Simon W Poulton

List of Publications by Year
in descending order

132 papers	13,906 citations	22099 59 h-index	20307 116 g-index
135 all docs	135 docs citations	135 times ranked	7026 citing authors

#	Article	IF	Citations
1	Development of a sequential extraction procedure for iron: implications for iron partitioning in continentally derived particulates. Chemical Geology, 2005, 214, 209-221.	1.4	932
2	Tracing the stepwise oxygenation of the Proterozoic ocean. Nature, 2008, 452, 456-459.	13.7	883
3	Late-Neoproterozoic Deep-Ocean Oxygenation and the Rise of Animal Life. Science, 2007, 315, 92-95.	6.0	812
4	Ferruginous Conditions: A Dominant Feature of the Ocean through Earth's History. Elements, 2011, 7, 107-112.	0.5	717
5	Ferruginous Conditions Dominated Later Neoproterozoic Deep-Water Chemistry. Science, 2008, 321, 949-952.	6.0	626
6	Fluctuations in Precambrian atmospheric oxygenation recorded by chromium isotopes. Nature, 2009, 461, 250-253.	13.7	554
7	A revised scheme for the reactivity of iron (oxyhydr)oxide minerals towards dissolved sulfide. Geochimica Et Cosmochimica Acta, 2004, 68, 3703-3715.	1.6	490
8	The transition to a sulphidic ocean âˆ¼ 1.84 billion years ago. Nature, 2004, 431, 173-177.	13.7	405
9	Spatial variability in oceanic redox structure 1.8â€‰billion years ago. Nature Geoscience, 2010, 3, 486-490.	5.4	338
10	Co-evolution of eukaryotes and ocean oxygenation in the Neoproterozoic era. Nature Geoscience, 2014, 7, 257-265.	5.4	305
11	Ocean acidification and the Permo-Triassic mass extinction. Science, 2015, 348, 229-232.	6.0	284
12	Rise to modern levels of ocean oxygenation coincided with the Cambrian radiation of animals. Nature Communications, 2015, 6, 7142.	5.8	250
13	Mo isotope fractionation during adsorption to Fe (oxyhydr)oxides. Geochimica Et Cosmochimica Acta, 2009, 73, 6502-6516.	1.6	248
14	Pervasive oxygenation along late Archaean ocean margins. Nature Geoscience, 2010, 3, 647-652.	5.4	233
15	A bistable organic-rich atmosphere on the Neoarchaean Earth. Nature Geoscience, 2012, 5, 359-363.	5.4	201
16	Redox sensitivity of P cycling during marine black shale formation: Dynamics of sulfidic and anoxic, non-sulfidic bottom waters. Geochimica Et Cosmochimica Acta, 2008, 72, 3703-3717.	1.6	196
17	An emerging picture of Neoproterozoic ocean chemistry: Insights from the Chuar Group, Grand Canyon, USA. Earth and Planetary Science Letters, 2010, 290, 64-73.	1.8	194
18	Assessing the utility of Fe/Al and Fe-speciation to record water column redox conditions in carbonate-rich sediments. Chemical Geology, 2014, 382, 111-122.	1.4	181

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19	The iron paleoredox proxies: A guide to the pitfalls, problems and proper practice. Numerische Mathematik, 2018, 318, 491-526.	0.7	174
20	An 80 million year oceanic redox history from Permian to Jurassic pelagic sediments of the Mino-Tamba terrane, SW Japan, and the origin of four mass extinctions. Global and Planetary Change, 2010, 71, 109-123.	1.6	172
21	Stepwise oxygenation of the Paleozoic atmosphere. Nature Communications, 2018, 9, 4081.	5.8	166
22	Sulfide oxidation and iron dissolution kinetics during the reaction of dissolved sulfide with ferrihydrite. Chemical Geology, 2003, 202, 79-94.	1.4	164
23	Green rust formation controls nutrient availability in a ferruginous water column. Geology, 2012, 40, 599-602.	2.0	159
24	Ocean euxinia and climate change â€œdouble whammyâ€•drove the Late Ordovician mass extinction. Geology, 2018, 46, 535-538.	2.0	148
