Kevin Burton

List of Publications by Year
in descending order

112 papers	8,657 citations	30068 54 h-index	43886 91 g-index
112 all docs	112 docs citations	112 times ranked	5343 citing authors

#	Article	IF	Citations
1	Hf isotope ratio analysis using multi-collector inductively coupled plasma mass spectrometry: an evaluation of isobaric interference corrections. Journal of Analytical Atomic Spectrometry, 2002, 17, 1567-1574.	3.0	1,087
2	Ancient melt extraction from the oceanic upper mantle revealed by Reâ€“Os isotopes in abyssal peridotites from the Mid-Atlantic ridge. Earth and Planetary Science Letters, 2006, 244, 606-621.	4.4	267
3	Molybdenum isotope evidence for global ocean anoxia coupled with perturbations to the carbon cycle during the Early Jurassic. Geology, 2008, 36, 231.	4.4	216
4	The behaviour of Li and Mg isotopes during primary phase dissolution and secondary mineral formation in basalt. Geochimica Et Cosmochimica Acta, 2010, 74, 5259-5279.	3.9	214
5	The influence of weathering processes on riverine magnesium isotopes in a basaltic terrain. Earth and Planetary Science Letters, 2008, 276, 187-197.	4.4	209
6	Closure of the Central American Isthmus and its effect on deep-water formation in the North Atlantic. Nature, 1997, 386, 382-385.	27.8	202
7	In situ Os isotopes in abyssal peridotites bridge the isotopic gap between MORBs and their source mantle. Nature, 2005, 436, 1005-1008.	27.8	190
8	Silicon isotope variations accompanying basalt weathering in Iceland. Earth and Planetary Science Letters, 2007, 261, 476-490.	4.4	179
9	Sedimentary Feâ€“Mn oxyhydroxides as paleoceanographic archives and the role of aeolian flux in regulating oceanic dissolved REE. Earth and Planetary Science Letters, 2004, 224, 477-492.	4.4	177
10	Riverine behaviour of uranium and lithium isotopes in an actively glaciated basaltic terrain. Earth and Planetary Science Letters, 2006, 251, 134-147.	4.4	172
11	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
12	Osmium isotope disequilibrium between mantle minerals in a spinel-lherzolite. Earth and Planetary Science Letters, 1999, 172, 311-322.	4.4	160
13	The relationship between riverine lithium isotope composition and silicate weathering rates in Iceland. Earth and Planetary Science Letters, 2009, 287, 434-441.	4.4	150
14	Silicon isotope fractionation during magmatic differentiation. Geochimica Et Cosmochimica Acta, 2011, 75, 6124-6139.	3.9	137
15	Glacialâ€“interglacial variations in the neodymium isotope composition of seawater in the Bay of Bengal recorded by planktonic foraminifera. Earth and Planetary Science Letters, 2000, 176, 425-441.	4.4	133
16	The scale and origin of the osmium isotope variations in mid-ocean ridge basalts. Earth and Planetary Science Letters, 2007, 259, 541-556.	4.4	133
17	The timescale and mechanism of granulite formation at Kurunegala, Sri Lanka. Contributions To Mineralogy and Petrology, 1990, 106, 66-89.	3.1	129
18	The relative diffusion of Pb, Nd, Sr and O in garnet. Earth and Planetary Science Letters, 1995, 133, 199-211.	4.4	128

