

# Thorsten Kleine

## List of Publications by Year in descending order

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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	Samples returned from the asteroid Ryugu are similar to Ivuna-type carbonaceous meteorites. <i>Science</i> , 2023, 379, .	12.6	97
2	Collisional mixing between inner and outer solar system planetesimals inferred from the Nedagolla iron meteorite. <i>Meteoritics and Planetary Science</i> , 2022, 57, 261-276.	1.6	3
3	Earth's accretion inferred from iron isotopic anomalies of supernova nuclear statistical equilibrium origin. <i>Earth and Planetary Science Letters</i> , 2022, 577, 117245.	4.4	13
4	Contemporary formation of early Solar System planetesimals at two distinct radial locations. <i>Nature Astronomy</i> , 2022, 6, 72-79.	10.1	61
5	Tungsten and molybdenum isotopic evidence for an impact origin of pallasites. <i>Earth and Planetary Science Letters</i> , 2022, 584, 117440.	4.4	7
6	Titanium isotope systematics of refractory inclusions: Echoes of molecular cloud heterogeneity. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 324, 44-65.	3.9	7
7	Nucleosynthetic zinc isotope anomalies reveal a dual origin of terrestrial volatiles. <i>Icarus</i> , 2022, 386, 115171.	2.5	26
8	The old, unique C1 chondrite Flensburg – Insight into the first processes of aqueous alteration, brecciation, and the diversity of water-bearing parent bodies and lithologies. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 293, 142-186.	3.9	28
9	Ruthenium isotopic fractionation in primitive achondrites: Clues to the early stages of planetesimal melting. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 302, 46-60.	3.9	4
10	The Loongana (CL) group of carbonaceous chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 304, 1-31.	3.9	15
11	Tellurium isotope cosmochemistry: Implications for volatile fractionation in chondrite parent bodies and origin of the late veneer. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 309, 313-328.	3.9	14
12	No $^{182}\text{W}$ evidence for early Moon formation. <i>Nature Geoscience</i> , 2021, 14, 714-715.	12.9	8
13	Nucleosynthetic Pt isotope anomalies and the Hf-W chronology of core formation in inner and outer solar system planetesimals. <i>Earth and Planetary Science Letters</i> , 2021, 576, 117211.	4.4	27
14	Late accretionary history of Earth and Moon preserved in lunar impactites. <i>Science Advances</i> , 2021, 7, eabh2837.	10.3	10
15	Terrestrial planet formation from lost inner solar system material. <i>Science Advances</i> , 2021, 7, eabj7601.	10.3	49
16	Tracing dehydration and melting of the subducted slab with tungsten isotopes in arc lavas. <i>Earth and Planetary Science Letters</i> , 2020, 530, 115942.	4.4	22
17	The great isotopic dichotomy of the early Solar System. <i>Nature Astronomy</i> , 2020, 4, 32-40.	10.1	117
18	Early evolution of the solar accretion disk inferred from Cr-Ti-O isotopes in individual chondrules. <i>Earth and Planetary Science Letters</i> , 2020, 551, 116585.	4.4	49

