Noah J Planavsky

List of Publications by Year
in descending order

139 papers	14,958 citations	19636 61 h-index	18633 119 g-index
142 all docs	142 docs citations	142 times ranked	9279 citing authors

#	Article	IF	Citations
1	The rise of oxygen in Earthâ€™s early ocean and atmosphere. Nature, 2014, 506, 307-315.	13.7	1,966
2	The ketone metabolite Î²-hydroxybutyrate blocks NLRP3 inflammasomeâ€“mediated inflammatory disease. Nature Medicine, 2015, 21, 263-269.	15.2	1,400
3	Low Mid-Proterozoic atmospheric oxygen levels and the delayed rise of animals. Science, 2014, 346, 635-638.	6.0	594
4	Evidence for oxygenic photosynthesis half a billion years before the Great Oxidation Event. Nature Geoscience, 2014, 7, 283-286.	5.4	444
5	Ocean oxygenation in the wake of the Marinoan glaciation. Nature, 2012, 489, 546-549.	13.7	420
6	Proterozoic ocean redox and biogeochemical stasis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5357-5362.	3.3	418
7	Evolution of the global phosphorus cycle. Nature, 2017, 541, 386-389.	13.7	397
8	Widespread iron-rich conditions in the mid-Proterozoic ocean. Nature, 2011, 477, 448-451.	13.7	385
9	Rare Earth Element and yttrium compositions of Archean and Paleoproterozoic Fe formations revisited: New perspectives on the significance and mechanisms of deposition. Geochimica Et Cosmochimica Acta, 2010, 74, 6387-6405.	1.6	373
10	The evolution of the marine phosphate reservoir. Nature, 2010, 467, 1088-1090.	13.7	361
11	Aerobic bacterial pyrite oxidation and acid rock drainage during the Great Oxidation Event. Nature, 2011, 478, 369-373.	13.7	299
12	Continental arc volcanism as the principal driver of icehouse-greenhouse variability. Science, 2016, 352, 444-447.	6.0	269
13	A shale-hosted Cr isotope record of low atmospheric oxygen during the Proterozoic. Geology, 2016, 44, 555-558.	2.0	228
14	Earthâ€™s oxygen cycle and the evolution of animal life. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8933-8938.	3.3	205
15	Oxygenation history of the Neoproterozoic to early Phanerozoic and the rise of land plants. Earth and Planetary Science Letters, 2017, 466, 12-19.	1.8	203
16	A highly redox-heterogeneous ocean in South China during the early Cambrian (âˆ¼529â€“514Â Ma): Implications for biota-environment co-evolution. Earth and Planetary Science Letters, 2016, 441, 38-51.	1.8	198
17	Sulfur record of rising and falling marine oxygen and sulfate levels during the Lomagundi event. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18300-18305.	3.3	174
18	The iron paleoredox proxies: A guide to the pitfalls, problems and proper practice. Numerische Mathematik, 2018, 318, 491-526.	0.7	174

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19	Perspectives on Proterozoic surface ocean redox from iodine contents in ancient and recent carbonate. Earth and Planetary Science Letters, 2017, 463, 159-170.	1.8	172
20	Iron-oxidizing microbial ecosystems thrived in late Paleoproterozoic redox-stratified oceans. Earth and Planetary Science Letters, 2009, 286, 230-242.	1.8	166
21	Stepwise oxygenation of the Paleozoic atmosphere. Nature Communications, 2018, 9, 4081.	5.8	166
22	Reverse weathering as a long-term stabilizer of marine pH and planetary climate. Nature, 2018, 560, 471-475.	13.7	149
23	Iron isotope composition of some Archean and Proterozoic iron formations. Geochimica Et Cosmochimica Acta, 2012, 80, 158-169.	1.6	147
24	Triple oxygen isotope evidence for limited mid-Proterozoic primary productivity. Nature, 2018, 559, 613-616.	13.7	144
25	Evidence for a prolonged Permianâ€“Triassic extinction interval from global marine mercury records. Nature Communications, 2019, 10, 1563.	5.8	136
26	Trace elements at the intersection of marine biological and geochemical evolution. Earth-Science Reviews, 2016, 163, 323-348.	4.0	135
27	Mercury in marine Ordovician/Silurian boundary sections of South China is sulfide-hosted and non-volcanic in origin. Earth and Planetary Science Letters, 2019, 511, 130-140.	1.8	134
28	New age constraints for the Proterozoic Aravalliâ€“Delhi successions of India and their implications. Precambrian Research, 2013, 238, 120-128.	1.2	133
29	Protracted development of bioturbation through the early Palaeozoic Era. Nature Geoscience, 2015, 8, 865-869.	5.4	123
30	Global water cycle and the coevolution of the Earthâ€™s interior and surface environment. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150393.	1.6	119
31	Iron isotopes in an Archean ocean analogue. Geochimica Et Cosmochimica Acta, 2014, 133, 443-462.	1.6	118
32	Pyrite multiple-sulfur isotope evidence for rapid expansion and contraction of the early Paleoproterozoic seawater sulfate reservoir. Earth and Planetary Science Letters, 2014, 389, 95-104.	1.8	118
33	Rapid ocean acidification and protracted Earth system recovery followed the end-Cretaceous Chicxulub impact. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22500-22504.	3.3	116
34	An iodine record of Paleoproterozoic surface ocean oxygenation. Geology, 2014, 42, 619-622.	2.0	111
35	The isotopic composition of authigenic chromium in anoxic marine sediments: A case study from the Cariaco Basin. Earth and Planetary Science Letters, 2014, 407, 9-18.	1.8	99
36	Marine redox fluctuation as a potential trigger for the Cambrian explosion. Geology, 2018, 46, 587-590.	2.0	97

