

Kevin D Mckeegan

List of Publications by Year in descending order

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96
papers

10,609
citations

34105

52
h-index

37204

96
g-index

99
all docs

99
docs citations

99
times ranked

6764
citing authors

#	ARTICLE	IF	CITATIONS
1	Evidence for life on Earth before 3,800 million years ago. <i>Nature</i> , 1996, 384, 55-59.	27.8	1,188
2	Methane-Consuming Archaea Revealed by Directly Coupled Isotopic and Phylogenetic Analysis. <i>Science</i> , 2001, 293, 484-487.	12.6	957
3	Comet 81P/Wild 2 Under a Microscope. <i>Science</i> , 2006, 314, 1711-1716.	12.6	848
4	Multiple archaeal groups mediate methane oxidation in anoxic cold seep sediments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 7663-7668.	7.1	604
5	Isotopic Compositions of Cometary Matter Returned by Stardust. <i>Science</i> , 2006, 314, 1724-1728.	12.6	343
6	The Oxygen Isotopic Composition of the Sun Inferred from Captured Solar Wind. <i>Science</i> , 2011, 332, 1528-1532.	12.6	321
7	Prolonged residence times for the youngest rhyolites associated with Long Valley Caldera: $^{230}\text{Th}/^{238}\text{U}$ ion microprobe dating of young zircons. <i>Earth and Planetary Science Letters</i> , 1997, 150, 27-39.	4.4	305
8	Origin and Episodic Emplacement of the Manaslu Intrusive Complex, Central Himalaya. <i>Journal of Petrology</i> , 1999, 40, 3-19.	2.8	267
9	Mass-Independent Sulfur of Inclusions in Diamond and Sulfur Recycling on Early Earth. <i>Science</i> , 2002, 298, 2369-2372.	12.6	264
10	Incorporation of Short-Lived ^{10}Be in a Calcium-Aluminum-Rich Inclusion from the Allende Meteorite. <i>Science</i> , 2000, 289, 1334-1337.	12.6	257
11	Detection of inherited monazite in the Manaslu leucogranite by $^{208}\text{Pb}/^{232}\text{Th}$ ion microprobe dating: Crystallization age and tectonic implications. <i>Earth and Planetary Science Letters</i> , 1995, 133, 271-282.	4.4	255
12	Ion microprobe isotopic measurements of individual interplanetary dust particles. <i>Geochimica Et Cosmochimica Acta</i> , 1985, 49, 1971-1987.	3.9	206
13	The Chlorine Isotope Composition of the Moon and Implications for an Anhydrous Mantle. <i>Science</i> , 2010, 329, 1050-1053.	12.6	200
14	Mass-independent isotope effects in Archean (2.5 to 3.8 Ga) sedimentary sulfides determined by ion microprobe analysis. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 1635-1658.	3.9	190
15	Determination of oxygen self-diffusion in Al_2SiO_5 kermanite, anorthite, diopside, and spinel: Implications for oxygen isotopic anomalies and the thermal histories of Ca-Al-rich inclusions. <i>Geochimica Et Cosmochimica Acta</i> , 1994, 58, 3713-3734.	3.9	178
16	^{26}Al , ^{244}Pu , ^{50}Ti , REE, and trace element abundances in hibonite grains from CM and CV meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 1987, 51, 329-350.	3.9	175
17	The oxygen isotopic composition of olivine and pyroxene from CI chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 835-845.	3.9	160
18	Carbon isotopic composition of individual Precambrian microfossils. <i>Geology</i> , 2000, 28, 707.	4.4	157

