Thorsten Kleine

List of Publications by Year
in descending order

125 papers	9,792 citations	28274 55 h-index	36028 97 g-index
130 all docs	130 docs citations	130 times ranked	3667 citing authors

#	Article	IF	Citations
1	Rapid accretion and early core formation on asteroids and the terrestrial planets from Hfâ€“W chronometry. Nature, 2002, 418, 952-955.	27.8	714
2	Hfâ€“W chronology of the accretion and early evolution of asteroids and terrestrial planets. Geochimica Et Cosmochimica Acta, 2009, 73, 5150-5188.	3.9	521
3	Age of Jupiter inferred from the distinct genetics and formation times of meteorites. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6712-6716.	7.1	439
4	Late formation and prolonged differentiation of the Moon inferred from W isotopes in lunar metals. Nature, 2007, 450, 1206-1209.	27.8	414
5	Evolution of Planetary Cores and the Earth-Moon System from Nb/Ta Systematics. Science, 2003, 301, 84-87.	12.6	375
6	182Hf-182W isotope systematics of chondrites, eucrites, and martian meteorites: Chronology of core formation and early mantle differentiation in Vesta and Mars. Geochimica Et Cosmochimica Acta, 2004, 68, 2935-2946.	3.9	288
7	Early core formation in asteroids and late accretion of chondrite parent bodies: Evidence from 182Hf-182W in CAIs, metal-rich chondrites, and iron meteorites. Geochimica Et Cosmochimica Acta, 2005, 69, 5805-5818.	3.9	288
8	Molybdenum isotope anomalies in meteorites: Constraints on solar nebula evolution and origin of the Earth. Earth and Planetary Science Letters, 2011, 312, 390-400.	4.4	256
9	Protracted core formation and rapid accretion of protoplanets. Science, 2014, 344, 1150-1154.	12.6	224
10	Molybdenum isotopic evidence for the origin of chondrules and a distinct genetic heritage of carbonaceous and non-carbonaceous meteorites. Earth and Planetary Science Letters, 2016, 454, 293-303.	4.4	220
11	Broad bounds on Earthâ€™s accretion and core formation constrained by geochemical models. Nature Geoscience, 2010, 3, 439-443.	12.9	175
12	Tungsten isotopic compositions of iron meteorites: Chronological constraints vs. cosmogenic effects. Earth and Planetary Science Letters, 2006, 242, 1-15.	4.4	158
13	Hf-W Chronometry of Lunar Metals and the Age and Early Differentiation of the Moon. Science, 2005, 310, 1671-1674.	12.6	151
14	Si isotope systematics of meteorites and terrestrial peridotites: implications for Mg/Si fractionation in the solar nebula and for Si in the Earth's core. Earth and Planetary Science Letters, 2009, 287, 77-85.	4.4	150
15	Ruthenium isotopic evidence for an inner Solar System origin of the late veneer. Nature, 2017, 541, 525-527.	27.8	147
16	Hfâ€“W mineral isochron for Ca,Al-rich inclusions: Age of the solar system and the timing of core formation in planetesimals. Geochimica Et Cosmochimica Acta, 2008, 72, 6177-6197.	3.9	139
17	Lunar tungsten isotopic evidence for the late veneer. Nature, 2015, 520, 534-537.	27.8	139
18	Chronology of the angrite parent body and implications for core formation in protoplanets. Geochimica Et Cosmochimica Acta, 2012, 84, 186-203.	3.9	133

