Stein Jacobsen

List of Publications by Year
in descending order

112	17,959	18482 62	22832 112
papers	citations	h-index	g-index

113	113	113	9995
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Sm-Nd isotopic evolution of chondrites. Earth and Planetary Science Letters, 1980, 50, 139-155.	4.4	1,762
2	Nd and Sr isotopic systematics of river water suspended material: implications for crustal evolution. Earth and Planetary Science Letters, 1988, 87, 249-265.	4.4	863
3	Precise determination of SmNd ratios, Sm and Nd isotopic abundances in standard solutions. Geochimica Et Cosmochimica Acta, 1981, 45, 2311-2323.	3.9	852
4	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
5	Chicxulub Crater: A possible Cretaceous/Tertiary boundary impact crater on the YucatÃ¡n Peninsula, Mexico. Geology, 1991, 19, 867.	4.4	768
6	Sm-Nd isotopic evolution of chondrites and achondrites, II. Earth and Planetary Science Letters, 1984, 67, 137-150.	4.4	651
7	The Sr, C and O isotopic evolution of Neoproterozoic seawater. Chemical Geology, 1999, 161, 37-57.	3.3	616
8	A short timescale for terrestrial planet formation from Hfâ€“W chronometry of meteorites. Nature, 2002, 418, 949-952.	27.8	615
9	Rare earth elements in river waters. Earth and Planetary Science Letters, 1988, 89, 35-47.	4.4	572
10	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
11	Sedimentary cycling and environmental change in the Late Proterozoic: Evidence from stable and radiogenic isotopes. Geochimica Et Cosmochimica Acta, 1992, 56, 1317-1329.	3.9	520
12	The Vendian record of Sr and C isotopic variations in seawater: Implications for tectonics and paleoclimate. Earth and Planetary Science Letters, 1993, 120, 409-430.	4.4	441
13	The chemical evolution of Precambrian seawater: Evidence from REEs in banded iron formations. Geochimica Et Cosmochimica Acta, 1990, 54, 2965-2977.	3.9	408
14	The behavior of rare earth elements in seawater: Precise determination of variations in the North Pacific water column. Geochimica Et Cosmochimica Acta, 1992, 56, 1851-1862.	3.9	346
15	Isotopic Compositions of Cometary Matter Returned by Stardust. Science, 2006, 314, 1724-1728.	12.6	343
16	Nd and Sr isotopic variations of Early Paleozoic oceans. Earth and Planetary Science Letters, 1987, 84, 27-41.	4.4	328
17	Growth model interpretation of planet size distribution. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 9723-9728.	7.1	311
18	MASSâ€“RADIUS RELATION FOR ROCKY PLANETS BASED ON PREM. Astrophysical Journal, 2016, 819, 127.	4.5	293

#	Article	IF	Citations
19	Uâ€“Pb chronology of the Solar System's oldest solids with variable 238U/235U. Earth and Planetary Science Letters, 2010, 300, 343-350.	4.4	270
20	The Nd and Sr isotopic systematics of river-water dissolved material: Implications for the sources of Nd and Sr in seawater. Chemical Geology: Isotope Geoscience Section, 1987, 66, 245-272.	0.6	227
21	Strontium isotopic variations of Neoproterozoic seawater: Implications for crustal evolution. Geochimica Et Cosmochimica Acta, 1991, 55, 2883-2894.	3.9	204
22	THE Hf-W ISOTOPIC SYSTEM AND THE ORIGIN OF THE EARTH AND MOON. Annual Review of Earth and Planetary Sciences, 2005, 33, 531-570.	11.0	202
23	Evidence for 182Hf in the early Solar System and constraints on the timescale of terrestrial accretion and core formation. Geochimica Et Cosmochimica Acta, 1996, 60, 1131-1153.	3.9	200
24	Potassium isotopic evidence for a high-energy giant impact origin of the Moon. Nature, 2016, 538, 487-490.	27.8	194
25	The isotopic composition of neodymium in the North Pacific. Geochimica Et Cosmochimica Acta, 1988, 52, 1373-1381.	3.9	187
26	A Nd isotopic study of the Hamersley and Michipicoten banded iron formations: the source of REE and Fe in Archean oceans. Earth and Planetary Science Letters, 1988, 87, 29-44.	4.4	171
27	The pore water chemistry of rare earth elements in Buzzards Bay sediments. Geochimica Et Cosmochimica Acta, 1989, 53, 2847-2856.	3.9	171
28	Preservation of ancient and fertile lithospheric mantle beneath the southwestern United States. Nature, 2001, 411, 69-73.	27.8	167
29	Large Groundwater Strontium Flux to the Oceans from the Bengal Basin and the Marine Strontium Isotope Record. Science, 2001, 293, 1470-1473.	12.6	164
30	Global events across the Mesoproterozoicâ€“Neoproterozoic boundary: C and Sr isotopic evidence from Siberia. Precambrian Research, 2001, 111, 165-202.	2.7	163
31	Sr isotopic variations in Upper Proterozoic carbonates from Svalbard and East Greenland. Geochimica Et Cosmochimica Acta, 1989, 53, 2331-2339.	3.9	162
32	Evidence from coupled 147Smâ€“143Nd and 146Smâ€“142Nd systematics for very early (4.5-Gyr) differentiation of the Earth's mantle. Nature, 1992, 360, 728-732.	27.8	162
33	Stable calcium isotopic compositions of Hawaiian shield lavas: Evidence for recycling of ancient marine carbonates into the mantle. Geochimica Et Cosmochimica Acta, 2011, 75, 4987-4997.	3.9	141
34	Isotopic constraints on crustal growth and recycling. Earth and Planetary Science Letters, 1988, 90, 315-329.	4.4	140
35	²⁶Alâ€²⁶Mg isotope systematics of the first solids in the early solar system. Meteoritics and Planetary Science, 2013, 48, 1383-1400.	1.6	137
36	Calcium isotopic fractionation between clinopyroxene and orthopyroxene from mantle peridotites. Earth and Planetary Science Letters, 2010, 292, 337-344.	4.4	135