25	Chemical and physical characteristics of iron oxides in riverine and glacial meltwater sediments. Chemical Geology, 2005, 218, 203-221.	1.4	139
26	Trace elements at the intersection of marine biological and geochemical evolution. Earth-Science Reviews, 2016, 163, 323-348.	4.0	135
27	Dynamic redox conditions control late Ediacaran metazoan ecosystems in the Nama Group, Namibia. Precambrian Research, 2015, 261, 252-271.	1.2	134
28	Pathways for Neoarchean pyrite formation constrained by mass-independent sulfur isotopes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17638-17643.	3.3	125
29	Oxygenation of the Mesoproterozoic ocean and the evolution of complex eukaryotes. Nature Geoscience, 2018, 11, 345-350.	5.4	124
30	Redox changes in Early Cambrian black shales at Xiaotan section, Yunnan Province, South China. Precambrian Research, 2013, 225, 166-189.	1.2	116
31	Onset of the aerobic nitrogen cycle during the Great Oxidation Event. Nature, 2017, 542, 465-467.	13.7	114
32	A global transition to ferruginous conditions in the early Neoproterozoic oceans. Nature Geoscience, 2015, 8, 466-470.	5.4	105
33	A 200-million-year delay in permanent atmospheric oxygenation. Nature, 2021, 592, 232-236.	13.7	105
34	Sulphur and oxygen isotope signatures of late Neoproterozoic to early Cambrian sulphate, Yangtze Platform, China: Diagenetic constraints and seawater evolution. Precambrian Research, 2005, 137, 223-241.	1.2	103
35	Evolution of the oceanic sulfur cycle at the end of the Paleoproterozoic. Geochimica Et Cosmochimica Acta, 2006, 70, 5723-5739.	1.6	102
36	Molybdenum isotope constraints on the extent of late Paleoproterozoic ocean euxinia. Earth and Planetary Science Letters, 2011, 307, 450-460.	1.8	99

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37	Turbidite depositional influences on the diagenesis of Beecher's Trilobite Bed and the Hunsruck Slate; sites of soft tissue pyritization. Numerische Mathematik, 2008, 308, 105-129.	0.7	97
38	Possible links between extreme oxygen perturbations and the Cambrian radiation of animals. Nature Geoscience, 2019, 12, 468-474.	5.4	96
39	Controls on Mo isotope fractionations in a Mn-rich anoxic marine sediment, Gullmar Fjord, Sweden. Chemical Geology, 2012, 296-297, 73-82.	1.4	95
40	Sedimentary phosphorus and iron cycling in and below the oxygen minimum zone of the northern Arabian Sea. Biogeosciences, 2012, 9, 2603-2624.	1.3	95
41	Surface charge and growth of sulphate and carbonate green rust in aqueous media. Geochimica Et Cosmochimica Acta, 2013, 108, 141-153.	1.6	90
42	The onset of widespread marine red beds and the evolution of ferruginous oceans. Nature Communications, 2017, 8, 399.	5.8	86
43	Palaeoceanographic controls on spatial redox distribution over the Yangtze Platform during the Ediacaranâ€“Cambrian transition. Sedimentology, 2016, 63, 378-410.	1.6	85
44	Stepwise Earth oxygenation is an inherent property of global biogeochemical cycling. Science, 2019, 366, 1333-1337.	6.0	85
45	Bioavailability of zinc in marine systems through time. Nature Geoscience, 2013, 6, 125-128.	5.4	84
46	Controls on the evolution of Ediacaran metazoan ecosystems: A redox perspective. Geobiology, 2017, 15, 516-551.	1.1	79
47	The use of hydrous iron (III) oxides for the removal of hydrogen sulphide in aqueous systems. Water Research, 2002, 36, 825-834.	5.3	78
