

# The rise of oxygen in Earth's early ocean and atmosphere

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Citation Report

#	ARTICLE	IF	CITATIONS
1	The Distribution of Dissolved Iron in the West Atlantic Ocean. PLoS ONE, 2014, 9, e101323.	1.1	135
2	Oxygen fluctuations stalled life on Earth. Nature, 2014, , .	13.7	0
3	Evolutionary two-step. Nature Geoscience, 2014, 7, 245-245.	5.4	0
4	Attempt at a systemic outlook on aging and carcinogenesis. Bio-Algorithms and Med-Systems, 2014, 10, 101-115.	1.0	1
5	A modern framework for the interpretation of <sup>238</sup> U/ <sup>235</sup> U in studies of ancient ocean redox. Earth and Planetary Science Letters, 2014, 400, 184-194.	1.8	159
6	Biofilms: Five-Star Accommodations for the Aerobically Challenged. Current Biology, 2014, 24, R1002-R1004.	1.8	3
7	The elements of marine life. Nature Geoscience, 2014, 7, 855-856.	5.4	36
8	An iodine record of Paleoproterozoic surface ocean oxygenation. Geology, 2014, 42, 619-622.	2.0	111
9	Defining the discipline of geobiology. National Science Review, 2014, 1, 483-485.	4.6	3
10	Nutrition: Rejection Is the Fly's Protection. Current Biology, 2014, 24, R278-R280.	1.8	1
11	A bump-and-hole approach to engineer controlled selectivity of BET bromodomain chemical probes. Science, 2014, 346, 638-641.	6.0	128
12	Low Mid-Proterozoic atmospheric oxygen levels and the delayed rise of animals. Science, 2014, 346, 635-638.	6.0	594
13	Marine cements reveal the structure of an anoxic, ferruginous Neoproterozoic ocean. Journal of the Geological Society, 2014, 171, 741-744.	0.9	32
14	A rapid and synchronous initiation of the wide spread Cryogenian glaciations. Precambrian Research, 2014, 255, 401-411.	1.2	107
15	The fitness of the environments of air and water for photosynthesis, growth, reproduction and dispersal of photoautotrophs: An evolutionary and biogeochemical perspective. Aquatic Botany, 2014, 118, 4-13.	0.8	47
16	Onset of oxidative weathering of continents recorded in the geochemistry of ancient glacial diamictites. Earth and Planetary Science Letters, 2014, 408, 87-99.	1.8	59
17	Oxygenation of the Archean atmosphere: New paleosol constraints from eastern India. Geology, 2014, 42, 923-926.	2.0	102
18	Of early animals, anaerobic mitochondria, and a modern sponge. BioEssays, 2014, 36, 924-932.	1.2	28

#	ARTICLE	IF	CITATIONS
19	TAPHONOMY OF CAMBRIAN PHOSPHATIC SMALL SHELLY FOSSILS. <i>Palaios</i> , 2014, 29, 295-308.	0.6	25
20	Enhanced organic carbon burial in large Proterozoic lakes: Implications for atmospheric oxygenation. <i>Precambrian Research</i> , 2014, 255, 202-215.	1.2	11
21	Oxygen and animal evolution: Did a rise of atmospheric oxygen "trigger" the origin of animals?. <i>BioEssays</i> , 2014, 36, 1145-1155.	1.2	99
22	Oxygen and animals in Earth history. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3907-3908.	3.3	63
23	Redox heterogeneity of subsurface waters in the Mesoproterozoic ocean. <i>Geobiology</i> , 2014, 12, 373-386.	1.1	115
24	Evolution: A Fixed-Nitrogen Fix in the Early Ocean?. <i>Current Biology</i> , 2014, 24, R276-R278.	1.8	8
25	Ocean redox structure across the Late Neoproterozoic Oxygenation Event: A nitrogen isotope perspective. <i>Earth and Planetary Science Letters</i> , 2014, 396, 1-13.	1.8	119
26	Did phosphorus derived from the weathering of large igneous provinces fertilize the Neoproterozoic ocean?. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 1723-1738.	1.0	96