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19	The tungsten-182 record of kimberlites above the African superplume: Exploring links to the core-mantle boundary. <i>Earth and Planetary Science Letters</i> , 2020, 547, 116473.	4.4	40
20	Closure temperature of the Pd-Ag system and the crystallization and cooling history of IIIAB iron meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 285, 193-206.	3.9	11
21	Isotopic Evolution of the Inner Solar System Inferred from Molybdenum Isotopes in Meteorites. <i>Astrophysical Journal Letters</i> , 2020, 898, L2.	8.3	43
22	Astronomical context of Solar System formation from molybdenum isotopes in meteorite inclusions. <i>Science</i> , 2020, 370, 837-840.	12.6	27
23	Origin of volatile element depletion among carbonaceous chondrites. <i>Earth and Planetary Science Letters</i> , 2020, 549, 116508.	4.4	41
24	Hf-W chronology of a macrochondrule from the L5/6 chondrite Northwest Africa 8192. <i>Meteoritics and Planetary Science</i> , 2020, 55, 2241-2255.	1.6	2
25	The Non-carbonaceous-Carbonaceous Meteorite Dichotomy. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	94
26	Non-natural ruthenium isotope ratios of the undeclared 2017 atmospheric release consistent with civilian nuclear activities. <i>Nature Communications</i> , 2020, 11, 2744.	12.8	13
27	A long-lived magma ocean on a young Moon. <i>Science Advances</i> , 2020, 6, eaba8949.	10.3	76
28	Heterogeneous accretion of Earth inferred from Mo-Ru isotope systematics. <i>Earth and Planetary Science Letters</i> , 2020, 534, 116065.	4.4	28
29	Elemental and isotopic variability in solar system materials by mixing and processing of primordial disk reservoirs. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 261, 145-170.	3.9	72
30	Age and origin of IIE iron meteorites inferred from Hf-W chronology. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 262, 92-103.	3.9	22
31	Lack of late-accreted material as the origin of <sup>182</sup> W excesses in the Archean mantle: Evidence from the Pilbara Craton, Western Australia. <i>Earth and Planetary Science Letters</i> , 2019, 528, 115841.	4.4	31
32	Origin of the non-carbonaceous-Carbonaceous meteorite dichotomy. <i>Earth and Planetary Science Letters</i> , 2019, 511, 44-54.	4.4	130
33	Distinct evolution of the carbonaceous and non-carbonaceous reservoirs: Insights from Ru, Mo, and W isotopes. <i>Earth and Planetary Science Letters</i> , 2019, 521, 103-112.	4.4	43
34	Hf-W chronology of ordinary chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 258, 290-309.	3.9	33
35	Are the Moon's Nearside-Farside Asymmetries the Result of a Giant Impact?. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 2117-2140.	3.6	32
36	Molybdenum isotopic evidence for the late accretion of outer Solar System material to Earth. <i>Nature Astronomy</i> , 2019, 3, 736-741.	10.1	120

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37	The potential science and engineering value of samples delivered to Earth by Mars sample return. <i>Meteoritics and Planetary Science</i> , 2019, 54, S3.	1.6	73
38	Titanium isotopic evidence for a shared genetic heritage of refractory inclusions from different carbonaceous chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 254, 40-53.	3.9	20
39	Ruthenium isotope fractionation in protoplanetary cores. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 223, 75-89.	3.9	13
40	Multistage Core Formation in Planetesimals Revealed by Numerical Modeling and Hf-W Chronometry of Iron Meteorites. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 421-444.	3.6	10
41	Uranium isotope ratios of Muonionalusta troilite and complications for the absolute age of the IVA iron meteorite core. <i>Earth and Planetary Science Letters</i> , 2018, 490, 1-10.	4.4	11
42	No <sup>182</sup> W excess in the Ontong Java Plateau source. <i>Chemical Geology</i> , 2018, 485, 24-31.	3.3	35
43	Pd-Ag chronometry of IVA iron meteorites and the crystallization and cooling of a protoplanetary core. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 220, 82-95.	3.9	15
44	Hf-W chronology of CR chondrites: Implications for the timescales of chondrule formation and the distribution of <sup>26</sup> Al in the solar nebula. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 222, 284-304.	3.9	106
45	Nature of late accretion to Earth inferred from mass-dependent Ru isotopic compositions of chondrites and mantle peridotites. <i>Earth and Planetary Science Letters</i> , 2018, 494, 50-59.	4.4	15
46	A Distinct Nucleosynthetic Heritage for Early Solar System Solids Recorded by Ni Isotope Signatures. <i>Astrophysical Journal</i> , 2018, 862, 26.	4.5	22
47	Ti isotopic evidence for a non-CAI refractory component in the inner Solar System. <i>Earth and Planetary Science Letters</i> , 2018, 498, 257-265.	4.4	39
48	Transforming Dust to Planets. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	12
49	Tungsten Isotopes. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 1-5.	0.1	0
50	Origin and Evolution of the Moon: Tungsten Isotopic Constraints. , 2018, , 1-9.		0
51	Tungsten Isotopes. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 1458-1462.	0.1	0
52	Ruthenium isotopic evidence for an inner Solar System origin of the late veneer. <i>Nature</i> , 2017, 541, 525-527.	27.8	147
53	Tungsten Isotopes in Planets. <i>Annual Review of Earth and Planetary Sciences</i> , 2017, 45, 389-417.	11.0	78
54	Mixing and Transport of Dust in the Early Solar Nebula as Inferred from Titanium Isotope Variations among Chondrules. <i>Astrophysical Journal Letters</i> , 2017, 841, L17.	8.3	75

