

# Kevin Burton

## 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.

110  
papers

7,052  
citations

50  
h-index

82  
g-index

112  
ext. papers

7,875  
ext. citations

8.3  
avg, IF

5.65  
L-index

#	Paper	IF	Citations
110	Decoupling of inorganic and organic carbon during slab mantle devolatilisation.. <i>Nature Communications</i> , <b>2022</b> , 13, 308	17.4	2
109	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> , <b>2021</b> , 293, 575-597	5.5	1
108	Fossil records of early solar irradiation and cosmolocation of the CAI Factory: A reappraisal. <i>Science Advances</i> , <b>2021</b> , 7, eabg8329	14.3	0
107	The lithium isotope response to the variable weathering of soils in Iceland. <i>Geochimica Et Cosmochimica Acta</i> , <b>2021</b> , 313, 55-73	5.5	1
106	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> , <b>2020</b> , 8,	3.5	4
105	Hydrothermal and Cold Spring Water and Primary Productivity Effects on Magnesium Isotopes: Lake Myvatn, Iceland. <i>Frontiers in Earth Science</i> , <b>2020</b> , 8,	3.5	2
104	Simultaneous measurement of neodymium stable and radiogenic isotopes from a single aliquot using a double spike. <i>Journal of Analytical Atomic Spectrometry</i> , <b>2020</b> , 35, 388-402	3.7	6
103	Ge and Si Isotope Behavior During Intense Tropical Weathering and Ecosystem Cycling. <i>Global Biogeochemical Cycles</i> , <b>2020</b> , 34, e2019GB006522	5.9	5
102	Extensive crustal extraction in Earth's early history inferred from molybdenum isotopes. <i>Nature Geoscience</i> , <b>2019</b> , 12, 946-951	18.3	21
101	Using Mg Isotopes to Estimate Natural Calcite Compositions and Precipitation Rates During the 2010 Eyjafjallajökull Eruption. <i>Frontiers in Earth Science</i> , <b>2019</b> , 7,	3.5	5
100	Rapid CO mineralisation into calcite at the CarbFix storage site quantified using calcium isotopes. <i>Nature Communications</i> , <b>2019</b> , 10, 1983	17.4	28
99	Carbon dioxide emissions by rock organic carbon oxidation and the net geochemical carbon budget of the Mackenzie River Basin. <i>Numerische Mathematik</i> , <b>2019</b> , 319, 473-499	5.3	21
98	Controlling Mechanisms for Molybdenum Isotope Fractionation in Porphyry Deposits: The Qulong Example. <i>Economic Geology</i> , <b>2019</b> , 114, 981-992	4.3	8
97	Release of oxidizing fluids in subduction zones recorded by iron isotope zonation in garnet. <i>Nature Geoscience</i> , <b>2019</b> , 12, 1029-1033	18.3	21
96	Molybdenum isotope behaviour in groundwaters and terrestrial hydrothermal systems, Iceland. <i>Earth and Planetary Science Letters</i> , <b>2018</b> , 486, 108-118	5.3	23
95	Tracing the Impact of Coastal Water Geochemistry on the Re-Os Systematics of Macroalgae: Insights From the Basaltic Terrain of Iceland. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2018</b> , 123, 2791-2806	3.7	5
94	Osmium uptake, distribution, and <sup>187</sup> Os/ <sup>188</sup> Os and <sup>187</sup> Re/ <sup>188</sup> Os compositions in Phaeophyceae macroalgae, <i>Fucus vesiculosus</i> : Implications for determining the <sup>187</sup> Os/ <sup>188</sup> Os composition of seawater. <i>Geochimica Et Cosmochimica Acta</i> , <b>2017</b> , 199, 48-57	5.5	11