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19	Neodymium isotopes in planktonic foraminifera: a record of the response of continental weathering and ocean circulation rates to climate change. Earth and Planetary Science Letters, 1999, 173, 365-379.	4.4	120
20	Lithium, magnesium and uranium isotope behaviour in the estuarine environment of basaltic islands. Earth and Planetary Science Letters, 2008, 274, 462-471.	4.4	112
21	Hf and Nd isotopes in marine sediments: Constraints on global silicate weathering. Earth and Planetary Science Letters, 2009, 277, 318-326.	4.4	112
22	High-resolution garnet chronometry and the rates of metamorphic processes. Earth and Planetary Science Letters, 1991, 107, 649-671.	4.4	109
23	Glacial effects on weathering processes: New insights from the elemental and lithium isotopic composition of West Greenland rivers. Earth and Planetary Science Letters, 2010, 290, 427-437.	4.4	109
24	Assessing the role of climate on uranium and lithium isotope behaviour in rivers draining a basaltic terrain. Chemical Geology, 2010, 270, 227-239.	3.3	109
25	Thallium isotope evidence for a permanent increase in marine organic carbon export in the early Eocene. Earth and Planetary Science Letters, 2009, 278, 297-307.	4.4	106
26	Molybdenum isotope behaviour accompanying weathering and riverine transport in a basaltic terrain. Earth and Planetary Science Letters, 2010, 295, 104-114.	4.4	101
27	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
28	Titanium stable isotope investigation of magmatic processes on the Earth and Moon. Earth and Planetary Science Letters, 2016, 449, 197-205.	4.4	99
29	Hafnium Isotope Stratigraphy of Ferromanganese Crusts. Science, 1999, 285, 1052-1054.	12.6	95
30	Osmium isotope variations in the oceans recorded by FeMn crusts. Earth and Planetary Science Letters, 1999, 171, 185-197.	4.4	95
31	Late Accretion on the Earliest Planetesimals Revealed by the Highly Siderophile Elements. Science, 2012, 336, 72-75.	12.6	95
32	The distribution and behaviour of rhenium and osmium amongst mantle minerals and the age of the lithospheric mantle beneath Tanzania. Earth and Planetary Science Letters, 2000, 183, 93-106.	4.4	93
33	High-precision radiogenic strontium isotope measurements of the modern and glacial ocean: Limits on glacialâ€"interglacial variations in continental weathering. Earth and Planetary Science Letters, 2015, 415, 111-120.	4.4	91
34	The behaviour of magnesium and its isotopes during glacial weathering in an ancient shield terrain in West Greenland. Earth and Planetary Science Letters, 2011, 304, 260-269.	4.4	89
35	Reassessing the stable (Î´88/86Sr) and radiogenic (87Sr/86Sr) strontium isotopic composition of marine inputs. Geochimica Et Cosmochimica Acta, 2015, 157, 125-146.	3.9	89
36	Highly siderophile element behaviour accompanying subduction of oceanic crust: Whole rock and mineral-scale insights from a high-pressure terrain. Geochimica Et Cosmochimica Acta, 2009, 73, 1394-1416.	3.9	86