48	Searching for an oxygenation event in the fossiliferous Ediacaran of northwestern Canada. Chemical Geology, 2013, 362, 273-286.	1.4	78
49	A continental-weathering control on orbitally driven redox-nutrient cycling during Cretaceous Oceanic Anoxic Event 2. Geology, 2015, 43, 963-966.	2.0	77
50	Open system sulphate reduction in a diagenetic environment â€“ Isotopic analysis of barite (Î´34S and Î´18O) and pyrite (Î´34S) from the Tom and Jason Late Devonian Znâ€“Pbâ€“Ba deposits, Selwyn Basin, Canada. Geochimica Et Cosmochimica Acta, 2016, 180, 146-163.	1.6	77
51	Anoxia in the terrestrial environment during the late Mesoproterozoic. Geology, 2013, 41, 583-586.	2.0	75
52	Selenium isotope evidence for progressive oxidation of the Neoproterozoic biosphere. Nature Communications, 2015, 6, 10157.	5.8	72
53	Co-diagenesis of iron and phosphorus in hydrothermal sediments from the southern East Pacific Rise: Implications for the evaluation of paleoseawater phosphate concentrations. Geochimica Et Cosmochimica Acta, 2006, 70, 5883-5898.	1.6	70
54	Microfossils from the late Mesoproterozoic â€“ early Neoproterozoic Atar/El MreÃ¯ti Group, Taoudeni Basin, Mauritania, northwestern Africa. Precambrian Research, 2017, 291, 63-82.	1.2	69

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55	Multiple oscillations in Neoarchaean atmospheric chemistry. Earth and Planetary Science Letters, 2015, 431, 264-273.	1.8	67
56	A model for the oceanic mass balance of rhenium and implications for the extent of Proterozoic ocean anoxia. Geochimica Et Cosmochimica Acta, 2018, 227, 75-95.	1.6	66
57	Potentially bioavailable iron delivery by iceberg-hosted sediments and atmospheric dust to the polar oceans. Biogeosciences, 2016, 13, 3887-3900.	1.3	65
58	Biological regulation of atmospheric chemistry en route to planetary oxygenation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2571-E2579.	3.3	64
59	Phosphorus-limited conditions in the early Neoproterozoic ocean maintained low levels of atmospheric oxygen. Nature Geoscience, 2020, 13, 296-301.	5.4	63
60	Molybdenum drawdown during Cretaceous Oceanic Anoxic Event 2. Earth and Planetary Science Letters, 2016, 440, 81-91.	1.8	61
61	The evolution of the global selenium cycle: Secular trends in Se isotopes and abundances. Geochimica Et Cosmochimica Acta, 2015, 162, 109-125.	1.6	59
62	Determination of the stable iron isotopic composition of sequentially leached iron phases in marine sediments. Chemical Geology, 2016, 421, 93-102.	1.4	58
63	Stability of the nitrogen cycle during development of sulfidic water in the redox-stratified late Paleoproterozoic Ocean. Geology, 2013, 41, 655-658.	2.0	57
64	Early Palaeozoic ocean anoxia and global warming driven by the evolution of shallow burrowing. Nature Communications, 2018, 9, 2554.	5.8	56
65	A nutrient control on marine anoxia during the end-Permian mass extinction. Nature Geoscience, 2020, 13, 640-646.	5.4	56
66	Carbon isotopes in clastic rocks and the Neoproterozoic carbon cycle. Numerische Mathematik, 2020, 320, 97-124.	0.7	55
67	Aerobic iron and manganese cycling in a redox-stratified Mesoarchean epicontinental sea. Earth and Planetary Science Letters, 2018, 500, 28-40.	1.8	54
68	Phosphorus sources for phosphatic Cambrian carbonates. Bulletin of the Geological Society of America, 2014, 126, 145-163.	1.6	52
69	Phosphorus cycling in Lake Cadagno, Switzerland: A low sulfate euxinic ocean analogue. Geochimica Et Cosmochimica Acta, 2019, 251, 116-135.	1.6	51
