

# Stein Jacobsen

## List of Publications by Year in descending order

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times ranked

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#	ARTICLE	IF	CITATIONS
1	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. <i>Earth and Planetary Science Letters</i> , 2022, 578, 117291.	4.4	16
2	The Timing of Potential Last Nucleosynthetic Injections into the Protosolar Molecular Cloud Inferred from $^{41}\text{Ca}$ – $^{26}\text{Al}$ Systematics of Bulk CAIs. <i>Astrophysical Journal Letters</i> , 2022, 931, L13.	8.3	3
3	The Principal Hugoniot of Iron-bearing Olivine to 1465 GPa. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092471.	4.0	2
4	New Perspectives on the Exoplanet Radius Gap from a Mathematica Tool and Visualized Water Equation of State. <i>Astrophysical Journal</i> , 2021, 923, 247.	4.5	20
5	The shock physics of giant impacts: Key requirements for the equations of state. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	22
6	The $^{142}\text{Nd}/^{144}\text{Nd}$ variations in mantle-derived rocks provide constraints on the stirring rate of the mantle from the Hadean to the present. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 14738-14744.	7.1	35
7	Implications of K, Cu and Zn isotopes for the formation of tektites. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 259, 170-187.	3.9	27
8	Growth model interpretation of planet size distribution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 9723-9728.	7.1	311
9	Magnesium stable isotopes support the lunar magma ocean cumulate remelting model for mare basalts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 73-78.	7.1	24
10	The Principal Hugoniot of Forsterite to 950 GPa. <i>Geophysical Research Letters</i> , 2018, 45, 3865-3872.	4.0	31
11	No Measurable Calcium Isotopic Fractionation During Crystallization of Kilauea Iki Lava Lake. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 3128-3139.	2.5	57
12	Survival function analysis of planet size distribution with Gaia Data Release 2 updates. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 479, 5567-5576.	4.4	12
13	High precision $\text{Al-Mg}$ systematics of forsterite-bearing Type B CAIs from CV3 chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 201, 65-82.	3.9	31
14	Metal-silicate Partitioning and Its Role in Core Formation and Composition on Super-Earths. <i>Astrophysical Journal</i> , 2017, 835, 234.	4.5	15
15	K isotopes as a tracer of seafloor hydrothermal alteration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 1827-1831.	7.1	67
16	A Simple Analytical Model for Rocky Planet Interiors. <i>Astrophysical Journal</i> , 2017, 837, 164.	4.5	35
17	Calcium isotopic compositions of chondrites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 201, 364-376.	3.9	46
18	Is the mantle chemically stratified? Insights from sound velocity modeling and isotope evolution of an early magma ocean. <i>Earth and Planetary Science Letters</i> , 2016, 440, 158-168.	4.4	9