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37	The compatibility of rhenium and osmium in natural olivine and their behaviour during mantle melting and basalt genesis. Earth and Planetary Science Letters, 2002, 198, 63-76.	4.4	84
38	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
39	The relationship between riverine U-series disequilibria and erosion rates in a basaltic terrain. Earth and Planetary Science Letters, 2006, 249, 258-273.	4.4	79
40	Using (234U/238U) to assess diffusion rates of isotope tracers in ferromanganese crusts. Earth and Planetary Science Letters, 1999, 170, 169-179.	4.4	78
41	Molybdenum isotope fractionation in the mantle. Geochimica Et Cosmochimica Acta, 2017, 199, 91-111.	3.9	76
42	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
43	Actual timing of neodymium isotopic variations recorded by FeMn crusts in the western North Atlantic. Earth and Planetary Science Letters, 1999, 171, 149-156.	4.4	72
44	The control of weathering processes on riverine and seawater hafnium isotope ratios. Geology, 2006, 34, 433.	4.4	72
45	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
46	The behavior of iron and zinc stable isotopes accompanying the subduction of mafic oceanic crust: A case study from <scp>W</scp>estern <scp>A</scp>lpine ophiolites. Geochemistry, Geophysics, Geosystems, 2017, 18, 2562-2579.	2.5	68
47	Rapid CO2 mineralisation into calcite at the CarbFix storage site quantified using calcium isotopes. Nature Communications, 2019, 10, 1983.	12.8	68
48	Rheniumâ€“osmium isotope and elemental behaviour during subduction of oceanic crust and the implications for mantle recycling. Earth and Planetary Science Letters, 2007, 253, 211-225.	4.4	66
49	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
50	Changes in erosion and ocean circulation recorded in the Hf isotopic compositions of North Atlantic and Indian Ocean ferromanganese crusts. Earth and Planetary Science Letters, 2000, 181, 315-325.	4.4	65
51	Unravelling the effects of melt depletion and secondary infiltration on mantle Reâ€“Os isotopes beneath the French Massif Central. Geochimica Et Cosmochimica Acta, 2010, 74, 293-320.	3.9	63
52	Correlated Osâ€“Pbâ€“Ndâ€“Sr isotopes in the Australâ€“Cook chain basalts: the nature of mantle components in plume sources. Earth and Planetary Science Letters, 2001, 186, 527-537.	4.4	62
53	The effect of hydrothermal spring weathering processes and primary productivity on lithium isotopes: Lake Myvatn, Iceland. Chemical Geology, 2016, 445, 4-13.	3.3	62
54	Highly siderophile element and 182 W evidence for a partial late veneer in the source of 3.8 Ga rocks from Isua, Greenland. Earth and Planetary Science Letters, 2017, 458, 394-404.	4.4	60

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55	Garnet-quartz intergrowths in graphitic pelites: the role of the fluid phase. Mineralogical Magazine, 1986, 50, 611-620.	1.4	56
56	Unradiogenic lead in Earthâ€™s upper mantle. Nature Geoscience, 2012, 5, 570-573.	12.9	56
57	Extensive crustal extraction in Earthâ€™s early history inferred from molybdenum isotopes. Nature Geoscience, 2019, 12, 946-951.	12.9	55
58	Osmium Isotope Heterogeneity in the Constituent Phases of Mid-Ocean Ridge Basalts. Science, 2004, 303, 70-72.	12.6	54
59	Rhenium and osmium isotope and elemental behaviour accompanying laterite formation in the Deccan region of India. Earth and Planetary Science Letters, 2007, 261, 239-258.	4.4	54
60	Highly Siderophile Element and Os Isotope Systematics of Volcanic Rocks at Divergent and Convergent Plate Boundaries and in Intraplate Settings. Reviews in Mineralogy and Geochemistry, 2016, 81, 651-724.	4.8	54
61	Quantifying the impact of freshwater diatom productivity on silicon isotopes and silicon fluxes: Lake Myvatn, Iceland. Earth and Planetary Science Letters, 2011, 305, 73-82.	4.4	53
62	Mountain glaciation drives rapid oxidation of rock-bound organic carbon. Science Advances, 2017, 3, e1701107.	10.3	52
63	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
64	Quantifying the impact of riverine particulate dissolution in seawater on ocean chemistry. Earth and Planetary Science Letters, 2014, 395, 91-100.	4.4	45
65	Carbon dioxide emissions by rock organic carbon oxidation and the net geochemical carbon budget of the Mackenzie River Basin. Numerische Mathematik, 2019, 319, 473-499.	1.4	45
66	Global weathering variations inferred from marine radiogenic isotope records. Journal of Geochemical Exploration, 2006, 88, 262-265.	3.2	43
67	The stable calcium isotopic composition of rivers draining basaltic catchments in Iceland. Earth and Planetary Science Letters, 2013, 374, 173-184.	4.4	43
68	Insights into combined radiogenic and stable strontium isotopes as tracers for weathering processes in subglacial environments. Chemical Geology, 2016, 429, 33-43.	3.3	43
69	Deciphering the Trace Element Characteristics in Kilbourne Hole Peridotite Xenoliths: Meltâ€“Rock Interaction and Metasomatism beneath the Rio Grande Rift, SW USA. Journal of Petrology, 2012, 53, 1709-1742.	2.8	42
70	Iron and silicon isotope behaviour accompanying weathering in Icelandic soils, and the implications for iron export from peatlands. Geochimica Et Cosmochimica Acta, 2017, 217, 273-291.	3.9	39
71	The timing of mineral growth across a regional metamorphic sequence. Nature, 1992, 357, 235-238.	27.8	37
72	Molybdenum isotope behaviour in groundwaters and terrestrial hydrothermal systems, Iceland. Earth and Planetary Science Letters, 2018, 486, 108-118.	4.4	37