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55	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
56	Reconciliation of the excess <sup>176</sup> Hf 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
57	Chronology of Planetary Differentiation. , 2017, , 224-245.		9
58	A Low Abundance of <sup>135</sup> Cs in the Early Solar System from Barium Isotopic Signatures of Volatile-depleted Meteorites. Astrophysical Journal Letters, 2017, 837, L9.	8.3	11
59	Tungsten stable isotope compositions of terrestrial samples and meteorites determined by double spike MC-ICPMS. Chemical Geology, 2017, 450, 135-144.	3.3	30
60	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
61	The early differentiation of Mars inferred from Hf-W chronometry. Earth and Planetary Science Letters, 2017, 474, 345-354.	4.4	69
62	Tungsten isotopes and the origin of the Moon. Earth and Planetary Science Letters, 2017, 475, 15-24.	4.4	56
63	The cosmic molybdenum-neodymium isotope correlation and the building material of the Earth. Geochemical Perspectives Letters, 2017, , 170-178.	5.0	53
64	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
65	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
66	A nucleosynthetic origin for the Earth's anomalous <sup>142</sup> Nd composition. Nature, 2016, 537, 394-398.	27.8	122
67	Ruthenium stable isotope measurements by double spike MC-ICPMS. Journal of Analytical Atomic Spectrometry, 2016, 31, 1515-1526.	3.0	21
68	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
69	Planetary differentiation revealed by the Hf-W systematics of ureilites. Earth and Planetary Science Letters, 2015, 430, 316-325.	4.4	42
70	Uranium isotopic composition and absolute ages of Allende chondrules. Meteoritics and Planetary Science, 2015, 50, 1995-2002.	1.6	24
71	Hf-W chronology of the eucrite parent body. Geochimica Et Cosmochimica Acta, 2015, 156, 106-121.	3.9	51
72	Lunar tungsten isotopic evidence for the late veneer. Nature, 2015, 520, 534-537.	27.8	139