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19	High energy density soft X-ray momentum coupling to comet analogs for NEO mitigation. <i>Acta Astronautica</i> , 2016, 129, 384-388.	3.2	1
20	VARIATIONAL PRINCIPLE FOR PLANETARY INTERIORS. <i>Astrophysical Journal</i> , 2016, 829, 18.	4.5	25
21	Potassium isotopic evidence for a high-energy giant impact origin of the Moon. <i>Nature</i> , 2016, 538, 487-490.	27.8	194
22	MASS-RADIUS RELATION FOR ROCKY PLANETS BASED ON PREM. <i>Astrophysical Journal</i> , 2016, 819, 127.	4.5	293
23	An estimate of the Bulk Silicate Earth potassium isotopic composition based on MC-ICPMS measurements of basalts. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 178, 223-232.	3.9	108
24	Interlaboratory comparison of magnesium isotopic compositions of 12 felsic to ultramafic igneous rock standards analyzed by MC-ICPMS. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 3197-3209.	2.5	34
25	Impact vaporization of planetesimal cores in the late stages of planet formation. <i>Nature Geoscience</i> , 2015, 8, 269-272.	12.9	62
26	Extinct isotope heterogeneities in the mantles of Earth and Mars: Implications for mantle stirring rates. <i>Meteoritics and Planetary Science</i> , 2015, 50, 555-567.	1.6	10
27	Remembering Mike Drake. <i>Meteoritics and Planetary Science</i> , 2015, 50, 523-529.	1.6	0
28	The earliest Lunar Magma Ocean differentiation recorded in Fe isotopes. <i>Earth and Planetary Science Letters</i> , 2015, 430, 202-208.	4.4	33
29	Calcium and titanium isotopic fractionations during evaporation. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 140, 365-380.	3.9	41
30	Chromium isotope variations ( $^{53}\text{Cr}/^{52}\text{Cr}$ ) in mantle-derived sources and their weathering products: Implications for environmental studies and the evolution of $^{53}\text{Cr}/^{52}\text{Cr}$ in the Earth's mantle over geologic time. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 123, 74-92.	3.9	120
31	Large Pt anomaly in the Greenland ice core points to a cataclysm at the onset of Younger Dryas. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 12917-12920.	7.1	73
32	$^{26}\text{Al}$ - $^{26}\text{Mg}$ isotope systematics of the first solids in the early solar system. <i>Meteoritics and Planetary Science</i> , 2013, 48, 1383-1400.	1.6	137
33	Reply to Boslough: Is Greenland Pt anomaly global or local?. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E5036.	7.1	5
34	$^{147}\text{Sm}$ - $^{143}\text{Nd}$ systematics of Earth are inconsistent with a superchondritic Sm/Nd ratio. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 4929-4934.	7.1	27
35	Calcium isotopic ratios and rare earth element abundances in refractory inclusions from the Allende CV3 chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 77, 252-265.	3.9	72
36	Si isotope variability in Proterozoic cherts. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 91, 187-201.	3.9	75

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37	Forsterite-bearing type B refractory inclusions from CV3 chondrites: From aggregates to volatilized melt droplets. <i>Meteoritics and Planetary Science</i> , 2012, 47, 2128-2147.	1.6	33
38	Fast accretion of the Earth with a late Moon-forming giant impact. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 17604-17609.	7.1	48
39	Stable calcium isotopic compositions of Hawaiian shield lavas: Evidence for recycling of ancient marine carbonates into the mantle. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 4987-4997.	3.9	141
40	Calcium isotope constraints on the uptake and sources of Ca <sup>2+</sup> in a base-poor forest: A new concept of combining stable ( <sup>44</sup> Ca/ <sup>42</sup> Ca) and radiogenic ( <sup>47</sup> Ca) signals. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 7031-7046.	3.9	70
41	Silicon isotopes in the inner Solar System: Implications for core formation, solar nebular processes and partial melting. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 6921-6933.	3.9	64
42	Calcium isotopic fractionation between clinopyroxene and orthopyroxene from mantle peridotites. <i>Earth and Planetary Science Letters</i> , 2010, 292, 337-344.	4.4	135
43	The isotopic composition of magnesium in the inner Solar System. <i>Earth and Planetary Science Letters</i> , 2010, 293, 349-358.	4.4	82
44	U-Pb chronology of the Solar System's oldest solids with variable <sup>238</sup> U/ <sup>235</sup> U. <i>Earth and Planetary Science Letters</i> , 2010, 300, 343-350.	4.4	270
45	Petrologic study of SJ101, a new forsterite-bearing CAI from the Allende CV3 chondrite. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 5100-5114.	3.9	21
46	Hf-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
47	Mass-independent Oxygen Isotope Variation in the Solar Nebula. <i>Reviews in Mineralogy and Geochemistry</i> , 2008, 68, 187-218.	4.8	18
48	Modeling lead isotopic heterogeneity in mid-ocean ridge basalts. <i>Earth and Planetary Science Letters</i> , 2007, 262, 328-342.	4.4	35
49	Comet 81P/Wild 2 Under a Microscope. <i>Science</i> , 2006, 314, 1711-1716.	12.6	848
50	Isotopic Compositions of Cometary Matter Returned by Stardust. <i>Science</i> , 2006, 314, 1724-1728.	12.6	343
51	Barium Isotopes in Chondritic Meteorites: Implications for Planetary Reservoir Models. <i>Science</i> , 2006, 314, 809-812.	12.6	78
52	THE Hf-W ISOTOPIC SYSTEM AND THE ORIGIN OF THE EARTH AND MOON. <i>Annual Review of Earth and Planetary Sciences</i> , 2005, 33, 531-570.	11.0	202
53	Slab devolatilization and Os and Pb mobility in the mantle wedge of the Kamchatka arc. <i>Earth and Planetary Science Letters</i> , 2005, 236, 182-194.	4.4	53
54	Evolution and genesis of calc-alkaline magmas at Filicudi Volcano, Aeolian Arc (Southern Tyrrhenian)	2.4	23