27	Cyanobacteria and the Great Oxidation Event: evidence from genes and fossils. <i>Palaeontology</i> , 2015, 58, 769-785.	1.0	207
28	Heterogeneously hydrated mantle beneath the late Archean Yilgarn Craton. <i>Lithos</i> , 2015, 238, 76-85.	0.6	18
29	Causes and consequences of mid-Proterozoic anoxia. <i>Geophysical Research Letters</i> , 2015, 42, 8538-8546.	1.5	114
30	Origin of marine planktonic cyanobacteria. <i>Scientific Reports</i> , 2015, 5, 17418.	1.6	143
31	Late Proterozoic Transitions in Climate, Oxygen, and Tectonics, and the Rise of Complex Life. <i>The Paleontological Society Papers</i> , 2015, 21, 47-82.	0.8	20
32	Multicellular Consortia Preserved in Biogenic Ductile-Plastic Nodules of Okondja Basin (Gabon) by 2.1 Ga. <i>Journal of Geology &amp; Geosciences</i> , 2015, 04, .	0.2	3
33	The Talvivaara Black Shale-Hosted Ni-Zn-Cu-Co Deposit in Eastern Finland. , 2015, , 557-612.		14
34	Is the Neoproterozoic oxygen burst a supercontinent legacy?. <i>Frontiers in Earth Science</i> , 2015, 3, .	0.8	6
35	Seeking sunlight: rapid phototactic motility of filamentous mat-forming cyanobacteria optimize photosynthesis and enhance carbon burial in Lake Huron's submerged sinkholes. <i>Frontiers in Microbiology</i> , 2015, 6, 930.	1.5	27
36	Nitrate Storage and Dissimilatory Nitrate Reduction by Eukaryotic Microbes. <i>Frontiers in Microbiology</i> , 2015, 6, 1492.	1.5	93

#	ARTICLE	IF	CITATIONS
37	The <i>LysR</i> -type transcription factor <i>PacR</i> is a global regulator of photosynthetic carbon assimilation in <i>Acetivibrio nabaena</i> . <i>Environmental Microbiology</i> , 2015, 17, 3341-3351.	1.8	16
38	Deep-water microbialites of the Mesoproterozoic Dismal Lakes Group: microbial growth, lithification, and implications for coniform stromatolites. <i>Geobiology</i> , 2015, 13, 15-32.	1.1	32
39	Sulfur isotope composition of carbonate-associated sulfate from the Mesoproterozoic Jixian Group, North China: Implications for the marine sulfur cycle. <i>Precambrian Research</i> , 2015, 266, 319-336.	1.2	33
41	The evolution of the global selenium cycle: Secular trends in Se isotopes and abundances. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 162, 109-125.	1.6	59
42	Morphological adaptations of 3.22 Ga-old tufted microbial mats to Archean coastal habitats (Moodies) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.2	98
43	Sedimentology, chemostratigraphy, and stromatolites of lower Paleoproterozoic carbonates, Turee Creek Group, Western Australia. <i>Precambrian Research</i> , 2015, 266, 194-211.	1.2	22
44	Rise to modern levels of ocean oxygenation coincided with the Cambrian radiation of animals. <i>Nature Communications</i> , 2015, 6, 7142.	5.8	250
45	The rise of oxygen and siderite oxidation during the Lomagundi Event. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 6562-6567.	3.3	76
46	Multiproxy constraints on alteration and primary compositions of Ediacaran deep-water carbonate rocks, Yangtze Platform, South China. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 163, 262-278.	1.6	51
47	Occurrence of Far-Red Light Photoacclimation (FaRLiP) in Diverse Cyanobacteria. <i>Life</i> , 2015, 5, 4-24.	1.1	155
48	Arsenic Demethylation by a C <sub>4</sub> -As Lyase in Cyanobacterium <i>Nostoc</i> sp. PCC 7120. <i>Environmental Science &amp; Technology</i> , 2015, 49, 14350-14358.	4.6	55
49	Experimental dissolution of molybdenum-sulphides at low oxygen concentrations: A first-order approximation of late Archean atmospheric conditions. <i>Earth and Space Science</i> , 2015, 2, 173-180.	1.1	13