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73	Ru isotope heterogeneity in the solar protoplanetary disk. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 168, 151-171.	3.9	99
74	Reply to comment by Peters et al. (2015) on "Cosmogenic $^{180}\text{W}$ variations in meteorites and re-assessment of a possible $^{184}\text{Os}$ – $^{180}\text{W}$ decay system". <i>Geochimica Et Cosmochimica Acta</i> , 2015, 169, 240-243.	3.9	1
75	$\text{Pd}$ – $\text{Ag}$ chronometry of iron meteorites: Correction of neutron capture-effects and application to the cooling history of differentiated protoplanets. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 169, 45-62.	3.9	19
76	<i>Radiogenic Isotopes</i> , 2015, , 2137-2146.		0
77	Nucleosynthetic $\text{W}$ isotope anomalies and the $\text{Hf}$ – $\text{W}$ chronometry of $\text{Ca}$ – $\text{Al}$ -rich inclusions. <i>Earth and Planetary Science Letters</i> , 2014, 403, 317-327.	4.4	111
78	Evidence for $\text{Mo}$ isotope fractionation in the solar nebula and during planetary differentiation. <i>Earth and Planetary Science Letters</i> , 2014, 391, 201-211.	4.4	125
79	Protracted core formation and rapid accretion of protoplanets. <i>Science</i> , 2014, 344, 1150-1154.	12.6	224
80	Cosmogenic $^{180}\text{W}$ variations in meteorites and re-assessment of a possible $^{184}\text{Os}$ – $^{180}\text{W}$ decay system. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 140, 160-176.	3.9	16
81	<i>Radiogenic Isotopes</i> , 2014, , 1-10.		0
82	Isotopic evidence for chondritic $\text{Lu}/\text{Hf}$ and $\text{Sm}/\text{Nd}$ of the Moon. <i>Earth and Planetary Science Letters</i> , 2013, 380, 77-87.	4.4	74
83	Neutron capture on $\text{Pt}$ isotopes in iron meteorites and the $\text{Hf}$ – $\text{W}$ chronology of core formation in planetesimals. <i>Earth and Planetary Science Letters</i> , 2013, 361, 162-172.	4.4	99
84	Core Formation and Mantle Differentiation on Mars. <i>Space Science Reviews</i> , 2013, 174, 27-48.	8.1	54
85	Experimental evidence for $\text{Mo}$ isotope fractionation between metal and silicate liquids. <i>Earth and Planetary Science Letters</i> , 2013, 379, 38-48.	4.4	61
86	$\text{Rb}$ – $\text{Sr}$ chronology of volatile depletion in differentiated protoplanets: BABI, ADOR and ALL revisited. <i>Earth and Planetary Science Letters</i> , 2013, 374, 204-214.	4.4	103
87	The abundance and isotopic composition of $\text{Cd}$ in iron meteorites. <i>Meteoritics and Planetary Science</i> , 2013, 48, 2597-2607.	1.6	11
88	Thermal evolution and sintering of chondritic planetesimals. <i>Astronomy and Astrophysics</i> , 2012, 537, A45.	5.1	67
89	Thermal history modelling of the H chondrite parent body. <i>Astronomy and Astrophysics</i> , 2012, 545, A135.	5.1	61
90	Chronology of the angrite parent body and implications for core formation in protoplanets. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 84, 186-203.	3.9	133