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73	The influence of weathering and soil organic matter on Zn isotopes in soils. Chemical Geology, 2017, 466, 140-148.	3.3	36
74	The influence of weathering process on riverine osmium isotopes in a basaltic terrain. Earth and Planetary Science Letters, 2006, 243, 732-748.	4.4	34
75	Release of oxidizing fluids in subduction zones recorded by iron isotope zonation in garnet. Nature Geoscience, 2019, 12, 1029-1033.	12.9	32
76	High-resolution SIMS analysis of common lead. Chemical Geology, 1994, 112, 57-70.	3.3	30
77	New age for ferromanganese crust 109Dâ€€ and implications for isotopic records of lead, neodymium, hafnium, and thallium in the Pliocene Indian Ocean. Paleoceanography, 2011, 26, .	3.0	28
78	The neodymium stable isotope composition of the silicate Earth and chondrites. Earth and Planetary Science Letters, 2017, 480, 121-132.	4.4	28
79	Lithium Isotopes as Tracers in Marine and Terrestrial Environments. Advances in Isotope Geochemistry, 2012, , 41-59.	1.4	27
80	Archaean crustal development in the Lewisian complex of northwest Scotland. Nature, 1994, 370, 552-555.	27.8	26
81	Characterising the stable (Î´88/86 Sr) and radiogenic (87 Sr/ 86 Sr) isotopic composition of strontium in rainwater. Chemical Geology, 2015, 409, 54-60.	3.3	26
82	Fe-Ti oxide chronometry: With application to granulite formation. Geochimica Et Cosmochimica Acta, 1990, 54, 2593-2602.	3.9	25
83	Resolving crystallisation ages of Archean maficâ€“ultramafic rocks using the Reâ€“Os isotope system. Earth and Planetary Science Letters, 2000, 179, 453-467.	4.4	25
84	Silicon isotopes in allophane as a proxy for mineral formation in volcanic soils. Applied Geochemistry, 2011, 26, S115-S118.	3.0	25
85	Climate driven glacialâ€“interglacial variations in the osmium isotope composition of seawater recorded by planktic foraminifera. Earth and Planetary Science Letters, 2010, 295, 58-68.	4.4	22
86	The composition of melt inclusions in minerals at the garnetâ€“spinel transition zone. Earth and Planetary Science Letters, 2000, 174, 375-383.	4.4	21
87	High precision osmium elemental and isotope measurements of North Atlantic seawater. Journal of Analytical Atomic Spectrometry, 2014, 29, 2330-2342.	3.0	21
88	High precision osmium stable isotope measurements by double spike MC-ICP-MS and N-TIMS. Journal of Analytical Atomic Spectrometry, 2017, 32, 749-765.	3.0	20
89	Controlling Mechanisms for Molybdenum Isotope Fractionation in Porphyry Deposits: The Qulong Example. Economic Geology, 2019, 114, 981-992.	3.8	19
90	Transport and exchange of U-series nuclides between suspended material, dissolved load and colloids in rivers draining basaltic terrains. Earth and Planetary Science Letters, 2011, 301, 125-136.	4.4	18