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19	Early formation of the Moon 4.51 billion years ago. <i>Science Advances</i> , 2017, 3, e1602365.	10.3	156
20	Extreme oxygen-isotope compositions in magnetite from unequilibrated ordinary chondrites. <i>Nature</i> , 1998, 392, 577-579.	27.8	122
21	Li and B isotopic variations in an Allende CAI: Evidence for the in situ decay of short-lived ^{10}Be and for the possible presence of the short-lived nuclide ^7Be in the early solar system. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 224-245.	3.9	117
22	Isotopic records in CM hibonites: Implications for timescales of mixing of isotope reservoirs in the solar nebula. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 5051-5079.	3.9	113
23	Calcium- and aluminum-rich inclusions and amoeboid olivine aggregates from the CR carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2002, 37, 1729-1755.	1.6	107
24	Initial $^{26}\text{Al}/^{27}\text{Al}$ in carbonaceous-chondrite chondrules: too little ^{26}Al to melt asteroids. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 2947-2957.	3.9	106
25	In situ measurement of seasonal $\delta^{18}\text{O}$ variations and analysis of isotopic trends in a modern speleothem from southwest Australia. <i>Earth and Planetary Science Letters</i> , 2005, 233, 17-32.	4.4	106
26	Existence of an ^{16}O -Rich Gaseous Reservoir in the Solar Nebula. <i>Science</i> , 2002, 295, 1051-1054.	12.6	105
27	Lu-Hf zircon evidence for rapid lunar differentiation. <i>Earth and Planetary Science Letters</i> , 2009, 279, 157-164.	4.4	98
28	Oxygen Isotopic Constraints on the Genesis of Carbonates from Martian Meteorite ALH84001. <i>Geochimica Et Cosmochimica Acta</i> , 1998, 62, 3-13.	3.9	97
29	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	12.6	97
30	Raman and ion microscopic imagery of graphitic inclusions in apatite from older than 3830 Ma Akilia supracrustal rocks, west Greenland. <i>Geology</i> , 2007, 35, 591.	4.4	92
31	Isotopic links between atmospheric chemistry and the deep sulphur cycle on Mars. <i>Nature</i> , 2014, 508, 364-368.	27.8	91
32	Water Reservoirs in Small Planetary Bodies: Meteorites, Asteroids, and Comets. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	88
33	Coupled Fe and S isotope variations in pyrite nodules from Archean shale. <i>Earth and Planetary Science Letters</i> , 2014, 392, 67-79.	4.4	86
34	Refractory calcium- and aluminum-rich inclusions and aluminum-rich diopside-rich chondrules in the metal-rich chondrites Hammadah al Hamra 237 and Queen Alexandra Range 94411. <i>Meteoritics and Planetary Science</i> , 2001, 36, 1189-1216.	1.6	81
35	A Kinetic Model for Borosilicate Glass Dissolution Based on the Dissolution Affinity of a Surface Alteration Layer. <i>Materials Research Society Symposia Proceedings</i> , 1989, 176, 209.	0.1	78
36	Evolution of Oxygen Isotopic Composition in the Inner Solar Nebula. <i>Astrophysical Journal</i> , 2005, 622, 1333-1342.	4.5	77

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37	ISOTOPIC MASS FRACTIONATION OF SOLAR WIND: EVIDENCE FROM FAST AND SLOW SOLAR WIND COLLECTED BY THE GENESIS MISSION. <i>Astrophysical Journal</i> , 2012, 759, 121.	4.5	75
38	Isotopic mass fractionation laws for magnesium and their effects on ^{26}Al - ^{26}Mg systematics in solar system materials. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 158, 245-261.	3.9	74
39	Large Ca-48 anomalies are associated with Ti-50 anomalies in Murchison and Murray hibonites. <i>Astrophysical Journal</i> , 1986, 311, L103.	4.5	74
40	Molecular preservation of 1.88‰ Ga Gunflint organic microfossils as a function of temperature and mineralogy. <i>Nature Communications</i> , 2016, 7, 11977.	12.8	71
41	Ca,Al-rich inclusions, amoeboid olivine aggregates, and Al-rich chondrules from the unique carbonaceous chondrite Acfer 094: I. mineralogy and petrology. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 2167-2184.	3.9	70
42	Oxygen isotopic compositions of chondrules: Implications for evolution of oxygen isotopic reservoirs in the inner solar nebula. <i>Chemie Der Erde</i> , 2006, 66, 249-276.	2.0	70
43	Origin of magnetite in oxidized CV chondrites: in situ measurement of oxygen isotope compositions of Allende magnetite and olivine. <i>Earth and Planetary Science Letters</i> , 1997, 146, 337-349.	4.4	66
44	Isotopic compositions of oxygen, iron, chromium, and nickel in cosmic spherules: Toward a better comprehension of atmospheric entry heating effects. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 5365-5385.	3.9	66
45	16 O enrichments in aluminum-rich chondrules from ordinary chondrites. <i>Earth and Planetary Science Letters</i> , 2000, 184, 57-74.	4.4	65
46	Otolith sulfur isotope method to reconstruct salmon (<i>Oncorhynchus tshawytscha</i>) life history. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2002, 59, 587-591.	1.4	65
47	Oxygen isotopic compositions of individual minerals in Antarctic micrometeorites: further links to carbonaceous chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 1999, 63, 2623-2636.	3.9	60
48	Oxygen isotopes in calcium-aluminum-rich inclusions from enstatite chondrites: new evidence for a single CAI source in the solar nebula. <i>Earth and Planetary Science Letters</i> , 2000, 181, 271-277.	4.4	59
49	Oxygen-isotopic compositions of relict and host grains in chondrules in the Yamato 81020 CO3.0 chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 3599-3606.	3.9	58
50	Calcium-aluminum-rich inclusions in enstatite chondrites (II): Oxygen isotopes. <i>Meteoritics and Planetary Science</i> , 2001, 36, 223-230.	1.6	55
51	Stardust in Stardust: The C, N, and O isotopic compositions of Wild 2 cometary matter in Al foil impacts. <i>Meteoritics and Planetary Science</i> , 2008, 43, 299-313.	1.6	54
52	Coordinated U-Pb geochronology, trace element, Ti-in-zircon thermometry and microstructural analysis of Apollo zircons. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 202, 264-284.	3.9	53
53	A mantle origin for Paleoproterozoic peridotitic diamonds from the Panda kimberlite, Slave Craton: Evidence from ^{13}C -, ^{15}N - and $^{33,34}\text{S}$ -stable isotope systematics. <i>Lithos</i> , 2009, 112, 852-864.	1.4	52
54	Geochronology and geochemistry of rhyolites from Hormuz Island, southern Iran: A new record of Cadomian arc magmatism in the Hormuz Formation. <i>Lithos</i> , 2015, 236-237, 203-211.	1.4	48