50	Geomicrobiology and Microbial Geochemistry. <i>Elements</i> , 2015, 11, 389-394.	0.5	20
51	Emerging Biogeochemical Views of Earth's Ancient Microbial Worlds. <i>Elements</i> , 2015, 11, 415-421.	0.5	32
52	Molecular clocks and the early evolution of metazoan nervous systems. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2015, 370, 20150046.	1.8	36
53	Heterogeneous redox conditions and a shallow chemocline in the Mesoproterozoic ocean: Evidence from carbon-sulfur-iron relationships. <i>Precambrian Research</i> , 2015, 257, 94-108.	1.2	68
54	Decline in oceanic sulfate levels during the early Mesoproterozoic. <i>Precambrian Research</i> , 2015, 258, 36-47.	1.2	65
55	Marine redox conditions in the middle Proterozoic ocean and isotopic constraints on authigenic carbonate formation: Insights from the Chuanlinggou Formation, Yanshan Basin, North China. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 150, 90-105.	1.6	71

#	ARTICLE	IF	CITATIONS
56	Goldilocks and the three inorganic equilibria: how Earth's chemistry and life coevolve to be nearly in tune. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015, 373, 20140188.	1.6	13
57	Selenium isotopes support free O <sub>2</sub> in the latest Archean. <i>Geology</i> , 2015, 43, 259-262.	2.0	74
58	Controls on trace metal authigenic enrichment in reducing sediments: Insights from modern oxygen-deficient settings. <i>Numerische Mathematik</i> , 2015, 315, 77-119.	0.7	175
59	First whiffs of atmospheric oxygen triggered onset of crustal gold cycle. <i>Mineralium Deposita</i> , 2015, 50, 5-23.	1.7	51
60	Sulfur-cycling fossil bacteria from the 1.8-Ga Duck Creek Formation provide promising evidence of evolution's null hypothesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 2087-2092.	3.3	51
61	Connecting biodiversity and potential functional role in modern euxinic environments by microbial metagenomics. <i>ISME Journal</i> , 2015, 9, 1648-1661.	4.4	123
62	The terrestrial uranium isotope cycle. <i>Nature</i> , 2015, 517, 356-359.	13.7	142
63	Oxygen Sensing and Signaling. <i>Annual Review of Plant Biology</i> , 2015, 66, 345-367.	8.6	212
64	Sustaining Life on Planet Earth: Metalloenzymes Mastering Dioxygen and Other Chewy Gases. <i>Metal Ions in Life Sciences</i> , 2015, , .	2.8	22
65	Ore deposits in an evolving Earth: an introduction. <i>Geological Society Special Publication</i> , 2015, 393, 1-8.	0.8	10
66	Uranium and molybdenum isotope evidence for an episode of widespread ocean oxygenation during the late Ediacaran Period. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 156, 173-193.	1.6	222
67	Precipitation of iron silicate nanoparticles in early Precambrian oceans marks Earth's first iron age. <i>Geology</i> , 2015, 43, 303-306.	2.0	83
68	A fresh look at the evolution and diversification of photochemical reaction centers. <i>Photosynthesis Research</i> , 2015, 126, 111-134.	1.6	104
69	Origin and Evolution of Water Oxidation before the Last Common Ancestor of the Cyanobacteria. <i>Molecular Biology and Evolution</i> , 2015, 32, 1310-1328.	3.5	96
70	Planetary Atmospheres. , 2015, , 429-472.		16
71	Magnesium isotopic compositions of the Mesoproterozoic dolostones: Implications for Mg isotopic systematics of marine carbonates. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 164, 333-351.	1.6	75
72	Geochemical stratigraphy, sedimentology, and Mo isotope systematics of the ca. 2.58–2.50 Ga-old Transvaal Supergroup carbonate platform, South Africa. <i>Precambrian Research</i> , 2015, 266, 27-46.	1.2	43