93	High precision osmium stable isotope measurements by double spike MC-ICP-MS and N-TIMS. <i>Journal of Analytical Atomic Spectrometry</i> , <b>2017</b> , 32, 749-765	3.7	16
92	Continental weathering and terrestrial (oxyhydr)oxide export: Comparing glacial and non-glacial catchments in Iceland. <i>Chemical Geology</i> , <b>2017</b> , 462, 55-66	4.2	11
91	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> , <b>2017</b> , 18, 2562-2579	3.6	47
90	The influence of weathering and soil organic matter on Zn isotopes in soils. <i>Chemical Geology</i> , <b>2017</b> , 466, 140-148	4.2	21
89	Mountain glaciation drives rapid oxidation of rock-bound organic carbon. <i>Science Advances</i> , <b>2017</b> , 3, e1701197	4.1	24
88	Iron and silicon isotope behaviour accompanying weathering in Icelandic soils, and the implications for iron export from peatlands. <i>Geochimica Et Cosmochimica Acta</i> , <b>2017</b> , 217, 273-291	5.5	22
87	Impact of glacial activity on the weathering of Hf isotopes [Observations from Southwest Greenland. <i>Geochimica Et Cosmochimica Acta</i> , <b>2017</b> , 215, 295-316	5.5	11
86	The neodymium stable isotope composition of the silicate Earth and chondrites. <i>Earth and Planetary Science Letters</i> , <b>2017</b> , 480, 121-132	5.3	18
85	Highly siderophile element and <sup>182</sup> 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> , <b>2017</b> , 458, 394-404	5.3	48
84	Molybdenum isotope fractionation in the mantle. <i>Geochimica Et Cosmochimica Acta</i> , <b>2017</b> , 199, 91-111	5.5	41
83	The effect of hydrothermal spring weathering processes and primary productivity on lithium isotopes: Lake Myvatn, Iceland. <i>Chemical Geology</i> , <b>2016</b> , 445, 4-13	4.2	37
82	Titanium stable isotope investigation of magmatic processes on the Earth and Moon. <i>Earth and Planetary Science Letters</i> , <b>2016</b> , 449, 197-205	5.3	70
81	Insights into combined radiogenic and stable strontium isotopes as tracers for weathering processes in subglacial environments. <i>Chemical Geology</i> , <b>2016</b> , 429, 33-43	4.2	28
80	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> , <b>2016</b> , 81, 651-724	7.1	38
79	Molybdenum isotope fractionation in soils: Influence of redox conditions, organic matter, and atmospheric inputs. <i>Geochimica Et Cosmochimica Acta</i> , <b>2015</b> , 162, 1-24	5.5	56
78	Characterising the stable ( <sup>88</sup> / <sup>86</sup> Sr) and radiogenic ( <sup>87</sup> Sr/ <sup>86</sup> Sr) isotopic composition of strontium in rainwater. <i>Chemical Geology</i> , <b>2015</b> , 409, 54-60	4.2	21
77	Reassessing the stable ( <sup>88</sup> / <sup>86</sup> Sr) and radiogenic ( <sup>87</sup> Sr/ <sup>86</sup> Sr) strontium isotopic composition of marine inputs. <i>Geochimica Et Cosmochimica Acta</i> , <b>2015</b> , 157, 125-146	5.5	63
76	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> , <b>2015</b> , 415, 111-120	5.3	61