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91	Refractory element fractionation in the Allende meteorite: Implications for solar nebula condensation and the chondritic composition of planetary bodies. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 85, 114-141.	3.9	68
92	Origin of isotopic heterogeneity in the solar nebula by thermal processing and mixing of nebular dust. <i>Earth and Planetary Science Letters</i> , 2012, 357-358, 298-307.	4.4	70
93	Hf <sup>182</sup> -W chronometry of core formation in planetesimals inferred from weakly irradiated iron meteorites. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 99, 287-304.	3.9	75
94	NUCLEOSYNTHETIC TUNGSTEN ISOTOPE ANOMALIES IN ACID LEACHATES OF THE MURCHISON CHONDRITE: IMPLICATIONS FOR HAFNIUM-TUNGSTEN CHRONOMETRY. <i>Astrophysical Journal Letters</i> , 2012, 753, L6.	8.3	71
95	Core Formation and Mantle Differentiation on Mars. <i>Space Sciences Series of ISSI</i> , 2012, , 27-48.	0.0	0
96	Earth's patchy late veneer. <i>Nature</i> , 2011, 477, 168-169.	27.8	8
97	Molybdenum isotope anomalies in meteorites: Constraints on solar nebula evolution and origin of the Earth. <i>Earth and Planetary Science Letters</i> , 2011, 312, 390-400.	4.4	256
98	Chronometry of Meteorites and the Formation of the Earth and Moon. <i>Elements</i> , 2011, 7, 41-46.	0.5	44
99	Broad bounds on Earth's accretion and core formation constrained by geochemical models. <i>Nature Geoscience</i> , 2010, 3, 439-443.	12.9	175
100	Tungsten isotopic evolution during late-stage accretion: Constraints on Earth-Moon equilibration. <i>Earth and Planetary Science Letters</i> , 2010, 292, 363-370.	4.4	57
101	Tungsten isotopes in ferroan anorthosites: Implications for the age of the Moon and lifetime of its magma ocean. <i>Icarus</i> , 2009, 199, 245-249.	2.5	70
102	Hf <sup>182</sup> -W thermochronometry: II. Accretion and thermal history of the acapulcoite- lodranite parent body. <i>Earth and Planetary Science Letters</i> , 2009, 284, 168-178.	4.4	46
103	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. <i>Earth and Planetary Science Letters</i> , 2009, 287, 77-85.	4.4	150
104	Hf <sup>182</sup> -W chronology of the accretion and early evolution of asteroids and terrestrial planets. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 5150-5188.	3.9	521
105	The distribution of short-lived radioisotopes in the early solar system and the chronology of asteroid accretion, differentiation, and secondary mineralization. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 5115-5136.	3.9	113
106	Early differentiation of the Earth and the Moon. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2008, 366, 4105-4128.	3.4	30
107	Hf <sup>182</sup> -W thermochronometry: Closure temperature and constraints on the accretion and cooling history of the H chondrite parent body. <i>Earth and Planetary Science Letters</i> , 2008, 270, 106-118.	4.4	123
108	Hf <sup>182</sup> -W mineral isochron for Ca,Al-rich inclusions: Age of the solar system and the timing of core formation in planetesimals. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 6177-6197.	3.9	139

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109	Hafnium-Tungsten Chronometry of Planetary Accretion and Differentiation. ACS Symposium Series, 2008, , 208-230.	0.5	0
110	Hf-Nd-Pb isotope evidence from Permian arc rocks for the long-term presence of the Indian-Pacific mantle boundary in the SW Pacific. Earth and Planetary Science Letters, 2007, 254, 377-392.	4.4	70
111	Hafnium-tungsten chronometry of angrites and the earliest evolution of planetary objects. Earth and Planetary Science Letters, 2007, 262, 214-229.	4.4	66
112	Late formation and prolonged differentiation of the Moon inferred from W isotopes in lunar metals. Nature, 2007, 450, 1206-1209.	27.8	414
113	How rapidly did Mars accrete? Uncertainties in the Hf-W timing of core formation. Icarus, 2007, 191, 497-504.	2.5	121
114	Tungsten isotopic compositions of iron meteorites: Chronological constraints vs. cosmogenic effects. Earth and Planetary Science Letters, 2006, 242, 1-15.	4.4	158
115	Corrections and Clarifications. Science, 2006, 311, 177-177.	12.6	2
116	Hf-W Chronometry of Lunar Metals and the Age and Early Differentiation of the Moon. Science, 2005, 310, 1671-1674.	12.6	151
117	Early core formation in asteroids and late accretion of chondrite parent bodies: Evidence from $^{182}\text{Hf}$ - $^{182}\text{W}$ in CAIs, metal-rich chondrites, and iron meteorites. Geochimica Et Cosmochimica Acta, 2005, 69, 5805-5818.	3.9	288
118	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
119	Crustal Evolution along the Early Ordovician Proto-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
120	$^{182}\text{Hf}$ - $^{182}\text{W}$ 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
121	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
122	Evolution of Planetary Cores and the Earth-Moon System from Nb/Ta Systematics. Science, 2003, 301, 84-87.	12.6	375
123	Rapid accretion and early core formation on asteroids and the terrestrial planets from Hf-W chronometry. Nature, 2002, 418, 952-955.	27.8	714
124	Tungsten Isotopes and the Origin of Chondrules and Chondrites. , 0, , 276-299.		7
125	Sample return of primitive matter from the outer Solar System. Experimental Astronomy, 0, , 1.	3.7	2