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37	Long-term sedimentary recycling of rare sulphur isotope anomalies. Nature, 2013, 497, 100-103.	13.7	96
38	A new estimate of detrital redox-sensitive metal concentrations and variability in fluxes to marine sediments. Geochimica Et Cosmochimica Acta, 2017, 215, 337-353.	1.6	96
39	Cobalt and marine redox evolution. Earth and Planetary Science Letters, 2014, 390, 253-263.	1.8	95
40	The effects of diagenesis on geochemical paleoredox proxies in sedimentary carbonates. Geochimica Et Cosmochimica Acta, 2018, 232, 265-287.	1.6	92
41	Mercury evidence of intense volcanic effects on land during the Permian-Triassic transition. Geology, 2019, 47, 1117-1121.	2.0	89
42	Oxygenation, Life, and the Planetary System during Earth's Middle History: An Overview. Astrobiology, 2021, 21, 906-923.	1.5	85
43	Bioavailability of zinc in marine systems through time. Nature Geoscience, 2013, 6, 125-128.	5.4	84
44	The chromium isotope composition of reducing and oxic marine sediments. Geochimica Et Cosmochimica Acta, 2016, 184, 1-19.	1.6	83
45	Constraints on Paleoproterozoic atmospheric oxygen levels. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8104-8109.	3.3	83
46	On the coâ€evolution of surface oxygen levels and animals. Geobiology, 2020, 18, 260-281.	1.1	82
47	The geologic history of seawater oxygen isotopes from marine iron oxides. Science, 2019, 365, 469-473.	6.0	81
48	Mercury enrichments provide evidence of Early Triassic volcanism following the end-Permian mass extinction. Earth-Science Reviews, 2019, 195, 191-212.	4.0	81
49	Evolution of the Global Carbon Cycle and Climate Regulation on Earth. Global Biogeochemical Cycles, 2020, 34, e2018GB006061.	1.9	78
50	Chromium isotope fractionation during subduction-related metamorphism, black shale weathering, and hydrothermal alteration. Chemical Geology, 2016, 423, 19-33.	1.4	77
51	Compensatory Distal Reabsorption Drives Diuretic Resistance in Human Heart Failure. Journal of the American Society of Nephrology: JASN, 2017, 28, 3414-3424.	3.0	75
52	Redox-independent chromium isotope fractionation induced by ligand-promoted dissolution. Nature Communications, 2017, 8, 1590.	5.8	75
53	Evidence for episodic oxygenation in a weakly redox-buffered deep mid-Proterozoic ocean. Chemical Geology, 2018, 483, 581-594.	1.4	73
54	Marine redox conditions in the middle Proterozoic ocean and isotopic constraints on authigenic carbonate formation: Insights from the Chuanlinggou Formation, Yanshan Basin, North China. Geochimica Et Cosmochimica Acta, 2015, 150, 90-105.	1.6	71