70	Anaerobic ammonium-oxidising bacteria: A biological source of the bacteriohopanetetrol stereoisomer in marine sediments. Geochimica Et Cosmochimica Acta, 2014, 140, 50-64.	1.6	49
71	Reâ€“Os age constraints and new observations of Proterozoic glacial deposits in the Vazante Group, Brazil. Precambrian Research, 2013, 238, 199-213.	1.2	48
72	Solid phase associations, oceanic fluxes and the anthropogenic perturbation of transition metals in world river particulates. Marine Chemistry, 2000, 72, 17-31.	0.9	43

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73	Limited oxygen production in the Mesoarchean ocean. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6647-6652.	3.3	42
74	Evaluating a primary carbonate pathway for manganese enrichments in reducing environments. Earth and Planetary Science Letters, 2020, 538, 116201.	1.8	42
75	The Bacteriohopanepolyol Inventory of Novel Aerobic Methane Oxidising Bacteria Reveals New Biomarker Signatures of Aerobic Methanotrophy in Marine Systems. PLoS ONE, 2016, 11, e0165635.	1.1	41
76	In-situ determination of dissolved iron production in recent marine sediments. , 2002, 64, 282-291.		40
77	Phosphorus burial and diagenesis in the central Bering Sea (Bowers Ridge, IODP Site U1341): Perspectives on the marine P cycle. Chemical Geology, 2014, 363, 270-282.	1.4	40
78	Calibrating the temporal and spatial dynamics of the Ediacaran - Cambrian radiation of animals. Earth-Science Reviews, 2022, 225, 103913.	4.0	39
79	The biogeochemistry of ferruginous lakes and past ferruginous oceans. Earth-Science Reviews, 2020, 211, 103430.	4.0	36
80	Shallow water anoxia in the Mesoproterozoic ocean: Evidence from the Bashkir Meganticlinorium, Southern Urals. Precambrian Research, 2018, 317, 196-210.	1.2	32
81	Early phosphorus redigested. Nature Geoscience, 2017, 10, 75-76.	5.4	31
82	Molybdenum record from black shales indicates oscillating atmospheric oxygen levels in the early Paleoproterozoic. Numerische Mathematik, 2018, 318, 275-299.	0.7	31
83	Development of Iron Speciation Reference Materials for Palaeoredox Analysis. Geostandards and Geoanalytical Research, 2020, 44, 581-591.	1.7	31
84	A palaeoecological model for the late Mesoproterozoic â€“ early Neoproterozoic Atar/El MreÃ¯ti Group, Taoudeni Basin, Mauritania, northwestern Africa. Precambrian Research, 2017, 299, 1-14.	1.2	31
85	Pulsed oxygenation events drove progressive oxygenation of the early Mesoproterozoic ocean. Earth and Planetary Science Letters, 2021, 559, 116754.	1.8	28
86	The Sedimentary Geochemistry and Paleoenvironments Project. Geobiology, 2021, 19, 545-556.	1.1	26
87	Earthâ€™s Great Oxidation Event facilitated by the rise of sedimentary phosphorus recycling. Nature Geoscience, 2022, 15, 210-215.	5.4	26
88	Marine oxygen production and open water supported an active nitrogen cycle during the Marinoan Snowball Earth. Nature Communications, 2017, 8, 1316.	5.8	25
89	Anoxic development of sapropel S1 in the Nile Fan inferred from redox sensitive proxies, Fe speciation, Fe and Mo isotopes. Chemical Geology, 2017, 475, 24-39.	1.4	24
90	Development of a modified SEDEX phosphorus speciation method for ancient rocks and modern iron-rich sediments. Chemical Geology, 2019, 524, 383-393.	1.4	24

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91	Analysis of mass dependent and mass independent selenium isotope variability in black shales. Journal of Analytical Atomic Spectrometry, 2014, 29, 1648-1659.	1.6	23