75	Persistence of deeply sourced iron in the Pacific Ocean. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 1292-7	11.5	39
74	Chemical weathering processes in the Great Artesian Basin: Evidence from lithium and silicon isotopes. <i>Earth and Planetary Science Letters</i> , <b>2014</b> , 406, 24-36	5.3	47
73	Magnesium retention on the soil exchange complex controlling Mg isotope variations in soils, soil solutions and vegetation in volcanic soils, Iceland. <i>Geochimica Et Cosmochimica Acta</i> , <b>2014</b> , 125, 110-130	5.5	75
72	Quantifying the impact of riverine particulate dissolution in seawater on ocean chemistry. <i>Earth and Planetary Science Letters</i> , <b>2014</b> , 395, 91-100	5.3	36
71	Controls on stable strontium isotope fractionation in coccolithophores with implications for the marine Sr cycle. <i>Geochimica Et Cosmochimica Acta</i> , <b>2014</b> , 128, 225-235	5.5	61
70	High precision osmium elemental and isotope measurements of North Atlantic seawater. <i>Journal of Analytical Atomic Spectrometry</i> , <b>2014</b> , 29, 2330-2342	3.7	14
69	Osmium isotope variations accompanying the eruption of a single lava flow field in the Columbia River Flood Basalt Province. <i>Earth and Planetary Science Letters</i> , <b>2013</b> , 368, 183-194	5.3	12
68	The stable calcium isotopic composition of rivers draining basaltic catchments in Iceland. <i>Earth and Planetary Science Letters</i> , <b>2013</b> , 374, 173-184	5.3	32
67	Lithium, magnesium and silicon isotope behaviour accompanying weathering in a basaltic soil and pore water profile in Iceland. <i>Earth and Planetary Science Letters</i> , <b>2012</b> , 339-340, 11-23	5.3	137
66	Late accretion on the earliest planetesimals revealed by the highly siderophile elements. <i>Science</i> , <b>2012</b> , 336, 72-5	33.3	67
65	Unradiogenic lead in Earth's upper mantle. <i>Nature Geoscience</i> , <b>2012</b> , 5, 570-573	18.3	48
64	Deciphering the Trace Element Characteristics in Kilbourne Hole Peridotite Xenoliths: Melt-Rock Interaction and Metasomatism beneath the Rio Grande Rift, SW USA. <i>Journal of Petrology</i> , <b>2012</b> , 53, 1709-1742 <sup>37</sup>	3.9	37
63	Lithium Isotopes as Tracers in Marine and Terrestrial Environments. <i>Advances in Isotope Geochemistry</i> , <b>2012</b> , 41-59	1.2	18
62	New age for ferromanganese crust 109D-C and implications for isotopic records of lead, neodymium, hafnium, and thallium in the Pliocene Indian Ocean. <i>Paleoceanography</i> , <b>2011</b> , 26, n/a-n/a		22
61	Silicon isotopes in allophane as a proxy for mineral formation in volcanic soils. <i>Applied Geochemistry</i> , <b>2011</b> , 26, S115-S118	3.5	20
60	Osmium mass balance in peridotite and the effects of mantle-derived sulphides on basalt petrogenesis. <i>Geochimica Et Cosmochimica Acta</i> , <b>2011</b> , 75, 5574-5596	5.5	73
59	Silicon isotope fractionation during magmatic differentiation. <i>Geochimica Et Cosmochimica Acta</i> , <b>2011</b> , 75, 6124-6139	5.5	104
58	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> , <b>2011</b> , 301, 125-136	5.3	16