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91	Simultaneous measurement of neodymium stable and radiogenic isotopes from a single aliquot using a double spike. Journal of Analytical Atomic Spectrometry, 2020, 35, 388-402.	3.0	18
92	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
93	Radiogenic isotope records of Quaternary glaciations: Changes in the erosional source and weathering processes. Geology, 2004, 32, 861.	4.4	15
94	Osmium uptake, distribution, and 187Os/188Os and 187Re/188Os compositions in Phaeophyceae macroalgae, Fucus vesiculosus: Implications for determining the 187Os/188Os composition of seawater. Geochimica Et Cosmochimica Acta, 2017, 199, 48-57.	3.9	14
95	Using Mg Isotopes to Estimate Natural Calcite Compositions and Precipitation Rates During the 2010 EyjafjallajÃ¶kull Eruption. Frontiers in Earth Science, 2019, 7, .	1.8	14
96	Continental weathering and terrestrial (oxyhydr)oxide export: Comparing glacial and non-glacial catchments in Iceland. Chemical Geology, 2017, 462, 55-66.	3.3	13
97	The Neodymium Stable Isotope Composition of the Oceanic Crust: Reconciling the Mismatch Between Erupted Mid-Ocean Ridge Basalts and Lower Crustal Gabbros. Frontiers in Earth Science, 2020, 8, .	1.8	13
98	Impact of glacial activity on the weathering of Hf isotopes â€" Observations from Southwest Greenland. Geochimica Et Cosmochimica Acta, 2017, 215, 295-316.	3.9	12
99	Ge and Si Isotope Behavior During Intense Tropical Weathering and Ecosystem Cycling. Global Biogeochemical Cycles, 2020, 34, e2019GB006522.	4.9	12
100	Decoupling of inorganic and organic carbon during slab mantle devolatilisation. Nature Communications, 2022, 13, 308.	12.8	12
101	The lithium isotope response to the variable weathering of soils in Iceland. Geochimica Et Cosmochimica Acta, 2021, 313, 55-73.	3.9	11
102	Pressure, temperature and structural evolution of the Sulitjelma fold-nappe, central Scandinavian Caledonides. Geological Society Special Publication, 1989, 43, 391-411.	1.3	10
103	The chondritic neodymium stable isotope composition of the Earth inferred from mid-ocean ridge, ocean island and arc basalts. Geochimica Et Cosmochimica Acta, 2021, 293, 575-597.	3.9	10
104	Chiastolite. Gondwana Research, 2010, 18, 222-229.	6.0	8
105	Diachronous burial and exhumation of a single tectonic unit during collision orogenesis (Sulitjelma,) Tj ETQq1 1 0.784314 rgBT /Overlo	4.4	7
106	Tracing the Impact of Coastal Water Geochemistry on the Reâ€Os Systematics of Macroalgae: Insights From the Basaltic Terrain of Iceland. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 2791-2806.	3.0	6
107	Hydrothermal and Cold Spring Water and Primary Productivity Effects on Magnesium Isotopes: Lake Myvatn, Iceland. Frontiers in Earth Science, 2020, 8, .	1.8	4
108	Fossil records of early solar irradiation and cosmolocation of the CAI factory: A reappraisal. Science Advances, 2021, 7, eabg8329.	10.3	4

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109	Crust formation in the Lewisian. Nature, 1995, 375, 366-367.	27.8	3
110	Constraining erosional input and deep-water formation in the North Atlantic using Nd isotopes. Chemical Geology, 2006, 226, 253-263.	3.3	3
111	Highly Siderophile Element and Os Isotope Systematics of Volcanic Rocks at Divergent and Convergent Plate Boundaries and in Intraplate Settings. , 2016, , 651-724.		0
112	Reply to comment by Thomas M. Blattmann on â€œCarbon dioxide emissions by rock organic carbon oxidation and the next geochemical carbon budget of the Mackenzie River Basinâ€, v. 319, n. 6, p. 473â€"499.. Numerische Mathematik, 2019, 319, 905-906.	1.4	0