73	Sulfate: A time capsule for Earth's O <sub>2</sub> , O <sub>3</sub> , and H <sub>2</sub> O. <i>Chemical Geology</i> , 2015, 395, 108-118.	1.4	52

#	ARTICLE	IF	CITATIONS
74	Molybdenum Cofactors and Their role in the Evolution of Metabolic Pathways. Springer Briefs in Molecular Science, 2015, , .	0.1	3
75	Hole hopping through tyrosine/tryptophan chains protects proteins from oxidative damage. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10920-10925.	3.3	185
76	Statistical analysis of iron geochemical data suggests limited late Proterozoic oxygenation. Nature, 2015, 523, 451-454.	13.7	484
77	Functional Oxygen Sensitivity of Astrocytes. Journal of Neuroscience, 2015, 35, 10460-10473.	1.7	219
78	Trace Element Content of Sedimentary Pyrite in Black Shales. Economic Geology, 2015, 110, 1389-1410.	1.8	307
79	Atmosphere, Metabolism and Longevity. Healthy Ageing and Longevity, 2015, , 285-299.	0.2	1
80	Transition to an oxygen-rich atmosphere with an extensive overshoot triggered by the Paleoproterozoic snowball Earth. Earth and Planetary Science Letters, 2015, 419, 178-186.	1.8	17
81	<i>In situ</i> trace metal analysis of Neoproterozoic to Ordovician shallow-marine microbial carbonate-hosted pyrites. Geobiology, 2015, 13, 316-339.	1.1	12
82	Germanium/silicon of the Ediacaran-Cambrian Laobao cherts: Implications for the bedded chert formation and paleoenvironment interpretations. Geochemistry, Geophysics, Geosystems, 2015, 16, 751-763.	1.0	51
83	Was the Ediacaran-Cambrian radiation a unique evolutionary event?. Paleobiology, 2015, 41, 1-15.	1.3	32
84	Ni isotope fractionation during sorption to ferrihydrite: Implications for Ni in banded iron formations. Chemical Geology, 2015, 400, 56-64.	1.4	64
85	A public goods approach to major evolutionary innovations. Geobiology, 2015, 13, 308-315.	1.1	19
86	Cyanobacteria: the bright and dark sides of a charming group. Biodiversity and Conservation, 2015, 24, 711-738.	1.2	47
87	Variations in the abundance of photosynthetic oxygen through Precambrian and Paleozoic time in relation to biotic evolution and mass extinctions: evidence from Mn/Fe ratios. Precambrian Research, 2015, 264, 30-35.	1.2	7
88	The geochemistry of carbonate diagenesis: The past, present and future. Sedimentology, 2015, 62, 1233-1304.	1.6	415
89	Molybdenum Availability in the Ecosystems (Geochemistry Aspects, When and How Did It Appear?). Springer Briefs in Molecular Science, 2015, , 5-19.	0.1	2
90	A statistical analysis of the carbon isotope record from the Archean to Phanerozoic and implications for the rise of oxygen. Numerische Mathematik, 2015, 315, 275-316.	0.7	130
91	Reappraisal of hydrocarbon biomarkers in Archean rocks. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5915-5920.	3.3	230

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92	Low temperature equilibrium isotope fractionation and isotope exchange kinetics between U(IV) and U(VI). <i>Geochimica Et Cosmochimica Acta</i> , 2015, 158, 262-275.	1.6	35
93	The Ecological Physiology of Earth's Second Oxygen Revolution. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2015, 46, 215-235.	3.8	106
94	Microbes, Mineral Evolution, and the Rise of Microcontinents—Origin and Coevolution of Life with Early Earth. <i>Astrobiology</i> , 2015, 15, 922-939.	1.5	31
95	A theoretical prediction of chemical zonation in early oceans (>520 Ma). <i>Science China Earth Sciences</i> , 2015, 58, 1901-1909.	2.3	58