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55	Differentiation of metal-rich meteoritic parent bodies: I. Measurements of PGEs, Re, Mo, W, and Au in meteoritic Fe-Ni metal. <i>Meteoritics and Planetary Science</i> , 2004, 39, 1685-1697.	1.6	47
56	Chondritic Meteorite Fragments Associated with the Permian-Triassic Boundary in Antarctica. <i>Science</i> , 2003, 302, 1388-1392.	12.6	124
57	GEOCHEMISTRY: How Old Is Planet Earth?. <i>Science</i> , 2003, 300, 1513-1514.	12.6	39
58	Modeling the distribution of isotopic ratios in geochemical reservoirs. <i>Earth and Planetary Science Letters</i> , 2002, 204, 183-202.	4.4	69
59	A short timescale for terrestrial planet formation from Hf-W chronometry of meteorites. <i>Nature</i> , 2002, 418, 949-952.	27.8	615
60	Diverse supernova sources of pre-solar material inferred from molybdenum isotopes in meteorites. <i>Nature</i> , 2002, 415, 881-883.	27.8	101
61	Global events across the Mesoproterozoic-Neoproterozoic boundary: C and Sr isotopic evidence from Siberia. <i>Precambrian Research</i> , 2001, 111, 165-202.	2.7	163
62	A gravimetric K <sub>2</sub> O/Cl <sub>6</sub> standard: Application to precise and accurate Os spike calibration. <i>Geochimica Et Cosmochimica Acta</i> , 2001, 65, 2113-2127.	3.9	37
63	Preservation of ancient and fertile lithospheric mantle beneath the southwestern United States. <i>Nature</i> , 2001, 411, 69-73.	27.8	167
64	Gas hydrates and deglaciations. <i>Nature</i> , 2001, 412, 691-692.	27.8	26
65	Large Groundwater Strontium Flux to the Oceans from the Bengal Basin and the Marine Strontium Isotope Record. <i>Science</i> , 2001, 293, 1470-1473.	12.6	164
66	Supernova Sources and the $^{92}\text{Zr}/^{92}\text{Nb}$ - $^{92}\text{Zr}/^{92}\text{Y}$ Process Chronometer. <i>Astrophysical Journal</i> , 2000, 536, L49-L53.	4.5	41
67	Osmium Isotopic Evidence for Mesozoic Removal of Lithospheric Mantle Beneath the Sierra Nevada, California. <i>Science</i> , 2000, 289, 1912-1916.	12.6	114
68	The Sr, C and O isotopic evolution of Neoproterozoic seawater. <i>Chemical Geology</i> , 1999, 161, 37-57.	3.3	616
69	$\delta^{15}\text{N}$ during the Last Interglacial Period recorded by a fossil coral from Indonesia. <i>Geophysical Research Letters</i> , 1999, 26, 3129-3132.	4.0	82
70	Geochemical Earth Reference Model (GERM): description of the initiative. <i>Chemical Geology</i> , 1998, 145, 153-159.	3.3	23
71	melting of the Siberian Mantle Plume. <i>Geophysical Research Letters</i> , 1998, 25, 2209-2212.	4.0	16
72	Evidence for $^{182}\text{Hf}$ in the early Solar System and constraints on the timescale of terrestrial accretion and core formation. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 1131-1153.	3.9	200