92	Did anoxia terminate Ediacaran benthic communities? Evidence from early diagenesis. Precambrian Research, 2018, 313, 134-147.	1.2	23
93	Tracing water column euxinia in Eastern Mediterranean Sapropels S5 and S7. Chemical Geology, 2020, 545, 119627.	1.4	22
94	Molybdenum isotope fractionations observed under anoxic experimental conditions. Geochemical Journal, 2012, 46, 201-209.	0.5	21
95	Controls on amorphous organic matter type and sulphurization in a Mississippian black shale. Review of Palaeobotany and Palynology, 2019, 268, 1-18.	0.8	20
96	Extensive marine anoxia in the European epicontinental sea during the end-Triassic mass extinction. Global and Planetary Change, 2022, 210, 103771.	1.6	20
97	Repeated enrichment of trace metals and organic carbon on an Eocene high-energy shelf caused by anoxia and reworking. Geology, 2016, 44, 1011-1014.	2.0	19
98	Links between seawater paleoredox and the formation of sediment-hosted massive sulphide (SHMS) deposits â€" Fe speciation and Mo isotope constraints from Late Devonian mudstones. Chemical Geology, 2018, 490, 45-60.	1.4	19
99	Chromium isotopes in marine hydrothermal sediments. Chemical Geology, 2019, 529, 119286.	1.4	19
100	Black shale deposition and early diagenetic dolomite cementation during Oceanic Anoxic Event 1: The mid-Cretaceous Maracaibo Platform, northwestern South America. Numerische Mathematik, 2016, 316, 669-711.	0.7	18
101	Fraction-specific controls on the trace element distribution in iron formations: Implications for trace metal stable isotope proxies. Chemical Geology, 2017, 474, 17-32.	1.4	18
102	Latest Permian carbonate carbon isotope variability traces heterogeneous organic carbon accumulation and authigenic carbonate formation. Climate of the Past, 2017, 13, 1635-1659.	1.3	18
103	Spatio-temporal evolution of ocean redox and nitrogen cycling in the early Cambrian Yangtze ocean. Chemical Geology, 2020, 554, 119803.	1.4	18
104	Molybdenum isotope and trace metal signals in an iron-rich Mesoproterozoic ocean: A snapshot from the Vindhyan Basin, India. Precambrian Research, 2020, 343, 105718.	1.2	18
105	A template for an improved rock-based subdivision of the pre-Cryogenian timescale. Journal of the Geological Society, 2022, 179, .	0.9	18
106	A short-lived oxidation event during the early Ediacaran and delayed oxygenation of the Proterozoic ocean. Earth and Planetary Science Letters, 2022, 577, 117274.	1.8	18
107	A nutrient control on expanded anoxia and global cooling during the Late Ordovician mass extinction. Communications Earth & Environment, 2022, 3, .	2.6	17
108	Decoupled oxygenation of the Ediacaran ocean and atmosphere during the rise of early animals. Earth and Planetary Science Letters, 2022, 591, 117619.	1.8	17

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109	No effect of thermal maturity on the Mo, U, Cd, and Zn isotope compositions of Lower Jurassic organic-rich sediments. Geology, 2022, 50, 598-602.	2.0	16
110	Porewater sulphur geochemistry and fossil preservation during phosphate diagenesis in a Lower Cretaceous shelf mudstone. Sedimentology, 1998, 45, 875-887.	1.6	15
111	A chemical weathering control on the delivery of particulate iron to the continental shelf. Geochimica Et Cosmochimica Acta, 2021, 308, 204-216.	1.6	15
112	Arid climate disturbance and the development of salinized lacustrine oil shale in the Middle Jurassic Dameigou Formation, Qaidam Basin, northwestern China. Palaeogeography, Palaeoclimatology, Palaeoecology, 2021, 577, 110533.	1.0	15