96	Geochemistry of Neoproterozoic black shales from Svalbard: Implications for oceanic redox conditions spanning Cryogenian glaciations. <i>Chemical Geology</i> , 2015, 417, 383-393.	1.4	63
97	Isotopes, DUPAL, LLSVPs, and Anekantavada. <i>Chemical Geology</i> , 2015, 419, 10-28.	1.4	105
98	The Proterozoic Record of Eukaryotes. <i>Paleobiology</i> , 2015, 41, 610-632.	1.3	139
99	MINERAL ECOLOGY: CHANCE AND NECESSITY IN THE MINERAL DIVERSITY OF TERRESTRIAL PLANETS. <i>Canadian Mineralogist</i> , 2015, 53, 295-324.	0.3	75
100	Hydrocarbons preserved in a ~2.7 Ga outcrop sample from the Fortescue Group, Pilbara Craton, Western Australia. <i>Geobiology</i> , 2015, 13, 99-111.	1.1	12
101	Assessing the distribution of sedimentary C <sub>40</sub> carotenoids through time. <i>Geobiology</i> , 2015, 13, 139-151.	1.1	74
102	Life in the Aftermath of Mass Extinctions. <i>Current Biology</i> , 2015, 25, R941-R952.	1.8	81
103	Dynamic changes in sulfate sulfur isotopes preceding the Ediacaran Shuram Excursion. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 170, 204-224.	1.6	36
105	Snowball cooling after algal rise. <i>Nature Geoscience</i> , 2015, 8, 659-662.	5.4	40
106	Euxinic conditions recorded in the ca. 1.93 Ga Bravo Lake Formation, Nunavut (Canada): Implications for oceanic redox evolution. <i>Chemical Geology</i> , 2015, 417, 148-162.	1.4	16
107	Increase of seawater Mo inventory and ocean oxygenation during the early Cambrian. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2015, 440, 621-631.	1.0	35
108	Cycles of nutrient trace elements in the Phanerozoic ocean. <i>Gondwana Research</i> , 2015, 28, 1282-1293.	3.0	112
109	Cyanobacterial Inhabitation on Archean Rock Surfaces in the Pilbara Craton, Western Australia. <i>Astrobiology</i> , 2015, 15, 559-574.	1.5	16
110	Antarctic microbial mats: A modern analog for Archean lacustrine oxygen oases. <i>Geology</i> , 2015, 43, 887-890.	2.0	55

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111	A redox-stratified ocean 3.2 billion years ago. <i>Earth and Planetary Science Letters</i> , 2015, 430, 43-53.	1.8	114
112	Redox condition of the late Neoproterozoic pelagic deep ocean: <sup>57</sup> Fe Mössbauer analyses of pelagic mudstones in the Ediacaran accretionary complex, Wales, UK. <i>Tectonophysics</i> , 2015, 662, 472-480.	0.9	11
113	Transient episodes of mild environmental oxygenation and oxidative continental weathering during the late Archean. <i>Science Advances</i> , 2015, 1, e1500777.	4.7	61
114	Remarkable insights into the paleoecology of the Avalonian Ediacaran macrobiota. <i>Gondwana Research</i> , 2015, 27, 1355-1380.	3.0	113
115	Light-driven hydrogen production from Photosystem I-catalyst hybrids. <i>Current Opinion in Chemical Biology</i> , 2015, 25, 1-8.	2.8	58
116	Nitrogen isotope evidence for alkaline lakes on late Archean continents. <i>Earth and Planetary Science Letters</i> , 2015, 411, 1-10.	1.8	104
117	Time in Redox Adaptation Processes: From Evolution to Hormesis. <i>International Journal of Molecular Sciences</i> , 2016, 17, 1649.	1.8	58
118	Evolution of Eukaryotes with Respect to Atmosphere Oxygen Appearance and Rise. , 2016, , 145-159.		0
119	Oxygen signaling: Call for papers. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2016, 311, R948-R948.	0.9	0
120	Aerotaxis in the closest relatives of animals. <i>ELife</i> , 2016, 5, .	2.8	29
121	Biodegradation of oil hydrocarbons and its implications for source identification. , 2016, , 869-916.		32