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19	Origin of the non-carbonaceousâ€“carbonaceous meteorite dichotomy. Earth and Planetary Science Letters, 2019, 511, 44-54.	4.4	130
20	Evidence for Mo isotope fractionation in the solar nebula and during planetary differentiation. Earth and Planetary Science Letters, 2014, 391, 201-211.	4.4	125
21	Hfâ€“W thermochronometry: Closure temperature and constraints on the accretion and cooling history of the H chondrite parent body. Earth and Planetary Science Letters, 2008, 270, 106-118.	4.4	123
22	A nucleosynthetic origin for the Earthâ€™s anomalous 142Nd composition. Nature, 2016, 537, 394-398.	27.8	122
23	How rapidly did Mars accrete? Uncertainties in the Hfâ€“W timing of core formation. Icarus, 2007, 191, 497-504.	2.5	121
24	Molybdenum isotopic evidence for the late accretion of outer Solar System material to Earth. Nature Astronomy, 2019, 3, 736-741.	10.1	120
25	The great isotopic dichotomy of the early Solar System. Nature Astronomy, 2020, 4, 32-40.	10.1	117
26	The distribution of short-lived radioisotopes in the early solar system and the chronology of asteroid accretion, differentiation, and secondary mineralization. Geochimica Et Cosmochimica Acta, 2009, 73, 5115-5136.	3.9	113
27	Nucleosynthetic W isotope anomalies and the Hfâ€“W chronometry of Caâ€“Al-rich inclusions. Earth and Planetary Science Letters, 2014, 403, 317-327.	4.4	111
28	Tungsten isotopic constraints on the age and origin of chondrules. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2886-2891.	7.1	109
29	Hf-W chronology of CR chondrites: Implications for the timescales of chondrule formation and the distribution of 26Al in the solar nebula. Geochimica Et Cosmochimica Acta, 2018, 222, 284-304.	3.9	106
30	The W isotope evolution of the bulk silicate Earth: constraints on the timing and mechanisms of core formation and accretion. Earth and Planetary Science Letters, 2004, 228, 109-123.	4.4	104
31	Rbâ€“Sr chronology of volatile depletion in differentiated protoplanets: BABI, ADOR and ALL revisited. Earth and Planetary Science Letters, 2013, 374, 204-214.	4.4	103
32	Neutron capture on Pt isotopes in iron meteorites and the Hfâ€“W chronology of core formation in planetesimals. Earth and Planetary Science Letters, 2013, 361, 162-172.	4.4	99
33	Ru isotope heterogeneity in the solar protoplanetary disk. Geochimica Et Cosmochimica Acta, 2015, 168, 151-171.	3.9	99
34	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. Science, 2023, 379, .	12.6	97
35	The Non-carbonaceousâ€“Carbonaceous Meteorite Dichotomy. Space Science Reviews, 2020, 216, 1.	8.1	94
36	The effects of magmatic processes and crustal recycling on the molybdenum stable isotopic composition of Mid-Ocean Ridge Basalts. Earth and Planetary Science Letters, 2016, 453, 171-181.	4.4	90

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37	Tungsten Isotopes in Planets. Annual Review of Earth and Planetary Sciences, 2017, 45, 389-417.	11.0	78
38	A long-lived magma ocean on a young Moon. Science Advances, 2020, 6, eaba8949.	10.3	76
39	Hfâ€“W chronometry of core formation in planetesimals inferred from weakly irradiated iron meteorites. Geochimica Et Cosmochimica Acta, 2012, 99, 287-304.	3.9	75
40	Mixing and Transport of Dust in the Early Solar Nebula as Inferred from Titanium Isotope Variations among Chondrules. Astrophysical Journal Letters, 2017, 841, L17.	8.3	75
41	Isotopic evidence for chondritic Lu/Hf and Sm/Nd of the Moon. Earth and Planetary Science Letters, 2013, 380, 77-87.	4.4	74
42	The potential science and engineering value of samples delivered to Earth by Mars sample return. Meteoritics and Planetary Science, 2019, 54, S3.	1.6	73
43	Elemental and isotopic variability in solar system materials by mixing and processing of primordial disk reservoirs. Geochimica Et Cosmochimica Acta, 2019, 261, 145-170.	3.9	72
44	NUCLEOSYNTHETIC TUNGSTEN ISOTOPE ANOMALIES IN ACID LEACHATES OF THE MURCHISON CHONDRITE: IMPLICATIONS FOR HAFNIUM-TUNGSTEN CHRONOMETRY. Astrophysical Journal Letters, 2012, 753, L6.	8.3	71
45	Hfâ€“Ndâ€“Pb isotope evidence from Permian arc rocks for the long-term presence of the Indianâ€“Pacific mantle boundary in the SW Pacific. Earth and Planetary Science Letters, 2007, 254, 377-392.	4.4	70
46	Tungsten isotopes in ferroan anorthosites: Implications for the age of the Moon and lifetime of its magma ocean. Icarus, 2009, 199, 245-249.	2.5	70
47	Origin of isotopic heterogeneity in the solar nebula by thermal processing and mixing of nebular dust. Earth and Planetary Science Letters, 2012, 357-358, 298-307.	4.4	70
48	The early differentiation of Mars inferred from Hfâ€“W chronometry. Earth and Planetary Science Letters, 2017, 474, 345-354.	4.4	69
49	Refractory element fractionation in the Allende meteorite: Implications for solar nebula condensation and the chondritic composition of planetary bodies. Geochimica Et Cosmochimica Acta, 2012, 85, 114-141.	3.9	68
50	Thermal evolution and sintering of chondritic planetesimals. Astronomy and Astrophysics, 2012, 537, A45.	5.1	67
51	Hafniumâ€“tungsten chronometry of angrites and the earliest evolution of planetary objects. Earth and Planetary Science Letters, 2007, 262, 214-229.	4.4	66
52	Thermal history modelling of the HÂchondrite parent body. Astronomy and Astrophysics, 2012, 545, A135.	5.1	61
53	Experimental evidence for Mo isotope fractionation between metal and silicate liquids. Earth and Planetary Science Letters, 2013, 379, 38-48.	4.4	61
54	Contemporary formation of early Solar System planetesimals at two distinct radial locations. Nature Astronomy, 2022, 6, 72-79.	10.1	61