57	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> , <b>2011</b> , 304, 260-269	5.3	67
56	Quantifying the impact of freshwater diatom productivity on silicon isotopes and silicon fluxes: Lake Myvatn, Iceland. <i>Earth and Planetary Science Letters</i> , <b>2011</b> , 305, 73-82	5.3	46
55	Unravelling the effects of melt depletion and secondary infiltration on mantle Re/Os isotopes beneath the French Massif Central. <i>Geochimica Et Cosmochimica Acta</i> , <b>2010</b> , 74, 293-320	5.5	59
54	The behaviour of Li and Mg isotopes during primary phase dissolution and secondary mineral formation in basalt. <i>Geochimica Et Cosmochimica Acta</i> , <b>2010</b> , 74, 5259-5279	5.5	162
53	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> , <b>2010</b> , 290, 427-437	5.3	85
52	Climate driven glacial/interglacial variations in the osmium isotope composition of seawater recorded by planktic foraminifera. <i>Earth and Planetary Science Letters</i> , <b>2010</b> , 295, 58-68	5.3	18
51	Molybdenum isotope behaviour accompanying weathering and riverine transport in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , <b>2010</b> , 295, 104-114	5.3	85
50	Assessing the role of climate on uranium and lithium isotope behaviour in rivers draining a basaltic terrain. <i>Chemical Geology</i> , <b>2010</b> , 270, 227-239	4.2	91
49	Chiestolite. <i>Gondwana Research</i> , <b>2010</b> , 18, 222-229	5.1	5
48	Hf and Nd isotopes in marine sediments: Constraints on global silicate weathering. <i>Earth and Planetary Science Letters</i> , <b>2009</b> , 277, 318-326	5.3	92
47	Thallium isotope evidence for a permanent increase in marine organic carbon export in the early Eocene. <i>Earth and Planetary Science Letters</i> , <b>2009</b> , 278, 297-307	5.3	83
46	The relationship between riverine lithium isotope composition and silicate weathering rates in Iceland. <i>Earth and Planetary Science Letters</i> , <b>2009</b> , 287, 434-441	5.3	120
45	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> , <b>2009</b> , 73, 1394-1416	5.5	82
44	Molybdenum isotope evidence for global ocean anoxia coupled with perturbations to the carbon cycle during the Early Jurassic. <i>Geology</i> , <b>2008</b> , 36, 231	5	188
43	Lithium, magnesium and uranium isotope behaviour in the estuarine environment of basaltic islands. <i>Earth and Planetary Science Letters</i> , <b>2008</b> , 274, 462-471	5.3	92
42	The influence of weathering processes on riverine magnesium isotopes in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , <b>2008</b> , 276, 187-197	5.3	166
41	Rhenium/osmium isotope and elemental behaviour during subduction of oceanic crust and the implications for mantle recycling. <i>Earth and Planetary Science Letters</i> , <b>2007</b> , 253, 211-225	5.3	62
40	The scale and origin of the osmium isotope variations in mid-ocean ridge basalts. <i>Earth and Planetary Science Letters</i> , <b>2007</b> , 259, 541-556	5.3	123

39	Rhenium and osmium isotope and elemental behaviour accompanying laterite formation in the Deccan region of India. <i>Earth and Planetary Science Letters</i> , <b>2007</b> , 261, 239-258	5.3	50
38	Silicon isotope variations accompanying basalt weathering in Iceland. <i>Earth and Planetary Science Letters</i> , <b>2007</b> , 261, 476-490	5.3	151
37	The control of weathering processes on riverine and seawater hafnium isotope ratios. <i>Geology</i> , <b>2006</b> , 34, 433	5	61
36	The influence of weathering process on riverine osmium isotopes in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , <b>2006</b> , 243, 732-748	5.3	31
35	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> , <b>2006</b> , 244, 606-621	5.3	232
34	The relationship between riverine U-series disequilibria and erosion rates in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , <b>2006</b> , 249, 258-273	5.3	70
33	Riverine behaviour of uranium and lithium isotopes in an actively glaciated basaltic terrain. <i>Earth and Planetary Science Letters</i> , <b>2006</b> , 251, 134-147	5.3	138
32	Constraining erosional input and deep-water formation in the North Atlantic using Nd isotopes. <i>Chemical Geology</i> , <b>2006</b> , 226, 253-263	4.2	3
31	Global weathering variations inferred from marine radiogenic isotope records. <i>Journal of Geochemical Exploration</i> , <b>2006</b> , 88, 262-265	3.8	32
30	In situ Os isotopes in abyssal peridotites bridge the isotopic gap between MORBs and their source mantle. <i>Nature</i> , <b>2005</b> , 436, 1005-8	50.4	176
29	Osmium isotope heterogeneity in the constituent phases of mid-ocean ridge basalts. <i>Science</i> , <b>2004</b> , 303, 70-2	33.3	52
28	Radiogenic isotope records of Quaternary glaciations: Changes in the erosional source and weathering processes. <i>Geology</i> , <b>2004</b> , 32, 861	5	12
27	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> , <b>2004</b> , 224, 477-492	5.3	139
26	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> , <b>2002</b> , 17, 1567-1574	2.7	936
25	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> , <b>2002</b> , 198, 63-76	5.3	78
24	Correlated Os/Bb/Nd/Br isotopes in the Australo-Antarctic chain basalts: the nature of mantle components in plume sources. <i>Earth and Planetary Science Letters</i> , <b>2001</b> , 186, 527-537	5.3	60
23	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> , <b>2000</b> , 176, 425-441	5.3	120
22	Resolving crystallisation ages of Archean mafic/ultramafic rocks using the Re/Os isotope system. <i>Earth and Planetary Science Letters</i> , <b>2000</b> , 179, 453-467	5.3	23