122	Cyanobacterial Diazotrophy and Earth's Delayed Oxygenation. <i>Frontiers in Microbiology</i> , 2016, 7, 1526.	1.5	14
123	Photosynthetic Versatility in the Genome of <i>Geitlerinema</i> sp. PCC 9228 (Formerly <i>Oscillatoria</i> ) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 267 <i>Microbiology</i> , 2016, 7, 1546.	1.5	37
124	A Proposal for Formation of Archaean Stromatolites before the Advent of Oxygenic Photosynthesis. <i>Frontiers in Microbiology</i> , 2016, 7, 1784.	1.5	16
125	Aerobic Lineage of the Oxidative Stress Response Protein Rubrerythrin Emerged in an Ancient Microaerobic, (Hyper)Thermophilic Environment. <i>Frontiers in Microbiology</i> , 2016, 7, 1822.	1.5	38
126	Cyanobacteria in Sulfidic Spring Microbial Mats Can Perform Oxygenic and Anoxygenic Photosynthesis Simultaneously during an Entire Diurnal Period. <i>Frontiers in Microbiology</i> , 2016, 7, 1973.	1.5	20
127	A Comprehensive Study of Cyanobacterial Morphological and Ecological Evolutionary Dynamics through Deep Geologic Time. <i>PLoS ONE</i> , 2016, 11, e0162539.	1.1	69
128	Reconstructing the Origin of Oxygenic Photosynthesis: Do Assembly and Photoactivation Recapitulate Evolution?. <i>Frontiers in Plant Science</i> , 2016, 7, 257.	1.7	59



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129	Paradigm shift in determining Neoproterozoic atmospheric oxygen. <i>Geology</i> , 2016, 44, 651-654.	2.0	80
130	The evolution of the Krebs cycle: A promising subject for meaningful learning of biochemistry. <i>Biochemistry and Molecular Biology Education</i> , 2016, 44, 288-296.	0.5	3
131	Oceanic oxygenation events in the anoxic Ediacaran ocean. <i>Geobiology</i> , 2016, 14, 457-468.	1.1	241
132	Effect of thermal maturity on remobilization of molybdenum in black shales. <i>Earth and Planetary Science Letters</i> , 2016, 449, 311-320.	1.8	62
133	Environmental context for the terminal Ediacaran biomineralization of animals. <i>Geobiology</i> , 2016, 14, 344-363.	1.1	78
134	Arsenic stress after the Proterozoic glaciations. <i>Scientific Reports</i> , 2016, 5, 17789.	1.6	30
135	Ediacaran distributions in space and time: testing assemblage concepts of earliest macroscopic body fossils. <i>Paleobiology</i> , 2016, 42, 574-594.	1.3	84
136	Cyanobacterial evolution during the Precambrian. <i>International Journal of Astrobiology</i> , 2016, 15, 187-204.	0.9	108
137	Rising levels of atmospheric oxygen and evolution of Nrf2. <i>Scientific Reports</i> , 2016, 6, 27740.	1.6	52
138	Modeling $N_2$ through Geological Time: Implications for Planetary Climates and Atmospheric Biosignatures. <i>Astrobiology</i> , 2016, 16, 949-963.	1.5	53
139	In situ Imaging of Multi-elements on Pyrite Using Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry. <i>Chinese Journal of Analytical Chemistry</i> , 2016, 44, 1665-1670.	0.9	6
140	Continental growth and mantle hydration as intertwined feedback cycles in the thermal evolution of Earth. <i>Physics of the Earth and Planetary Interiors</i> , 2016, 255, 27-49.	0.7	34
141	Pyrite trace element chemistry of the Velkerri Formation, Roper Group, McArthur Basin: Evidence for atmospheric oxygenation during the Boring Billion. <i>Precambrian Research</i> , 2016, 281, 13-26.	1.2	57
142	Two-step rise of atmospheric oxygen linked to the growth of continents. <i>Nature Geoscience</i> , 2016, 9, 417-424.	5.4	162
143	Enzymatic Antioxidant Systems in Early Anaerobes: Theoretical Considerations. <i>Astrobiology</i> , 2016, 16, 348-358.	1.5	48