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37	Integrated chronostratigraphy of Proterozoicâ€“Cambrian boundary beds in the western Anabar region, northern Siberia. Geological Magazine, 1996, 133, 509-533.	1.5	134
38	Chondritic Meteorite Fragments Associated with the Permian-Triassic Boundary in Antarctica. Science, 2003, 302, 1388-1392.	12.6	124
39	Chromium isotope variations (Î´53/52Cr) in mantle-derived sources and their weathering products: Implications for environmental studies and the evolution of Î´53/52Cr in the Earthâ€™s mantle over geologic time. Geochimica Et Cosmochimica Acta, 2013, 123, 74-92.	3.9	120
40	The Pb isotopic evolution of the Earth: inferences from river water suspended loads. Earth and Planetary Science Letters, 1993, 115, 245-256.	4.4	117
41	Osmium Isotopic Evidence for Mesozoic Removal of Lithospheric Mantle Beneath the Sierra Nevada, California. Science, 2000, 289, 1912-1916.	12.6	114
42	Noble Gases and Earth's Accretion. Science, 1996, 273, 1814-1818.	12.6	110
43	An estimate of the Bulk Silicate Earth potassium isotopic composition based on MC-ICPMS measurements of basalts. Geochimica Et Cosmochimica Acta, 2016, 178, 223-232.	3.9	108
44	Diverse supernova sources of pre-solar material inferred from molybdenum isotopes in meteorites. Nature, 2002, 415, 881-883.	27.8	101
45	A Nd and Sr isotopic study of the Trinity peridotite; implications for mantle evolution. Earth and Planetary Science Letters, 1984, 68, 361-378.	4.4	96
46	Nd isotopic variations in Precambrian banded iron formations. Geophysical Research Letters, 1988, 15, 393-396.	4.0	94
47	Isotopic and chemical constraints on mantle-crust evolution. Geochimica Et Cosmochimica Acta, 1988, 52, 1341-1350.	3.9	90
48	Rb-Sr isotope systematics in metamorphic rocks, Kongsberg sector, south Norway. Lithos, 1978, 11, 257-276.	1.4	83
49	Nd isotopic variations of Phanerozoic paleoceans. Earth and Planetary Science Letters, 1988, 90, 395-410.	4.4	83
50	El NiÃ±o during the Last Interglacial Period recorded by a fossil coral from Indonesia. Geophysical Research Letters, 1999, 26, 3129-3132.	4.0	82
51	The isotopic composition of magnesium in the inner Solar System. Earth and Planetary Science Letters, 2010, 293, 349-358.	4.4	82
52	REE in the Great Whale River estuary, northwest Quebec. Earth and Planetary Science Letters, 1988, 88, 241-252.	4.4	81
53	Barium Isotopes in Chondritic Meteorites: Implications for Planetary Reservoir Models. Science, 2006, 314, 809-812.	12.6	78
54	Interpretation of Nd, Sr and Pb isotope data from Archean migmatites in Lofoten-VesterÃ¥len, Norway. Earth and Planetary Science Letters, 1978, 41, 245-253.	4.4	75

