

Kevin Burton

List of Publications by Citations

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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 | 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 | 2.7 | 936 |
| 109 | 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 | 5.3 | 232 |
| 108 | Molybdenum isotope evidence for global ocean anoxia coupled with perturbations to the carbon cycle during the Early Jurassic. <i>Geology</i> , 2008 , 36, 231 | 5 | 188 |
| 107 | Closure of the Central American Isthmus and its effect on deep-water formation in the North Atlantic. <i>Nature</i> , 1997 , 386, 382-385 | 50.4 | 182 |
| 106 | In situ Os isotopes in abyssal peridotites bridge the isotopic gap between MORBs and their source mantle. <i>Nature</i> , 2005 , 436, 1005-8 | 50.4 | 176 |
| 105 | The influence of weathering processes on riverine magnesium isotopes in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2008 , 276, 187-197 | 5.3 | 166 |
| 104 | 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 | 5.5 | 162 |
| 103 | Silicon isotope variations accompanying basalt weathering in Iceland. <i>Earth and Planetary Science Letters</i> , 2007 , 261, 476-490 | 5.3 | 151 |
| 102 | Osmium isotope disequilibrium between mantle minerals in a spinel-lherzolite. <i>Earth and Planetary Science Letters</i> , 1999 , 172, 311-322 | 5.3 | 146 |
| 101 | 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 | 5.3 | 139 |
| 100 | Riverine behaviour of uranium and lithium isotopes in an actively glaciated basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2006 , 251, 134-147 | 5.3 | 138 |
| 99 | 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> , 2012 , 339-340, 11-23 | 5.3 | 137 |
| 98 | 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 | 5.3 | 123 |
| 97 | The relationship between riverine lithium isotope composition and silicate weathering rates in Iceland. <i>Earth and Planetary Science Letters</i> , 2009 , 287, 434-441 | 5.3 | 120 |
| 96 | 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 | 5.3 | 120 |
| 95 | The timescale and mechanism of granulite formation at Kurunegala, Sri Lanka. <i>Contributions To Mineralogy and Petrology</i> , 1990 , 106, 66-89 | 3.5 | 115 |
| 94 | The relative diffusion of Pb, Nd, Sr and O in garnet. <i>Earth and Planetary Science Letters</i> , 1995 , 133, 199-211 | 5.1 | 110 |

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| 93 | High-resolution garnet chronometry and the rates of metamorphic processes. <i>Earth and Planetary Science Letters</i> , 1991 , 107, 649-671 | 5.3 | 105 |
| 92 | Silicon isotope fractionation during magmatic differentiation. <i>Geochimica Et Cosmochimica Acta</i> , 2011 , 75, 6124-6139 | 5.5 | 104 |
| 91 | 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 | 5.3 | 103 |
| 90 | Hf and Nd isotopes in marine sediments: Constraints on global silicate weathering. <i>Earth and Planetary Science Letters</i> , 2009 , 277, 318-326 | 5.3 | 92 |
| 89 | Lithium, magnesium and uranium isotope behaviour in the estuarine environment of basaltic islands. <i>Earth and Planetary Science Letters</i> , 2008 , 274, 462-471 | 5.3 | 92 |
| 88 | 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 | 4.2 | 91 |
| 87 | Hafnium isotope stratigraphy of ferromanganese crusts. <i>Science</i> , 1999 , 285, 1052-4 | 33.3 | 90 |
| 86 | Osmium isotope variations in the oceans recorded by FeMn crusts. <i>Earth and Planetary Science Letters</i> , 1999 , 171, 185-197 | 5.3 | 88 |
| 85 | 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 | 5.3 | 85 |
| 84 | Molybdenum isotope behaviour accompanying weathering and riverine transport in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2010 , 295, 104-114 | 5.3 | 85 |
| 83 | 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 | 5.3 | 85 |
| 82 | 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 | 5.3 | 83 |
| 81 | 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 | 5.5 | 82 |
| 80 | 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 | 5.3 | 78 |
| 79 | 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> , 2014 , 125, 110-130 | 5.5 | 75 |
| 78 | Osmium mass balance in peridotite and the effects of mantle-derived sulphides on basalt petrogenesis. <i>Geochimica Et Cosmochimica Acta</i> , 2011 , 75, 5574-5596 | 5.5 | 73 |
| 77 | Titanium stable isotope investigation of magmatic processes on the Earth and Moon. <i>Earth and Planetary Science Letters</i> , 2016 , 449, 197-205 | 5.3 | 70 |
| 76 | 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 | 5.3 | 70 |