113	The origin and rise of complex life: progress requires interdisciplinary integration and hypothesis testing. Interface Focus, 2020, 10, 20200024.	1.5	13
114	A Mississippian black shale record of redox oscillation in the Craven Basin, UK. Palaeogeography, Palaeoclimatology, Palaeoecology, 2020, 538, 109423.	1.0	11
115	Progressive development of ocean anoxia in the end-Permian pelagic Panthalassa. Global and Planetary Change, 2021, 207, 103650.	1.6	11
116	Pyrite mega-analysis reveals modes of anoxia through geological time. Science Advances, 2022, 8, eabj5687.	4.7	11
117	Copper and its Isotopes in Organic-Rich Sediments: From the Modern Peru Margin to Archean Shales. Geosciences (Switzerland), 2019, 9, 325.	1.0	10
118	Redox evolution and the development of oxygen minimum zones in the Eastern Mediterranean Levantine basin during the early Holocene. Geochimica Et Cosmochimica Acta, 2021, 297, 82-100.	1.6	10
119	Detection and removal of dissolved hydrogen sulphide in flowâ€through systems via the sulphidation of hydrous iron (III) oxides. Environmental Technology (United Kingdom), 2003, 24, 217-229.	1.2	9
120	Curation and Analysis of Global Sedimentary Geochemical Data to Inform Earth History. GSA Today, 2021, 31, 4-10.	1.1	9
121	A multiproxy study distinguishes environmental change from diagenetic alteration in the recent sedimentary record of the inner Cadiz Bay (SW Spain). Holocene, 2016, 26, 1355-1370.	0.9	8
122	Carbonate shutdown, phosphogenesis and the variable style of marine anoxia in the late Famennian (Late Devonian) in western Laurentia. Palaeogeography, Palaeoclimatology, Palaeoecology, 2022, 589, 110835.	1.0	8
123	Extending the applications of sediment profile imaging to geochemical interpretations using colour. Continental Shelf Research, 2019, 185, 16-22.	0.9	7
124	Isotopic constraints on ocean redox at the end of the Eocene. Earth and Planetary Science Letters, 2021, 562, 116814.	1.8	6
125	Does the Paleoproterozoic Animikie Basin record the sulfidic ocean transition?: COMMENT. Geology, 2011, 39, e241-e241.	2.0	5
126	Unravelling the paleoecology of flat clams: New insights from an Upper Triassic halobiid bivalve. Global and Planetary Change, 2020, 190, 103195.	1.6	4

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127	The Ediacaran â€˜Miaohe Memberâ€™ of South China: new insights from palaeoredox proxies and stable isotope data. Geological Magazine, 0, , 1-15.	0.9	3
128	The origin of early-Paleozoic banded iron formations in NW China. Gondwana Research, 2021, 93, 218-226.	3.0	3
129	Limited expression of the Paleoproterozoic Oklo natural nuclear reactor phenomenon in the aftermath of a widespread deoxygenation event ~2.11â€“2.06 billion years ago. Chemical Geology, 2021, 578, 120315.	1.4	3
130	Origin of the Neoarchean VMS-BIF Metallogenic Association in the Qingyuan Greenstone Belt, North China Craton: Constraints from Geology, Geochemistry, and Iron and Multiple Sulfur (<i>Î´</i>33S,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.8	3
131	Insights from modern diffuse-flow hydrothermal systems into the origin of post-GOE deep-water Fe-Si precipitates. Geochimica Et Cosmochimica Acta, 2022, 317, 1-17.	1.6	2
132	Combining Nitrogen Isotopes and Redox Proxies Strengthens Paleoenvironmental Interpretations: Examples From Neoproterozoic Snowball Earth Sediments. Frontiers in Earth Science, 0, 10, .	0.8	2