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55	Fluids on differentiated asteroids: Evidence from phosphates in differentiated meteorites GRA 06128 and GRA 06129. <i>Meteoritics and Planetary Science</i> , 2011, 46, 1345-1362.	1.6	46
56	A high spatial resolution $\delta^{18}\text{O}$ profile of a speleothem using an ion-microprobe. <i>Chemical Geology</i> , 2003, 197, 21-28.	3.3	41
57	Aluminum-Magnesium and Oxygen Isotope Study of Relict Calcium-rich Inclusions in Chondrules. <i>Astrophysical Journal</i> , 2006, 639, 1227-1237.	4.5	41
58	A unique basaltic micrometeorite expands the inventory of solar system planetary crusts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 6904-6909.	7.1	41
59	A LOWER INITIAL ABUNDANCE OF SHORT-LIVED ^{41}Ca IN THE EARLY SOLAR SYSTEM AND ITS IMPLICATIONS FOR SOLAR SYSTEM FORMATION. <i>Astrophysical Journal</i> , 2012, 761, 137.	4.5	41
60	Small Antarctic micrometeorites: A mineralogical and in situ oxygen isotope study. <i>Meteoritics and Planetary Science</i> , 2005, 40, 917-932.	1.6	40
61	The chlorine isotope composition of Martian meteorites 2. Implications for the early solar system and the formation of Mars. <i>Meteoritics and Planetary Science</i> , 2016, 51, 2111-2126.	1.6	38
62	The Hyperion-II radio-frequency oxygen ion source on the UCLA ims1290 ion microprobe: Beam characterization and applications in geochemistry and cosmochemistry. <i>International Journal of Mass Spectrometry</i> , 2018, 424, 1-9.	1.5	33
63	Sulfur isotopes in otoliths allow discrimination of anadromous and non-anadromous ecotypes of sockeye salmon (<i>Oncorhynchus nerka</i>). <i>Environmental Biology of Fishes</i> , 2010, 89, 521-532.	1.0	29
64	In situ ^{40}K - ^{40}Ca double-plus™ SIMS dating resolves Klokken feldspar ^{40}K - ^{40}Ar paradox. <i>Earth and Planetary Science Letters</i> , 2010, 299, 426-433.	4.4	29
65	Fine-grained, spinel-rich inclusions from the reduced CV chondrite Efremovka: II. Oxygen isotopic compositions. <i>Meteoritics and Planetary Science</i> , 2005, 40, 1043-1058.	1.6	27
66	Sulfur isotopic composition of Fe-Ni sulfide grains in CI and CM carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2010, 45, 885-898.	1.6	27
67	U-Pb geochronology and geochemistry of Bibi-Maryam pluton, eastern Iran: Implication for the late stage of the tectonic evolution of the Sistan Ocean. <i>Lithos</i> , 2014, 200-201, 197-211.	1.4	26
68	Fe-Al-rich tridymite-hercynite xenoliths with positive cerium anomalies: preserved lateritic paleosols and implications for Miocene climate. <i>Chemical Geology</i> , 2004, 207, 101-116.	3.3	25
69	Oxygen isotope and ^{26}Al - ^{26}Mg systematics of aluminum-rich chondrules from unequilibrated enstatite chondrites. <i>Meteoritics and Planetary Science</i> , 2006, 41, 33-47.	1.6	25
70	The thermal and cementation histories of a sandstone petroleum reservoir, Elk Hills, California. <i>Chemical Geology</i> , 1998, 152, 257-271.	3.3	19
71	Ion Implants as Matrix-Appropriate Calibrators for Geochemical Ion Probe Analyses. <i>Geostandards and Geoanalytical Research</i> , 2015, 39, 265-276.	3.1	18
72	Shock metamorphic history of ^{235}U - ^{238}U Apollo 14 and 15 zircons. <i>Meteoritics and Planetary Science</i> , 2019, 54, 181-201.	1.6	18