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73	Comment on "The issue of the terrestrial record of $^{146}\text{Sm}$ " by M. Sharma, D. A. Papanastassiou, G. J. Wasserburg, and R. F. Dymek. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 3747-3749.	3.9	5
74	Noble Gases and Earth's Accretion. <i>Science</i> , 1996, 273, 1814-1818.	12.6	110
75	Integrated chronostratigraphy of Proterozoic-Cambrian boundary beds in the western Anabar region, northern Siberia. <i>Geological Magazine</i> , 1996, 133, 509-533.	1.5	134
76	Reply to the comment by Spencer and Mahoney on "The Pb isotopic evolution of the Earth: inferences from river water suspended loads". <i>Earth and Planetary Science Letters</i> , 1995, 132, 239-241.	4.4	2
77	REE chemistry and Sm-Nd systematics of late Archean weathering profiles in the Fortescue Group, Western Australia. <i>Geochimica Et Cosmochimica Acta</i> , 1994, 58, 1777-1794.	3.9	48
78	Variations in magma source regions during large-scale continental extension, Death Valley region, western United States. <i>Earth and Planetary Science Letters</i> , 1994, 125, 235-254.	4.4	31
79	Sm-Nd dating of multiple garnet growth events in an arc-continent collision zone, northwestern U.S. Cordillera. <i>Contributions To Mineralogy and Petrology</i> , 1993, 115, 45-57.	3.1	69
80	The Pb isotopic evolution of the Earth: inferences from river water suspended loads. <i>Earth and Planetary Science Letters</i> , 1993, 115, 245-256.	4.4	117
81	The Vendian record of Sr and C isotopic variations in seawater: Implications for tectonics and paleoclimate. <i>Earth and Planetary Science Letters</i> , 1993, 120, 409-430.	4.4	441
82	The behavior of rare earth elements in seawater: Precise determination of variations in the North Pacific water column. <i>Geochimica Et Cosmochimica Acta</i> , 1992, 56, 1851-1862.	3.9	346
83	Sedimentary cycling and environmental change in the Late Proterozoic: Evidence from stable and radiogenic isotopes. <i>Geochimica Et Cosmochimica Acta</i> , 1992, 56, 1317-1329.	3.9	520
84	Evidence from coupled $^{147}\text{Sm}$ - $^{143}\text{Nd}$ and $^{146}\text{Sm}$ - $^{142}\text{Nd}$ systematics for very early (4.5-Gyr) differentiation of the Earth's mantle. <i>Nature</i> , 1992, 360, 728-732.	27.8	162
85	Strontium isotopic variations of Neoproterozoic seawater: Implications for crustal evolution. <i>Geochimica Et Cosmochimica Acta</i> , 1991, 55, 2883-2894.	3.9	204
86	Chicxulub Crater: A possible Cretaceous/Tertiary boundary impact crater on the Yucatán Peninsula, Mexico. <i>Geology</i> , 1991, 19, 867.	4.4	768
87	Rapid uplift and crustal growth in extensional environments: An isotopic study from the Death Valley region, California. <i>Geology</i> , 1990, 18, 223.	4.4	39
88	The chemical evolution of Precambrian seawater: Evidence from REEs in banded iron formations. <i>Geochimica Et Cosmochimica Acta</i> , 1990, 54, 2965-2977.	3.9	408
89	The pore water chemistry of rare earth elements in Buzzards Bay sediments. <i>Geochimica Et Cosmochimica Acta</i> , 1989, 53, 2847-2856.	3.9	171
90	Sr isotopic variations in Upper Proterozoic carbonates from Svalbard and East Greenland. <i>Geochimica Et Cosmochimica Acta</i> , 1989, 53, 2331-2339.	3.9	162