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55	Two pulses of oceanic environmental disturbance during the Permianâ€“Triassic boundary crisis. Earth and Planetary Science Letters, 2016, 443, 139-152.	1.8	71
56	Chromium isotope systematics in the Connecticut River. Chemical Geology, 2017, 456, 98-111.	1.4	69
57	Tracking the rise of eukaryotes to ecological dominance with zinc isotopes. Geobiology, 2018, 16, 341-352.	1.1	65
58	A case for low atmospheric oxygen levels during Earth's middle history. Emerging Topics in Life Sciences, 2018, 2, 149-159.	1.1	64
59	An evaluation of sedimentary molybdenum and iron as proxies for pore fluid paleoredox conditions. Numerische Mathematik, 2018, 318, 527-556.	0.7	63
60	Uranium isotopes in marine carbonates as a global ocean paleoredox proxy: A critical review. Geochimica Et Cosmochimica Acta, 2020, 287, 27-49.	1.6	63
61	Felsic volcanism as a factor driving the end-Permian mass extinction. Science Advances, 2021, 7, eabh1390.	4.7	63
62	Persistent global marine euxinia in the early Silurian. Nature Communications, 2020, 11, 1804.	5.8	61
63	Ediacaran Marine Redox Heterogeneity and Early Animal Ecosystems. Scientific Reports, 2015, 5, 17097.	1.6	59
64	Chemostratigraphy of the Shaler Supergroup, Victoria Island, NW Canada: A record of ocean composition prior to the Cryogenian glaciations. Precambrian Research, 2015, 263, 232-245.	1.2	59
65	Two-step deoxygenation at the end of the Paleoproterozoic Lomagundi Event. Earth and Planetary Science Letters, 2018, 486, 70-83.	1.8	58
66	The Molybdenum Isotope System as a Tracer of Slab Input in Subduction Zones: An Example From Martinique, Lesser Antilles Arc. Geochemistry, Geophysics, Geosystems, 2017, 18, 4674-4689.	1.0	57
67	Mercury fluxes record regional volcanism in the South China craton prior to the end-Permian mass extinction. Geology, 2021, 49, 452-456.	2.0	57
68	A lithium-isotope perspective on the evolution of carbon and silicon cycles. Nature, 2021, 595, 394-398.	13.7	56
69	Integrated geochemical-petrographic insights from component-selective Î´²³⁸U of Cryogenian marine carbonates. Geology, 2016, 44, 935-938.	2.0	52
70	A Mesoarchean shift in uranium isotope systematics. Geochimica Et Cosmochimica Acta, 2018, 238, 438-452.	1.6	52
71	Multiple negative molybdenum isotope excursions in the Doushantuo Formation (South China) fingerprint complex redox-related processes in the Ediacaran Nanhua Basin. Geochimica Et Cosmochimica Acta, 2019, 261, 191-209.	1.6	52
72	Global marine redox evolution from the late Neoproterozoic to the early Paleozoic constrained by the integration of Mo and U isotope records. Earth-Science Reviews, 2021, 214, 103506.	4.0	52

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73	Extensive marine anoxia associated with the Late Devonian Hangenberg Crisis. Earth and Planetary Science Letters, 2020, 533, 115976.	1.8	49
74	Intensified continental chemical weathering and carbon-cycle perturbations linked to volcanism during the Triassicâ€"Jurassic transition. Nature Communications, 2022, 13, 299.	5.8	49
75	Increased productivity as a primary driver of marine anoxia in the Lower Cambrian. Palaeogeography, Palaeoclimatology, Palaeoecology, 2018, 491, 1-9.	1.0	48
76	Palaeoproterozoic oxygenated oceans following the Lomagundiâ€"Jatuli Event. Nature Geoscience, 2020, 13, 302-306.	5.4	47
77	Sedimentary chromium isotopic compositions across the Cretaceous OAE2 at Demerara Rise Site 1258. Chemical Geology, 2016, 429, 85-92.	1.4	44
78	No evidence for high atmospheric oxygen levels 1,400 million years ago. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2550-1.	3.3	44
79	UV radiation limited the expansion of cyanobacteria in early marine photic environments. Nature Communications, 2018, 9, 3088.	5.8	44
80	Highly heterogeneous â€œpoikiloredoxâ€•conditions in the early Ediacaran Yangtze Sea. Precambrian Research, 2018, 311, 157-166.	1.2	42
81	Uranium Isotope Fractionation in Nonâ€sulfidic Anoxic Settings and the Global Uranium Isotope Mass Balance. Global Biogeochemical Cycles, 2020, 34, e2020GB006649.	1.9	40
82	Assessing bulk carbonates as archives for seawater Li isotope ratios. Chemical Geology, 2019, 530, 119338.	1.4	39
83	The impact of marine nutrient abundance on early eukaryotic ecosystems. Geobiology, 2020, 18, 139-151.	1.1	39
84	The role of environmental factors in the long-term evolution of the marine biological pump. Nature Geoscience, 2020, 13, 812-816.	5.4	38
85	A Study of the Microbial Spatial Heterogeneity of Bahamian Thrombolites Using Molecular, Biochemical, and Stable Isotope Analyses. Astrobiology, 2017, 17, 413-430.	1.5	37
86	Investigating controls on boron isotope ratios in shallow marine carbonates. Earth and Planetary Science Letters, 2017, 458, 380-393.	1.8	37
87	The effects of diagenesis on lithium isotope ratios of shallow marine carbonates. Numerische Mathematik, 2020, 320, 150-184.	0.7	37
88	Evolution of the structure and impact of Earthâ€™s biosphere. Nature Reviews Earth & Environment, 2021, 2, 123-139.	12.2	37
89	The elements of marine life. Nature Geoscience, 2014, 7, 855-856.	5.4	36
90	Earthâ€™s youngest banded iron formation implies ferruginous conditions in the Early Cambrian ocean. Scientific Reports, 2018, 8, 9970.	1.6	33