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55	The Northwest Africa 8159 martian meteorite: Expanding the martian sample suite to the early Amazonian. Geochimica Et Cosmochimica Acta, 2017, 218, 1-26.	3.9	58
56	Tungsten isotopic evolution during late-stage accretion: Constraints on Earthâ€“Moon equilibration. Earth and Planetary Science Letters, 2010, 292, 363-370.	4.4	57
57	Tungsten isotopes and the origin of the Moon. Earth and Planetary Science Letters, 2017, 475, 15-24.	4.4	56
58	The W isotope composition of eucrite metals: constraints on the timing and cause of the thermal metamorphism of basaltic eucrites. Earth and Planetary Science Letters, 2005, 231, 41-52.	4.4	54
59	Core Formation and Mantle Differentiation on Mars. Space Science Reviews, 2013, 174, 27-48.	8.1	54
60	The cosmic molybdenum-neodymium isotope correlation and the building material of the Earth. Geochemical Perspectives Letters, 2017, , 170-178.	5.0	53
61	Hfâ€“W chronology of the eucrite parent body. Geochimica Et Cosmochimica Acta, 2015, 156, 106-121.	3.9	51
62	Early evolution of the solar accretion disk inferred from Cr-Ti-O isotopes in individual chondrules. Earth and Planetary Science Letters, 2020, 551, 116585.	4.4	49
63	Terrestrial planet formation from lost inner solar system material. Science Advances, 2021, 7, eabj7601.	10.3	49
64	Hfâ€“W thermochronometry: II. Accretion and thermal history of the acapulcoiteâ€“lodranite parent body. Earth and Planetary Science Letters, 2009, 284, 168-178.	4.4	46
65	Crustal Evolution along the Early Ordovician Protoâ€Andean Margin of Gondwana: Trace Element and Isotope Evidence from the Complejo Igneo Pocitos (Northwest Argentina). Journal of Geology, 2004, 112, 503-520.	1.4	44
66	Chronometry of Meteorites and the Formation of the Earth and Moon. Elements, 2011, 7, 41-46.	0.5	44
67	Distinct evolution of the carbonaceous and non-carbonaceous reservoirs: Insights from Ru, Mo, and W isotopes. Earth and Planetary Science Letters, 2019, 521, 103-112.	4.4	43
68	Isotopic Evolution of the Inner Solar System Inferred from Molybdenum Isotopes in Meteorites. Astrophysical Journal Letters, 2020, 898, L2.	8.3	43
69	Planetesimal differentiation revealed by the Hfâ€“W systematics of ureilites. Earth and Planetary Science Letters, 2015, 430, 316-325.	4.4	42
70	Origin of volatile element depletion among carbonaceous chondrites. Earth and Planetary Science Letters, 2020, 549, 116508.	4.4	41
71	The tungsten-182 record of kimberlites above the African superplume: Exploring links to the core-mantle boundary. Earth and Planetary Science Letters, 2020, 547, 116473.	4.4	40
72	Ti isotopic evidence for a non-CAI refractory component in the inner Solar System. Earth and Planetary Science Letters, 2018, 498, 257-265.	4.4	39