144	Petrography and the REE-composition of apatite in the Paleoproterozoic PilgūjĀrvi Sedimentary Formation, Pechenga Greenstone Belt, Russia. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 186, 135-153.	1.6	26
145	FRAMBOIDAL PYRITE SHROUD CONFIRMS THE 'DEATH MASK' MODEL FOR MOLDIC PRESERVATION OF EDIACARAN SOFT-BODIED ORGANISMS. <i>Palaios</i> , 2016, 31, 259-274.	0.6	61
146	Marine Mo biogeochemistry in the context of dynamically euxinic mid-depth waters: A case study of the lower Cambrian Niutitang shales, South China. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 183, 79-93.	1.6	90

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147	Carbon mineral ecology: Predicting the undiscovered minerals of carbon. <i>American Mineralogist</i> , 2016, 101, 889-906.	0.9	46
148	Rare earth elements in Hamersley BIF minerals. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 184, 311-328.	1.6	46
149	Powered by light: Phototrophy and photosynthesis in prokaryotes and its evolution. <i>Microbiological Research</i> , 2016, 186-187, 99-118.	2.5	54
150	Sedimentary chromium isotopic compositions across the Cretaceous OAE2 at Demerara Rise Site 1258. <i>Chemical Geology</i> , 2016, 429, 85-92.	1.4	44
151	Contribution of oxygenic photosynthesis to palaeo-oceanic organic carbon sink fluxes in Early Cambrian Upper Yangtze shallow sea: Evidence from black shale record. <i>Journal of Earth Science (Wuhan, China)</i> , 2016, 27, 211-224.	1.1	8
152	Cu isotopes in marine black shales record the Great Oxidation Event. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 4941-4946.	3.3	88
153	On the language and physiology of dormancy and quiescence in plants. <i>Journal of Experimental Botany</i> , 2016, 67, 3189-3203.	2.4	112
154	Sedimentary provenance and weathering processes in the 1.1 Ga Midcontinental Rift of the Keweenaw Peninsula, Michigan, USA. <i>Precambrian Research</i> , 2016, 275, 225-240.	1.2	19
155	One step beyond a ribosome: The ancient anaerobic core. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 1027-1038.	0.5	51
156	Evolution of Oxygenic Photosynthesis. <i>Annual Review of Earth and Planetary Sciences</i> , 2016, 44, 647-683.	4.6	334
157	Field and laboratory tests for recognition of Ediacaran paleosols. <i>Gondwana Research</i> , 2016, 36, 107-123.	3.0	41
158	Ancient micrometeorites suggestive of an oxygen-rich Archaean upper atmosphere. <i>Nature</i> , 2016, 533, 235-238.	13.7	45
159	Life: the first two billion years. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2016, 371, 20150493.	1.8	102
160	Limited role for methane in the mid-Proterozoic greenhouse. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11447-11452.	3.3	69
161	Integrated geochemical-petrographic insights from component-selective $\delta^{238}\text{U}$ of Cryogenian marine carbonates. <i>Geology</i> , 2016, 44, 935-938.	2.0	52
162	The mass spectrometer for planetary exploration (MASPEX)., 2016, , .		34
163	A modeling case for high atmospheric oxygen concentrations during the Mesozoic and Cenozoic. <i>Geology</i> , 2016, 44, 1023-1026.	2.0	49
164	Tubular microfossils from $\sim 2.8$ to 2.7 Ga-old lacustrine deposits of South Africa: A sign for early origin of eukaryotes?. <i>Precambrian Research</i> , 2016, 286, 180-194.	1.2	15

#	ARTICLE	IF	CITATIONS
165	Chromium isotope, REE and redox-sensitive trace element chemostratigraphy across the late Neoproterozoic Ghaub glaciation, Otavi Group, Namibia. <i>Precambrian Research</i> , 2016, 286, 234-249.	1.2	50