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55	Si isotope variability in Proterozoic cherts. Geochimica Et Cosmochimica Acta, 2012, 91, 187-201.	3.9	75
56	Large Pt anomaly in the Greenland ice core points to a cataclysm at the onset of Younger Dryas. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12917-12920.	7.1	73
57	Calcium isotopic ratios and rare earth element abundances in refractory inclusions from the Allende CV3 chondrite. Geochimica Et Cosmochimica Acta, 2012, 77, 252-265.	3.9	72
58	Calcium isotope constraints on the uptake and sources of Ca2+ in a base-poor forest: A new concept of combining stable (Î´44/42Ca) and radiogenic (ÎµCa) signals. Geochimica Et Cosmochimica Acta, 2011, 75, 7031-7046.	3.9	70
59	Sm?Nd dating of multiple garnet growth events in an arc-continent collision zone, northwestern U.S. Cordillera. Contributions To Mineralogy and Petrology, 1993, 115, 45-57.	3.1	69
60	Modeling the distribution of isotopic ratios in geochemical reservoirs. Earth and Planetary Science Letters, 2002, 204, 183-202.	4.4	69
61	K isotopes as a tracer of seafloor hydrothermal alteration. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1827-1831.	7.1	67
62	Silicon isotopes in the inner Solar System: Implications for core formation, solar nebular processes and partial melting. Geochimica Et Cosmochimica Acta, 2010, 74, 6921-6933.	3.9	64
63	Impact vaporization of planetesimal cores in the late stages of planet formation. Nature Geoscience, 2015, 8, 269-272.	12.9	62
64	No Measurable Calcium Isotopic Fractionation During Crystallization of Kilauea Iki Lava Lake. Geochemistry, Geophysics, Geosystems, 2018, 19, 3128-3139.	2.5	57
65	The Nd and Sr isotopic evolution of Proterozoic seawater. Geophysical Research Letters, 1988, 15, 397-400.	4.0	56
66	Slab devolatilization and Os and Pb mobility in the mantle wedge of the Kamchatka arc. Earth and Planetary Science Letters, 2005, 236, 182-194.	4.4	53
67	REE chemistry and Sm-Nd systematics of late Archean weathering profiles in the Fortescue Group, Western Australia. Geochimica Et Cosmochimica Acta, 1994, 58, 1777-1794.	3.9	48
68	Fast accretion of the Earth with a late Moon-forming giant impact. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17604-17609.	7.1	48
69	Differentiation of metalâ€rich meteoritic parent bodies: I. Measurements of PGEs, Re, Mo, W, and Au in meteoritic Feâ€Ni metal. Meteoritics and Planetary Science, 2004, 39, 1685-1697.	1.6	47
70	Calcium isotopic compositions of chondrites. Geochimica Et Cosmochimica Acta, 2017, 201, 364-376.	3.9	46
71	Supernova Sources and the [TSUP]92[/TSUP]N[CLC]b[/CLC]-[TSUP]92[/TSUP]Z[CLC]r[/CLC] [CLC][ITAL]p[/ITAL][/CLC]-Process Chronometer. Astrophysical Journal, 2000, 536, L49-L53.	4.5	41
72	Calcium and titanium isotopic fractionations during evaporation. Geochimica Et Cosmochimica Acta, 2014, 140, 365-380.	3.9	41

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73	Transport models for crust and mantle evolution. Tectonophysics, 1981, 75, 163-179.	2.2	40
74	Rapid uplift and crustal growth in extensional environments: An isotopic study from the Death Valley region, California. Geology, 1990, 18, 223.	4.4	39
75	GEOCHEMISTRY: How Old Is Planet Earth?. Science, 2003, 300, 1513-1514.	12.6	39
76	A gravimetric K2OsCl6 standard: Application to precise and accurate Os spike calibration. Geochimica Et Cosmochimica Acta, 2001, 65, 2113-2127.	3.9	37
77	A two-reservoir recycling model for mantle-crust evolution. Proceedings of the National Academy of Sciences of the United States of America, 1980, 77, 6298-6302.	7.1	35
78	Modeling lead isotopic heterogeneity in mid-ocean ridge basalts. Earth and Planetary Science Letters, 2007, 262, 328-342.	4.4	35
79	A Simple Analytical Model for Rocky Planet Interiors. Astrophysical Journal, 2017, 837, 164.	4.5	35
80	The ¹⁴² Nd/ ¹⁴⁴ Nd variations in mantle-derived rocks provide constraints on the stirring rate of the mantle from the Hadean to the present. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14738-14744.	7.1	35
81	Interlaboratory comparison of magnesium isotopic compositions of 12 felsic to ultramafic igneous rock standards analyzed by <scp>MCâ€ICPMS</scp>. Geochemistry, Geophysics, Geosystems, 2015, 16, 3197-3209.	2.5	34
82	Forsteriteâ€bearing type B refractory inclusions from CV3 chondrites: From aggregates to volatilized melt droplets. Meteoritics and Planetary Science, 2012, 47, 2128-2147.	1.6	33
83	The earliest Lunar Magma Ocean differentiation recorded in Fe isotopes. Earth and Planetary Science Letters, 2015, 430, 202-208.	4.4	33
84	SmNd age of the FiskenÆ¦sset Anorthosite Complex, West Greenland. Earth and Planetary Science Letters, 1989, 91, 261-270.	4.4	31
85	Variations in magma source regions during large-scale continental extension, Death Valley region, western United States. Earth and Planetary Science Letters, 1994, 125, 235-254.	4.4	31
86	High precision Alâ€“Mg systematics of forsterite-bearing Type B CAIs from CV3 chondrites. Geochimica Et Cosmochimica Acta, 2017, 201, 65-82.	3.9	31
87	The Principal Hugoniot of Forsterite to 950 GPa. Geophysical Research Letters, 2018, 45, 3865-3872.	4.0	31
88	147Sm-143Nd systematics of Earth are inconsistent with a superchondritic Sm/Nd ratio. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4929-4934.	7.1	27
89	Implications of K, Cu and Zn isotopes for the formation of tektites. Geochimica Et Cosmochimica Acta, 2019, 259, 170-187.	3.9	27
90	Gas hydrates and deglaciations. Nature, 2001, 412, 691-692.	27.8	26