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| 75 | Using ($^{234}\text{U}/^{238}\text{U}$) to assess diffusion rates of isotope tracers in ferromanganese crusts. <i>Earth and Planetary Science Letters</i> , 1999 , 170, 169-179 | 5:3 | 68 |
| 74 | 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 | 5:3 | 68 |
| 73 | Late accretion on the earliest planetesimals revealed by the highly siderophile elements. <i>Science</i> , 2012 , 336, 72-5 | 33:3 | 67 |
| 72 | 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 | 5:3 | 67 |
| 71 | 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 | 5:3 | 64 |
| 70 | 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 | 5:5 | 63 |
| 69 | Rhenium-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 | 5:3 | 62 |
| 68 | Controls on stable strontium isotope fractionation in coccolithophores with implications for the marine Sr cycle. <i>Geochimica Et Cosmochimica Acta</i> , 2014 , 128, 225-235 | 5:5 | 61 |
| 67 | 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 | 5:3 | 61 |
| 66 | The control of weathering processes on riverine and seawater hafnium isotope ratios. <i>Geology</i> , 2006 , 34, 433 | 5 | 61 |
| 65 | Correlated Os-Pb-Nd-Br isotopes in the Australo-Antarctic chain basalts: the nature of mantle components in plume sources. <i>Earth and Planetary Science Letters</i> , 2001 , 186, 527-537 | 5:3 | 60 |
| 64 | 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> , 2010 , 74, 293-320 | 5:5 | 59 |
| 63 | Molybdenum isotope fractionation in soils: Influence of redox conditions, organic matter, and atmospheric inputs. <i>Geochimica Et Cosmochimica Acta</i> , 2015 , 162, 1-24 | 5:5 | 56 |
| 62 | Osmium isotope heterogeneity in the constituent phases of mid-ocean ridge basalts. <i>Science</i> , 2004 , 303, 70-2 | 33:3 | 52 |
| 61 | 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 | 5:3 | 50 |
| 60 | 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 | 5:3 | 48 |
| 59 | Unradiogenic lead in Earth's upper mantle. <i>Nature Geoscience</i> , 2012 , 5, 570-573 | 18:3 | 48 |
| 58 | 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 ^{3.6} | | 47 |