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91	A long-term record of early to mid-Paleozoic marine redox change. Science Advances, 2021, 7, .	4.7	33
92	Stromatolite branching in the Neoproterozoic of the Centralian Superbasin, Australia: an investigation into sedimentary and microbial control of stromatolite morphology. Geobiology, 2007, 6, 070816220552001-???.	1.1	32
93	Carbonation and decarbonation reactions: Implications for planetary habitability. American Mineralogist, 2019, 104, 1369-1380.	0.9	30
94	Zircon (Uâ€‹Th)/He Thermochronometric Constraints on Himalayan Thrust Belt Exhumation, Bedrock Weathering, and Cenozoic Seawater Chemistry. Geochemistry, Geophysics, Geosystems, 2018, 19, 257-271.	1.0	29
95	Phytoplankton contributions to the trace-element composition of Precambrian banded iron formations. Bulletin of the Geological Society of America, 2018, 130, 941-951.	1.6	28
96	A paleosol record of the evolution of Cr redox cycling and evidence for an increase in atmospheric oxygen during the Neoproterozoic. Geobiology, 2019, 17, 579-593.	1.1	27
97	Making Sense of Massive Carbon Isotope Excursions With an Inverse Carbon Cycle Model. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 2485-2496.	1.3	26
98	Reconstructing Neoproterozoic seawater chemistry from early diagenetic dolomite. Geology, 2021, 49, 442-446.	2.0	26
99	Authigenic origin for a massive negative carbon isotope excursion. Geology, 2019, 47, 115-118.	2.0	25
100	Lithium isotope composition of modern and fossilized Cenozoic brachiopods. Geology, 2020, 48, 1058-1061.	2.0	25
101	Weathering, alteration and reconstructing Earth's oxygenation. Interface Focus, 2020, 10, 20190140.	1.5	25
102	Marine anoxia linked to abrupt global warming during Earthâ€™s penultimate icehouse. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2115231119.	3.3	24
103	Subglacial meltwater supported aerobic marine habitats during Snowball Earth. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 25478-25483.	3.3	23
104	The History of Ocean Oxygenation. Annual Review of Marine Science, 2022, 14, 331-353.	5.1	22
105	A largely invariant marine dissolved organic carbon reservoir across Earth's history. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	22
106	Late Proterozoic Transitions in Climate, Oxygen, and Tectonics, and the Rise of Complex Life. The Paleontological Society Papers, 2015, 21, 47-82.	0.8	20
107	The role of calcium in regulating marine phosphorus burial and atmospheric oxygenation. Nature Communications, 2020, 11, 2232.	5.8	20
108	Evaluation of shallow-water carbonates as a seawater zinc isotope archive. Earth and Planetary Science Letters, 2021, 553, 116599.	1.8	20