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73	The petrogenesis of type B1 Ca-Al-rich inclusions: The spinel perspective. <i>Meteoritics and Planetary Science</i> , 2003, 38, 197-224.	1.6	17
74	In situ isotopic studies of the U-depleted Allende CAI Curious Marie : Pre-accretionary alteration and the co-existence of ²⁶ Al and ³⁶ Cl in the early solar nebula. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 207, 1-18.	3.9	17
75	Accurate analysis of shallowly implanted solar wind ions by SIMS backside depth profiling. <i>Chemical Geology</i> , 2014, 390, 61-73.	3.3	16
76	Carbon isotopic composition of individual Precambrian microfossils. <i>Geology</i> , 2000, 28, 707-710.	4.4	16
77	MegaSIMS: a SIMS/AMS hybrid for measurement of the Sun's oxygen isotopic composition. <i>Applied Surface Science</i> , 2008, 255, 1461-1464.	6.1	15
78	4. Stable Isotope Variations in Extraterrestrial Materials. , 2001, , 279-318.		13
79	Isotopic and elemental fractionation of solar wind implanted in the Genesis concentrator target characterized and quantified by noble gases. <i>Meteoritics and Planetary Science</i> , 2011, 46, 493-512.	1.6	13
80	O, Mg, and Si isotope distributions in the complex ultrarefractory CAI Efremovka 101.1: Assimilation of ultrarefractory, FUN, and regular CAI precursors. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 232, 48-81.	3.9	13
81	Reply to the comment by Desch and Ouellette on ⁶ Li and B isotopic variations in an Allende CAI: Evidence for the in situ decay of short-lived ¹⁰ Be and for the possible presence of the short-lived nuclide ⁷ Be in the early solar system. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 5433-5436.	3.9	12
82	ON AN IRRADIATION ORIGIN FOR MAGNESIUM ISOTOPE ANOMALIES IN METEORITIC HIBONITE. <i>Astrophysical Journal</i> , 2009, 697, L145-L148.	4.5	12
83	Matrix effects on the relative sensitivity factors for manganese and chromium during ion microprobe analysis of carbonate: Implications for early Solar System chronology. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 201, 245-259.	3.9	11
84	Evidence for oxidation at the base of the nakhlite pile by reduction of sulfate salts at the time of lava emplacement. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 239, 186-197.	3.9	11
85	The White Angel: A unique wollastonite-bearing, mass-fractionated refractory inclusion from the Leoville CV3 carbonaceous chondrite. <i>Meteoritics and Planetary Science</i> , 2007, 42, 1159-1182.	1.6	8
86	Geochemical analysis of small samples: Micro-analytical techniques for the nineties and beyond. <i>Reviews of Geophysics</i> , 1995, 33, 25.	23.0	7
87	Alkali magmatism on a carbonaceous chondrite planetesimal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 8353-8359.	7.1	6
88	Evidence for diverse lunar melt compositions and mixing of the pre-3.9 Ga crust from zircon chemistry. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 284, 173-195.	3.9	6
89	Xenon systematics of individual lunar zircons, a new window on the history of the lunar surface. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 286, 103-118.	3.9	4
90	Elemental Abundances of Major Elements in the Solar Wind as Measured in Genesis Targets and Implications on Solar Wind Fractionation. <i>Astrophysical Journal</i> , 2021, 907, 15.	4.5	4

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91	Ernst Zinner, lithic astronomer. <i>Meteoritics and Planetary Science</i> , 2007, 42, 1045-1054.	1.6	3
92	Calibration of matrix-dependent biases in isotope and trace element analyses of carbonate minerals. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2020, 38, .	1.2	3
93	Carbon isotopes of Proterozoic filamentous microfossils: SIMS analyses of ancient cyanobacteria from two disparate shallow-marine cherts. <i>Geomicrobiology Journal</i> , 2021, 38, 719-731.	2.0	3
94	Reply to comment on "Geochronology and geochemistry of rhyolites from Hormuz Island, southern Iran: A new Cadomian arc magmatism in the Hormuz Formation" by Atapour, H. and Aftabi, A. <i>Lithos</i> , 2017, 284-285, 783-787.	1.4	2
95	2012 Leonard Medal for Donald S. Burnett. <i>Meteoritics and Planetary Science</i> , 2012, 47, 1229-1231.	1.6	0
96	Water Reservoirs in Small Planetary Bodies: Meteorites, Asteroids, and Comets. <i>Space Sciences Series of ISSI</i> , 2018, , 35-81.	0.0	0