21	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> , <b>2000</b> , 181, 315-325	5.3	64
20	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> , <b>2000</b> , 183, 93-106	5.3	85
19	The composition of melt inclusions in minerals at the garnet-spinel transition zone. <i>Earth and Planetary Science Letters</i> , <b>2000</b> , 174, 375-383	5.3	17
18	Hafnium isotope stratigraphy of ferromanganese crusts. <i>Science</i> , <b>1999</b> , 285, 1052-4	33.3	90
17	Using (234U/238U) to assess diffusion rates of isotope tracers in ferromanganese crusts. <i>Earth and Planetary Science Letters</i> , <b>1999</b> , 170, 169-179	5.3	68
16	Actual timing of neodymium isotopic variations recorded by FeMn crusts in the western North Atlantic. <i>Earth and Planetary Science Letters</i> , <b>1999</b> , 171, 149-156	5.3	68
15	Osmium isotope variations in the oceans recorded by FeMn crusts. <i>Earth and Planetary Science Letters</i> , <b>1999</b> , 171, 185-197	5.3	88
14	Osmium isotope disequilibrium between mantle minerals in a spinel-lherzolite. <i>Earth and Planetary Science Letters</i> , <b>1999</b> , 172, 311-322	5.3	146
13	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> , <b>1999</b> , 173, 365-379	5.3	103
12	Closure of the Central American Isthmus and its effect on deep-water formation in the North Atlantic. <i>Nature</i> , <b>1997</b> , 386, 382-385	50.4	182
11	Crust formation in the Lewisian. <i>Nature</i> , <b>1995</b> , 375, 366-367	50.4	3
10	The relative diffusion of Pb, Nd, Sr and O in garnet. <i>Earth and Planetary Science Letters</i> , <b>1995</b> , 133, 199-213	5.3	110
9	High-resolution SIMS analysis of common lead. <i>Chemical Geology</i> , <b>1994</b> , 112, 57-70	4.2	26
8	Archaean crustal development in the Lewisian complex of northwest Scotland. <i>Nature</i> , <b>1994</b> , 370, 552-555	50.4	25
7	Diachronous burial and exhumation of a single tectonic unit during collision orogenesis (Sulitjelma, central Scandinavian Caledonides). <i>Geology</i> , <b>1994</b> , 22, 1043	5	6
6	The timing of mineral growth across a regional metamorphic sequence. <i>Nature</i> , <b>1992</b> , 357, 235-238	50.4	33
5	High-resolution garnet chronometry and the rates of metamorphic processes. <i>Earth and Planetary Science Letters</i> , <b>1991</b> , 107, 649-671	5.3	105
4	The timescale and mechanism of granulite formation at Kurunegala, Sri Lanka. <i>Contributions To Mineralogy and Petrology</i> , <b>1990</b> , 106, 66-89	3.5	115

3	Fe-Ti oxide chronometry: With application to granulite formation. <i>Geochimica Et Cosmochimica Acta</i> , <b>1990</b> , 54, 2593-2602	5.5	22
2	Pressure, temperature and structural evolution of the Sulitjelma fold-nappe, central Scandinavian Caledonides. <i>Geological Society Special Publication</i> , <b>1989</b> , 43, 391-411	1.7	7
1	Garnet-quartz intergrowths in graphitic pelites: the role of the fluid phase. <i>Mineralogical Magazine</i> , <b>1986</b> , 50, 611-620	1.7	44