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91	VARIATIONAL PRINCIPLE FOR PLANETARY INTERIORS. Astrophysical Journal, 2016, 829, 18.	4.5	25
92	Magnesium stable isotopes support the lunar magma ocean cumulate remelting model for mare basalts. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 73-78.	7.1	24
93	Geochemical Earth Reference Model (GERM): description of the initiative. Chemical Geology, 1998, 145, 153-159.	3.3	23
94	Evolution and genesis of calc-alkaline magmas at Filicudi Volcano, Aeolian Arc (Southern Tyrrhenian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.4	23
95	The shock physics of giant impacts: Key requirements for the equations of state. AIP Conference Proceedings, 2020, , .	0.4	22
96	Petrologic study of SJ101, a new forsterite-bearing CAI from the Allende CV3 chondrite. Geochimica Et Cosmochimica Acta, 2009, 73, 5100-5114.	3.9	21
97	New Perspectives on the Exoplanet Radius Gap from a Mathematica Tool and Visualized Water Equation of State. Astrophysical Journal, 2021, 923, 247.	4.5	20
98	Mass-independent Oxygen Isotope Variation in the Solar Nebula. Reviews in Mineralogy and Geochemistry, 2008, 68, 187-218.	4.8	18
99	melting of the Siberian Mantle Plume. Geophysical Research Letters, 1998, 25, 2209-2212.	4.0	16
100	Across-arc variations in K-isotope ratios in lavas of the Izu arc: Evidence for progressive depletion of the slab in K and similarly mobile elements. Earth and Planetary Science Letters, 2022, 578, 117291.	4.4	16
101	Metal-silicate Partitioning and Its Role in Core Formation and Composition on Super-Earths. Astrophysical Journal, 2017, 835, 234.	4.5	15
102	Survival function analysis of planet size distribution with Gaia Data Release 2 updates. Monthly Notices of the Royal Astronomical Society, 2018, 479, 5567-5576.	4.4	12
103	Extinct isotope heterogeneities in the mantles of Earth and Mars: Implications for mantle stirring rates. Meteoritics and Planetary Science, 2015, 50, 555-567.	1.6	10
104	Is the mantle chemically stratified? Insights from sound velocity modeling and isotope evolution of an early magma ocean. Earth and Planetary Science Letters, 2016, 440, 158-168.	4.4	9
105	Comment on â€œThe issue of the terrestrial record of 146Smâ€•by M. Sharma, D. A. Papanastassiou, G. J. Wasserburg, and R. F. Dymek. Geochimica Et Cosmochimica Acta, 1996, 60, 3747-3749.	3.9	5
106	Reply to Boslough: Is Greenland Pt anomaly global or local?. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E5036.	7.1	5
107	The Timing of Potential Last Nucleosynthetic Injections into the Protosolar Molecular Cloud Inferred from ⁴¹Caâ€“²⁶Al Systematics of Bulk CAIs. Astrophysical Journal Letters, 2022, 931, L13.	8.3	3
108	The chemical evolution of precambrian seawater: REE and isotopic data. Chemical Geology, 1988, 70, 142.	3.3	2

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109	Reply to the comment by Spencer and Mahoney on â€˜The Pb isotopic evolution of the Earth: inferences from river water suspended loadsâ€™. Earth and Planetary Science Letters, 1995, 132, 239-241.	4.4	2
110	The Principal Hugoniot of Ironâ€Bearing Olivine to 1465ÂGPa. Geophysical Research Letters, 2021, 48, e2021GL092471.	4.0	2
111	High energy density soft X-ray momentum coupling to comet analogs for NEO mitigation. Acta Astronautica, 2016, 129, 384-388.	3.2	1
112	Remembering Mike Drake. Meteoritics and Planetary Science, 2015, 50, 523-529.	1.6	0