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73	No 182W excess in the Ontong Java Plateau source. Chemical Geology, 2018, 485, 24-31.	3.3	35
74	Hf-W chronology of ordinary chondrites. Geochimica Et Cosmochimica Acta, 2019, 258, 290-309.	3.9	33
75	Are the Moon's Nearsideâ€Farside Asymmetries the Result of a Giant Impact?. Journal of Geophysical Research E: Planets, 2019, 124, 2117-2140.	3.6	32
76	Lack of late-accreted material as the origin of 182W excesses in the Archean mantle: Evidence from the Pilbara Craton, Western Australia. Earth and Planetary Science Letters, 2019, 528, 115841.	4.4	31
77	Early differentiation of the Earth and the Moon. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 4105-4128.	3.4	30
78	Tungsten stable isotope compositions of terrestrial samples and meteorites determined by double spike MC-ICPMS. Chemical Geology, 2017, 450, 135-144.	3.3	30
79	Heterogeneous accretion of Earth inferred from Mo-Ru isotope systematics. Earth and Planetary Science Letters, 2020, 534, 116065.	4.4	28
80	The old, unique C1 chondrite Flensburg â€" Insight into the first processes of aqueous alteration, brecciation, and the diversity of water-bearing parent bodies and lithologies. Geochimica Et Cosmochimica Acta, 2021, 293, 142-186.	3.9	28
81	Astronomical context of Solar System formation from molybdenum isotopes in meteorite inclusions. Science, 2020, 370, 837-840.	12.6	27
82	Nucleosynthetic Pt isotope anomalies and the Hf-W chronology of core formation in inner and outer solar system planetesimals. Earth and Planetary Science Letters, 2021, 576, 117211.	4.4	27
83	Nucleosynthetic zinc isotope anomalies reveal a dual origin of terrestrial volatiles. Icarus, 2022, 386, 115171.	2.5	26
84	Uranium isotopic composition and absolute ages of Allende chondrules. Meteoritics and Planetary Science, 2015, 50, 1995-2002.	1.6	24
85	A Distinct Nucleosynthetic Heritage for Early Solar System Solids Recorded by Ni Isotope Signatures. Astrophysical Journal, 2018, 862, 26.	4.5	22
86	Age and origin of IIE iron meteorites inferred from Hf-W chronology. Geochimica Et Cosmochimica Acta, 2019, 262, 92-103.	3.9	22
87	Tracing dehydration and melting of the subducted slab with tungsten isotopes in arc lavas. Earth and Planetary Science Letters, 2020, 530, 115942.	4.4	22
88	Ruthenium stable isotope measurements by double spike MC-ICPMS. Journal of Analytical Atomic Spectrometry, 2016, 31, 1515-1526.	3.0	21
89	Titanium isotopic evidence for a shared genetic heritage of refractory inclusions from different carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2019, 254, 40-53.	3.9	20
90	Pdâ€"Ag chronometry of iron meteorites: Correction of neutron capture-effects and application to the cooling history of differentiated protoplanets. Geochimica Et Cosmochimica Acta, 2015, 169, 45-62.	3.9	19