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91	SmNd age of the Fiskefjället Anorthosite Complex, West Greenland. <i>Earth and Planetary Science Letters</i> , 1989, 91, 261-270.	4.4	31
92	Nd isotopic variations in Precambrian banded iron formations. <i>Geophysical Research Letters</i> , 1988, 15, 393-396.	4.0	94
93	The chemical evolution of precambrian seawater: REE and isotopic data. <i>Chemical Geology</i> , 1988, 70, 142.	3.3	2
94	Nd and Sr isotopic systematics of river water suspended material: implications for crustal evolution. <i>Earth and Planetary Science Letters</i> , 1988, 87, 249-265.	4.4	863
95	Rare earth elements in river waters. <i>Earth and Planetary Science Letters</i> , 1988, 89, 35-47.	4.4	572
96	A Nd isotopic study of the Hamersley and Michipicoten banded iron formations: the source of REE and Fe in Archean oceans. <i>Earth and Planetary Science Letters</i> , 1988, 87, 29-44.	4.4	171
97	REE in the Great Whale River estuary, northwest Quebec. <i>Earth and Planetary Science Letters</i> , 1988, 88, 241-252.	4.4	81
98	Isotopic constraints on crustal growth and recycling. <i>Earth and Planetary Science Letters</i> , 1988, 90, 315-329.	4.4	140
99	Nd isotopic variations of Phanerozoic paleoceans. <i>Earth and Planetary Science Letters</i> , 1988, 90, 395-410.	4.4	83
100	The Nd and Sr isotopic evolution of Proterozoic seawater. <i>Geophysical Research Letters</i> , 1988, 15, 397-400.	4.0	56
101	Isotopic and chemical constraints on mantle-crust evolution. <i>Geochimica Et Cosmochimica Acta</i> , 1988, 52, 1341-1350.	3.9	90
102	The isotopic composition of neodymium in the North Pacific. <i>Geochimica Et Cosmochimica Acta</i> , 1988, 52, 1373-1381.	3.9	187
103	Nd and Sr isotopic variations of Early Paleozoic oceans. <i>Earth and Planetary Science Letters</i> , 1987, 84, 27-41.	4.4	328
104	The Nd and Sr isotopic systematics of river-water dissolved material: Implications for the sources of Nd and Sr in seawater. <i>Chemical Geology: Isotope Geoscience Section</i> , 1987, 66, 245-272.	0.6	227
105	Sm-Nd isotopic evolution of chondrites and achondrites, II. <i>Earth and Planetary Science Letters</i> , 1984, 67, 137-150.	4.4	651
106	A Nd and Sr isotopic study of the Trinity peridotite; implications for mantle evolution. <i>Earth and Planetary Science Letters</i> , 1984, 68, 361-378.	4.4	96
107	Precise determination of SmNd ratios, Sm and Nd isotopic abundances in standard solutions. <i>Geochimica Et Cosmochimica Acta</i> , 1981, 45, 2311-2323.	3.9	852
108	Transport models for crust and mantle evolution. <i>Tectonophysics</i> , 1981, 75, 163-179.	2.2	40

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109	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
110	Sm-Nd isotopic evolution of chondrites. Earth and Planetary Science Letters, 1980, 50, 139-155.	4.4	1,762
111	Rb-Sr isotope systematics in metamorphic rocks, Kongsberg sector, south Norway. Lithos, 1978, 11, 257-276.	1.4	83
112	Interpretation of Nd, Sr and Pb isotope data from Archean migmatites in Lofoten-VesterÅlen, Norway. Earth and Planetary Science Letters, 1978, 41, 245-253.	4.4	75