Exploration</i> , 2006, 88, 262-265.	3.2	43
82	The control of weathering processes on riverine and seawater hafnium isotope ratios. <i>Geology</i> , 2006, 34, 433.	4.4	72
83	In situ Os isotopes in abyssal peridotites bridge the isotopic gap between MORBs and their source mantle. <i>Nature</i> , 2005, 436, 1005-1008.	27.8	190
84	Osmium Isotope Heterogeneity in the Constituent Phases of Mid-Ocean Ridge Basalts. <i>Science</i> , 2004, 303, 70-72.	12.6	54
85	Radiogenic isotope records of Quaternary glaciations: Changes in the erosional source and weathering processes. <i>Geology</i> , 2004, 32, 861.	4.4	15
86	Sedimentary Fe-Mn oxyhydroxides as paleoceanographic archives and the role of aeolian flux in regulating oceanic dissolved REE. <i>Earth and Planetary Science Letters</i> , 2004, 224, 477-492.	4.4	177
87	Hf isotope ratio analysis using multi-collector inductively coupled plasma mass spectrometry: an evaluation of isobaric interference corrections. <i>Journal of Analytical Atomic Spectrometry</i> , 2002, 17, 1567-1574.	3.0	1,087
88	The compatibility of rhenium and osmium in natural olivine and their behaviour during mantle melting and basalt genesis. <i>Earth and Planetary Science Letters</i> , 2002, 198, 63-76.	4.4	84
89	Correlated Os-Pb-Nd-Sr isotopes in the Austral-Cook chain basalts: the nature of mantle components in plume sources. <i>Earth and Planetary Science Letters</i> , 2001, 186, 527-537.	4.4	62
90	Glacial-interglacial variations in the neodymium isotope composition of seawater in the Bay of Bengal recorded by planktonic foraminifera. <i>Earth and Planetary Science Letters</i> , 2000, 176, 425-441.	4.4	133

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91	Resolving crystallisation ages of Archean mafic-ultramafic rocks using the Re-Os isotope system. <i>Earth and Planetary Science Letters</i> , 2000, 179, 453-467.	4.4	25
92	Changes in erosion and ocean circulation recorded in the Hf isotopic compositions of North Atlantic and Indian Ocean ferromanganese crusts. <i>Earth and Planetary Science Letters</i> , 2000, 181, 315-325.	4.4	65
93	The distribution and behaviour of rhenium and osmium amongst mantle minerals and the age of the lithospheric mantle beneath Tanzania. <i>Earth and Planetary Science Letters</i> , 2000, 183, 93-106.	4.4	93
94	The composition of melt inclusions in minerals at the garnet-spinel transition zone. <i>Earth and Planetary Science Letters</i> , 2000, 174, 375-383.	4.4	21
95	Hafnium Isotope Stratigraphy of Ferromanganese Crusts. <i>Science</i> , 1999, 285, 1052-1054.	12.6	95
96	Using (²³⁴ U/ ²³⁸ U) to assess diffusion rates of isotope tracers in ferromanganese crusts. <i>Earth and Planetary Science Letters</i> , 1999, 170, 169-179.	4.4	78
97	Actual timing of neodymium isotopic variations recorded by FeMn crusts in the western North Atlantic. <i>Earth and Planetary Science Letters</i> , 1999, 171, 149-156.	4.4	72
98	Osmium isotope variations in the oceans recorded by FeMn crusts. <i>Earth and Planetary Science Letters</i> , 1999, 171, 185-197.	4.4	95
99	Osmium isotope disequilibrium between mantle minerals in a spinel-lherzolite. <i>Earth and Planetary Science Letters</i> , 1999, 172, 311-322.	4.4	160
100	Neodymium isotopes in planktonic foraminifera: a record of the response of continental weathering and ocean circulation rates to climate change. <i>Earth and Planetary Science Letters</i> , 1999, 173, 365-379.	4.4	120
101	Closure of the Central American Isthmus and its effect on deep-water formation in the North Atlantic. <i>Nature</i> , 1997, 386, 382-385.	27.8	202
102	Crust formation in the Lewisian. <i>Nature</i> , 1995, 375, 366-367.	27.8	3
103	The relative diffusion of Pb, Nd, Sr and O in garnet. <i>Earth and Planetary Science Letters</i> , 1995, 133, 199-211.	4.4	128
104	High-resolution SIMS analysis of common lead. <i>Chemical Geology</i> , 1994, 112, 57-70.	3.3	30
105	Archaean crustal development in the Lewisian complex of northwest Scotland. <i>Nature</i> , 1994, 370, 552-555.	27.8	26
106	Diachronous burial and exhumation of a single tectonic unit during collision orogenesis (Sulitjelma), Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	4.4	7
107	The timing of mineral growth across a regional metamorphic sequence. <i>Nature</i> , 1992, 357, 235-238.	27.8	37
108	High-resolution garnet chronometry and the rates of metamorphic processes. <i>Earth and Planetary Science Letters</i> , 1991, 107, 649-671.	4.4	109

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109	The timescale and mechanism of granulite formation at Kurunegala, Sri Lanka. Contributions To Mineralogy and Petrology, 1990, 106, 66-89.	3.1	129
110	Fe-Ti oxide chronometry: With application to granulite formation. Geochimica Et Cosmochimica Acta, 1990, 54, 2593-2602.	3.9	25
111	Pressure, temperature and structural evolution of the Sulitjelma fold-nappe, central Scandinavian Caledonides. Geological Society Special Publication, 1989, 43, 391-411.	1.3	10
112	Garnet-quartz intergrowths in graphitic pelites: the role of the fluid phase. Mineralogical Magazine, 1986, 50, 611-620.	1.4	56