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109	Biogeochemical Controls on the Redox Evolution of Earthâ€™s Oceans and Atmosphere. Elements, 2020, 16, 191-196.	0.5	19
110	The kaolinite shuttle links the Great Oxidation and Lomagundi events. Nature Communications, 2021, 12, 2944.	5.8	19
111	Geochemistry of Paleoproterozoic Gunflint Formation carbonate: Implications for hydrosphere-atmosphere evolution. Precambrian Research, 2017, 290, 126-146.	1.2	18
112	Large Mass-Independent Oxygen Isotope Fractionations in Mid-Proterozoic Sediments: Evidence for a Low-Oxygen Atmosphere?. Astrobiology, 2020, 20, 628-636.	1.5	18
113	Experimental evidence supports early silica cementation of the Ediacara Biota. Geology, 2021, 49, 51-55.	2.0	17
114	Bioturbation feedbacks on the phosphorus cycle. Earth and Planetary Science Letters, 2021, 566, 116961.	1.8	16
115	Strong evidence for a weakly oxygenated oceanâ€“atmosphere system during the Proterozoic. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	15
116	Shallow water redox conditions of the mid-Proterozoic Muskwa Assemblage, British Columbia, Canada. Numerische Mathematik, 2019, 319, 122-157.	0.7	14
117	Revisiting groundwater carbon fluxes to the ocean with implications for the carbon cycle. Geology, 2020, 48, 67-71.	2.0	14
118	Pliocene decoupling of equatorial Pacific temperature and pH gradients. Nature, 2021, 598, 457-461.	13.7	14
119	Perturbation of the deep-Earth carbon cycle in response to the Cambrian Explosion. Science Advances, 2022, 8, eabj1325.	4.7	14
120	Model based Paleozoic atmospheric oxygen estimates: a revisit to GEOCARBSULF. Numerische Mathematik, 2018, 318, 557-589.	0.7	12
121	The isotopic composition of sedimentary organic zinc and implications for the global Zn isotope mass balance. Geochimica Et Cosmochimica Acta, 2021, 314, 16-26.	1.6	12
122	Uranium isotope evidence for extensive shallow water anoxia in the early Tonian oceans. Earth and Planetary Science Letters, 2022, 583, 117437.	1.8	12
123	From orogenies to oxygen. Nature Geoscience, 2018, 11, 9-10.	5.4	10
124	Triple oxygen isotope constraints on atmospheric O ₂ and biological productivity during the mid-Proterozoic. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
125	Marine siliceous ecosystem decline led to sustained anomalous Early Triassic warmth. Nature Communications, 2022, 13, .	5.8	9
126	Evolution: A Fixed-Nitrogen Fix in the Early Ocean?. Current Biology, 2014, 24, R276-R278.	1.8	8

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127	<i>Diopatra cuprea</i>worm burrow parchment: a cautionary tale of infaunal surface reactivity. Lethaia, 2020, 53, 47-61.	0.6	7
128	Neoproterozoic synâ€glacial carbonate precipitation and implications for a snowball Earth. Geobiology, 2022, 20, 175-193.	1.1	7
129	Oxygen isotopic fingerprints on the phosphorus cycle within the deep subseafloor biosphere. Geochimica Et Cosmochimica Acta, 2021, 310, 169-186.	1.6	5
130	Store and share ancient rocks. Nature, 2020, 581, 137-139.	13.7	5
131	Reconstructing seawater Î´18O and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:msup><mml:mrow><mml:mi mathvariant="normal">Î”</mml:mi></mml:mrow><mml:mrow><mml:mo>â€²</mml:mo><mml:mspace width="0.2em" /><mml:mn>17</mml:mn></mml:mrow></mml:msup></mml:math>O values with solid Earth system evolution. Earth and Planetary Science Letters, 2022, 592, 117637.	1.8	5
132	Petrological evidence supports the death mask model for the preservation of Ediacaran soft-bodied organisms in South Australia: COMMENT. Geology, 2019, 47, e473-e473.	2.0	4
133	Reply to comment on â€œNew age constraints for the Proterozoic Aravalliâ€"Delhi successions of India and their implicationsâ€• by Melezhik et al. [Precambrian Res. (2014)]. Precambrian Research, 2014, 246, 371-372.	1.2	3
134	Binding and transport of Cr(III) by clay minerals during the Great Oxidation Event. Earth and Planetary Science Letters, 2022, 584, 117503.	1.8	3
135	Global aerobics before Earthâ€™s oxygenation. Nature Ecology and Evolution, 2021, 5, 407-408.	3.4	2
136	Holocene Spatiotemporal Redox Variations in the Southern Baltic Sea. Frontiers in Earth Science, 2021, 9, .	0.8	2
137	Pointâ€counterpoint articles in geobiology. Geobiology, 2020, 18, 259-259.	1.1	1
138	The Long Road to Animal Life: Two Billion Years of Evolving Oxygen in the Atmosphere and Ocean and Escaping the â€˜Boring Billionâ€™. The Paleontological Society Special Publications, 2014, 13, 48-49.	0.0	0
139	The influence of invertebrate faecal material on compositional heterogeneity, diagenesis and trace metal distribution in the Ogeechee River estuary, Georgia, USA. Sedimentology, 2021, 68, 788-804.	1.6	0