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91	Cosmogenic 180W variations in meteorites and re-assessment of a possible 184Osâ€“180W decay system. Geochimica Et Cosmochimica Acta, 2014, 140, 160-176.	3.9	16
92	Pd-Ag chronometry of IVA iron meteorites and the crystallization and cooling of a protoplanetary core. Geochimica Et Cosmochimica Acta, 2018, 220, 82-95.	3.9	15
93	Nature of late accretion to Earth inferred from mass-dependent Ru isotopic compositions of chondrites and mantle peridotites. Earth and Planetary Science Letters, 2018, 494, 50-59.	4.4	15
94	The Loongana (CL) group of carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2021, 304, 1-31.	3.9	15
95	Tellurium isotope cosmochemistry: Implications for volatile fractionation in chondrite parent bodies and origin of the late veneer. Geochimica Et Cosmochimica Acta, 2021, 309, 313-328.	3.9	14
96	Ruthenium isotope fractionation in protoplanetary cores. Geochimica Et Cosmochimica Acta, 2018, 223, 75-89.	3.9	13
97	Non-natural ruthenium isotope ratios of the undeclared 2017 atmospheric release consistent with civilian nuclear activities. Nature Communications, 2020, 11, 2744.	12.8	13
98	Earth's accretion inferred from iron isotopic anomalies of supernova nuclear statistical equilibrium origin. Earth and Planetary Science Letters, 2022, 577, 117245.	4.4	13
99	Transforming Dust to Planets. Space Science Reviews, 2018, 214, 1.	8.1	12
100	The abundance and isotopic composition of Cd in iron meteorites. Meteoritics and Planetary Science, 2013, 48, 2597-2607.	1.6	11
101	A Low Abundance of ¹³⁵Cs in the Early Solar System from Barium Isotopic Signatures of Volatile-depleted Meteorites. Astrophysical Journal Letters, 2017, 837, L9.	8.3	11
102	Uranium isotope ratios of Muonionalusta troilite and complications for the absolute age of the IVA iron meteorite core. Earth and Planetary Science Letters, 2018, 490, 1-10.	4.4	11
103	Closure temperature of the Pd-Ag system and the crystallization and cooling history of IIIAB iron meteorites. Geochimica Et Cosmochimica Acta, 2020, 285, 193-206.	3.9	11
104	Multistage Core Formation in Planetesimals Revealed by Numerical Modeling and Hfâ€W Chronometry of Iron Meteorites. Journal of Geophysical Research E: Planets, 2018, 123, 421-444.	3.6	10
105	Late accretionary history of Earth and Moon preserved in lunar impactites. Science Advances, 2021, 7, eabh2837.	10.3	10
106	Reconciliation of the excess 176Hf conundrum in meteorites: Recent disturbances of the Lu-Hf and Sm-Nd isotope systematics. Geochimica Et Cosmochimica Acta, 2017, 212, 303-323.	3.9	9
107	Chronology of Planetesimal Differentiation. , 2017, , 224-245.		9
108	Earth's patchy late veneer. Nature, 2011, 477, 168-169.	27.8	8

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109	No 182W evidence for early Moon formation. Nature Geoscience, 2021, 14, 714-715.	12.9	8
110	Tungsten Isotopes and the Origin of Chondrules and Chondrites. , 0, , 276-299.		7
111	Tungsten and molybdenum isotopic evidence for an impact origin of pallasites. Earth and Planetary Science Letters, 2022, 584, 117440.	4.4	7
112	Titanium isotope systematics of refractory inclusions: Echoes of molecular cloud heterogeneity. Geochimica Et Cosmochimica Acta, 2022, 324, 44-65.	3.9	7
113	Ruthenium isotopic fractionation in primitive achondrites: Clues to the early stages of planetesimal melting. Geochimica Et Cosmochimica Acta, 2021, 302, 46-60.	3.9	4
114	Collisional mixing between inner and outer solar system planetesimals inferred from the Nedagolla iron meteorite. Meteoritics and Planetary Science, 2022, 57, 261-276.	1.6	3
115	Corrections and Clarifications. Science, 2006, 311, 177-177.	12.6	2
116	Hfâ€W chronology of a macrochondrule from the L5/6 chondrite Northwest Africa 8192. Meteoritics and Planetary Science, 2020, 55, 2241-2255.	1.6	2
117	Sample return of primitive matter from the outer Solar System. Experimental Astronomy, 0, , 1.	3.7	2
118	Reply to comment by Peters et al. (2015) on â€œCosmogenic 180W variations in meteorites and re-assessment of a possible 184Osâ€"180W decay systemâ€. Geochimica Et Cosmochimica Acta, 2015, 169, 240-243.	3.9	1
119	Hafniumâ€"Tungsten Chronometry of Planetary Accretion and Differentiation. ACS Symposium Series, 2008, , 208-230.	0.5	0
120	Core Formation and Mantle Differentiation on Mars. Space Sciences Series of ISSI, 2012, , 27-48.	0.0	0
121	Radiogenic Isotopes. , 2014, , 1-10.		0
122	Radiogenic Isotopes. , 2015, , 2137-2146.		0
123	Tungsten Isotopes. Encyclopedia of Earth Sciences Series, 2018, , 1-5.	0.1	0
124	Origin and Evolution of the Moon: Tungsten Isotopic Constraints. , 2018, , 1-9.		0
125	Tungsten Isotopes. Encyclopedia of Earth Sciences Series, 2018, , 1458-1462.	0.1	0