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| 57 | Chemical weathering processes in the Great Artesian Basin: Evidence from lithium and silicon isotopes. <i>Earth and Planetary Science Letters</i> , 2014 , 406, 24-36 | 5.3 | 47 |
| 56 | 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 | 5.3 | 46 |
| 55 | Garnet-quartz intergrowths in graphitic pelites: the role of the fluid phase. <i>Mineralogical Magazine</i> , 1986 , 50, 611-620 | 1.7 | 44 |
| 54 | Molybdenum isotope fractionation in the mantle. <i>Geochimica Et Cosmochimica Acta</i> , 2017 , 199, 91-111 | 5.5 | 41 |
| 53 | Persistence of deeply sourced iron in the Pacific Ocean. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 1292-7 | 11.5 | 39 |
| 52 | 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 | 7.1 | 38 |
| 51 | The effect of hydrothermal spring weathering processes and primary productivity on lithium isotopes: Lake Myvatn, Iceland. <i>Chemical Geology</i> , 2016 , 445, 4-13 | 4.2 | 37 |
| 50 | 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> , 2012 , 53, 1709-1742 | 3.9 | 37 |
| 49 | Quantifying the impact of riverine particulate dissolution in seawater on ocean chemistry. <i>Earth and Planetary Science Letters</i> , 2014 , 395, 91-100 | 5.3 | 36 |
| 48 | The timing of mineral growth across a regional metamorphic sequence. <i>Nature</i> , 1992 , 357, 235-238 | 50.4 | 33 |
| 47 | The stable calcium isotopic composition of rivers draining basaltic catchments in Iceland. <i>Earth and Planetary Science Letters</i> , 2013 , 374, 173-184 | 5.3 | 32 |
| 46 | Global weathering variations inferred from marine radiogenic isotope records. <i>Journal of Geochemical Exploration</i> , 2006 , 88, 262-265 | 3.8 | 32 |
| 45 | The influence of weathering process on riverine osmium isotopes in a basaltic terrain. <i>Earth and Planetary Science Letters</i> , 2006 , 243, 732-748 | 5.3 | 31 |
| 44 | Rapid CO mineralisation into calcite at the CarbFix storage site quantified using calcium isotopes. <i>Nature Communications</i> , 2019 , 10, 1983 | 17.4 | 28 |
| 43 | Insights into combined radiogenic and stable strontium isotopes as tracers for weathering processes in subglacial environments. <i>Chemical Geology</i> , 2016 , 429, 33-43 | 4.2 | 28 |
| 42 | High-resolution SIMS analysis of common lead. <i>Chemical Geology</i> , 1994 , 112, 57-70 | 4.2 | 26 |
| 41 | Archaean crustal development in the Lewisian complex of northwest Scotland. <i>Nature</i> , 1994 , 370, 552-555 | 55.4 | 25 |
| 40 | Mountain glaciation drives rapid oxidation of rock-bound organic carbon. <i>Science Advances</i> , 2017 , 3, e1701107 | 11.07 | 24 |

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| 39 | Molybdenum isotope behaviour in groundwaters and terrestrial hydrothermal systems, Iceland. <i>Earth and Planetary Science Letters</i> , 2018 , 486, 108-118 | 5.3 | 23 |
| 38 | 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 | 5.3 | 23 |
| 37 | 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 | 5.5 | 22 |
| 36 | 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> , 2011 , 26, n/a-n/a | | 22 |
| 35 | Fe-Ti oxide chronometry: With application to granulite formation. <i>Geochimica Et Cosmochimica Acta</i> , 1990 , 54, 2593-2602 | 5.5 | 22 |
| 34 | The influence of weathering and soil organic matter on Zn isotopes in soils. <i>Chemical Geology</i> , 2017 , 466, 140-148 | 4.2 | 21 |
| 33 | Extensive crustal extraction in Earth's early history inferred from molybdenum isotopes. <i>Nature Geoscience</i> , 2019 , 12, 946-951 | 18.3 | 21 |
| 32 | 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 | 5.3 | 21 |
| 31 | Release of oxidizing fluids in subduction zones recorded by iron isotope zonation in garnet. <i>Nature Geoscience</i> , 2019 , 12, 1029-1033 | 18.3 | 21 |
| 30 | Characterising the stable ($^{88}/^{86}\text{Sr}$) and radiogenic ($^{87}\text{Sr}/^{86}\text{Sr}$) isotopic composition of strontium in rainwater. <i>Chemical Geology</i> , 2015 , 409, 54-60 | 4.2 | 21 |
| 29 | Silicon isotopes in allophane as a proxy for mineral formation in volcanic soils. <i>Applied Geochemistry</i> , 2011 , 26, S115-S118 | 3.5 | 20 |
| 28 | The neodymium stable isotope composition of the silicate Earth and chondrites. <i>Earth and Planetary Science Letters</i> , 2017 , 480, 121-132 | 5.3 | 18 |
| 27 | Climate driven glacial-interglacial variations in the osmium isotope composition of seawater recorded by planktic foraminifera. <i>Earth and Planetary Science Letters</i> , 2010 , 295, 58-68 | 5.3 | 18 |
| 26 | Lithium Isotopes as Tracers in Marine and Terrestrial Environments. <i>Advances in Isotope Geochemistry</i> , 2012 , 41-59 | 1.2 | 18 |
| 25 | The composition of melt inclusions in minerals at the garnet-spinel transition zone. <i>Earth and Planetary Science Letters</i> , 2000 , 174, 375-383 | 5.3 | 17 |
| 24 | 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 | 3.7 | 16 |
| 23 | 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 | 5.3 | 16 |
| 22 | High precision osmium elemental and isotope measurements of North Atlantic seawater. <i>Journal of Analytical Atomic Spectrometry</i> , 2014 , 29, 2330-2342 | 3.7 | 14 |

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| 21 | 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> , 2013 , 368, 183-194 | 5.3 | 12 |
| 20 | Radiogenic isotope records of Quaternary glaciations: Changes in the erosional source and weathering processes. <i>Geology</i> , 2004 , 32, 861 | 5 | 12 |
| 19 | Osmium uptake, distribution, and ¹⁸⁷ Os/ ¹⁸⁸ Os and ¹⁸⁷ Re/ ¹⁸⁸ Os compositions in Phaeophyceae macroalgae, <i>Fucus vesiculosus</i> : Implications for determining the ¹⁸⁷ Os/ ¹⁸⁸ Os composition of seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2017 , 199, 48-57 | 5.5 | 11 |
| 18 | Continental weathering and terrestrial (oxyhydr)oxide export: Comparing glacial and non-glacial catchments in Iceland. <i>Chemical Geology</i> , 2017 , 462, 55-66 | 4.2 | 11 |
| 17 | Impact of glacial activity on the weathering of Hf isotopes [Observations from Southwest Greenland. <i>Geochimica Et Cosmochimica Acta</i> , 2017 , 215, 295-316 | 5.5 | 11 |
| 16 | Controlling Mechanisms for Molybdenum Isotope Fractionation in Porphyry Deposits: The Qulong Example. <i>Economic Geology</i> , 2019 , 114, 981-992 | 4.3 | 8 |
| 15 | Pressure, temperature and structural evolution of the Sulitjelma fold-nappe, central Scandinavian Caledonides. <i>Geological Society Special Publication</i> , 1989 , 43, 391-411 | 1.7 | 7 |
| 14 | Diachronous burial and exhumation of a single tectonic unit during collision orogenesis (Sulitjelma, central Scandinavian Caledonides). <i>Geology</i> , 1994 , 22, 1043 | 5 | 6 |
| 13 | 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 | 3.7 | 6 |
| 12 | Using Mg Isotopes to Estimate Natural Calcite Compositions and Precipitation Rates During the 2010 Eyjafjallajökull Eruption. <i>Frontiers in Earth Science</i> , 2019 , 7, | 3.5 | 5 |
| 11 | 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> , 2018 , 123, 2791-2806 | 3.7 | 5 |
| 10 | Chiastolite. <i>Gondwana Research</i> , 2010 , 18, 222-229 | 5.1 | 5 |
| 9 | Ge and Si Isotope Behavior During Intense Tropical Weathering and Ecosystem Cycling. <i>Global Biogeochemical Cycles</i> , 2020 , 34, e2019GB006522 | 5.9 | 5 |
| 8 | 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, | 3.5 | 4 |
| 7 | Constraining erosional input and deep-water formation in the North Atlantic using Nd isotopes. <i>Chemical Geology</i> , 2006 , 226, 253-263 | 4.2 | 3 |
| 6 | Crust formation in the Lewisian. <i>Nature</i> , 1995 , 375, 366-367 | 50.4 | 3 |
| 5 | Hydrothermal and Cold Spring Water and Primary Productivity Effects on Magnesium Isotopes: Lake Myvatn, Iceland. <i>Frontiers in Earth Science</i> , 2020 , 8, | 3.5 | 2 |
| 4 | Decoupling of inorganic and organic carbon during slab mantle devolatilisation.. <i>Nature Communications</i> , 2022 , 13, 308 | 17.4 | 2 |

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| 3 | 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 | 5.5 | 1 |
| 2 | The lithium isotope response to the variable weathering of soils in Iceland. <i>Geochimica Et Cosmochimica Acta</i> , 2021 , 313, 55-73 | 5.5 | 1 |
| 1 | Fossil records of early solar irradiation and cosmolocation of the CAI factory: A reappraisal. <i>Science Advances</i> , 2021 , 7, eabg8329 | 14.3 | 0 |