167	Basin redox and primary productivity within the Mesoproterozoic Roper Seaway. <i>Chemical Geology</i> , 2016, 440, 101-114.	1.4	89
168	Behaviors of trace elements in Neoproterozoic and Paleoproterozoic paleosols: Implications for atmospheric oxygen evolution and continental oxidative weathering. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 192, 203-219.	1.6	12
169	The origin and future of oxidative stress pathology: From the recognition of carcinogenesis as an iron addiction with ferroptosis resistance to non-thermal plasma therapy. <i>Pathology International</i> , 2016, 66, 245-259.	0.6	90
170	Sedimentological perspectives on climatic, atmospheric and environmental change in the Neoproterozoic Era. <i>Sedimentology</i> , 2016, 63, 253-306.	1.6	75
171	Mass-independent fractionation of oxygen isotopes during H <sub>2</sub> O <sub>2</sub> formation by gas-phase discharge from water vapour. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 193, 54-65.	1.6	8
172	SIMS and NanoSIMS analyses of well-preserved microfossils imply oxygen-producing photosynthesis in the Mesoproterozoic anoxic ocean. <i>Chemical Geology</i> , 2016, 441, 24-34.	1.4	21
173	Manganese oxide shuttling in pre-GOE oceans – evidence from molybdenum and iron isotopes. <i>Earth and Planetary Science Letters</i> , 2016, 452, 69-78.	1.8	69
174	RESEARCH FOCUS: Cracking the Neoproterozoic atmosphere?. <i>Geology</i> , 2016, 44, 687-688.	2.0	3
175	Earliest land plants created modern levels of atmospheric oxygen. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 9704-9709.	3.3	236
176	Oxidative stress in the pelvic cavity and its role in the pathogenesis of endometriosis. <i>Fertility and Sterility</i> , 2016, 106, 1011-1017.	0.5	149
177	Redox-dependent distribution of early macro-organisms: Evidence from the terminal Ediacaran Khatyspyt Formation in Arctic Siberia. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2016, 461, 122-139.	1.0	57
178	The Astrobiology Primer v2.0. <i>Astrobiology</i> , 2016, 16, 561-653.	1.5	133
179	Rapid oxygenation of Earth's atmosphere 2.33 billion years ago. <i>Science Advances</i> , 2016, 2, e1600134.	4.7	264
180	SPECTRAL PROPERTIES OF COOL STARS: EXTENDED ABUNDANCE ANALYSIS OF 1,617 PLANET-SEARCH STARS. <i>Astrophysical Journal, Supplement Series</i> , 2016, 225, 32.	3.0	277
181	Developing ecospheres on transiently habitable planets: the genesis project. <i>Astrophysics and Space Science</i> , 2016, 361, 1.	0.5	8
182	Atmospheric weathering of Scandinavian alum shales and the fractionation of C, N and S isotopes. <i>Applied Geochemistry</i> , 2016, 74, 94-108.	1.4	16
183	Open system models of isotopic evolution in Earth's silicate reservoirs: Implications for crustal growth and mantle heterogeneity. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 195, 142-157.	1.6	23

#	ARTICLE	IF	CITATIONS
184	Evidence for a reducing Archean ambient mantle and its effects on the carbon cycle. <i>Geology</i> , 2016, 44, 751-754.	2.0	104
185	Is the Lomagundi Event present on the Rae craton? A case study from the Murmac Bay Group. <i>Canadian Journal of Earth Sciences</i> , 2016, 53, 457-465.	0.6	3
186	The role of microaerophilic Fe-oxidizing microorganisms in producing banded iron formations. <i>Geobiology</i> , 2016, 14, 509-528.	1.1	67
187	The evolution of Earth's biogeochemical nitrogen cycle. <i>Earth-Science Reviews</i> , 2016, 160, 220-239.	4.0	269
188	Alien Mindscapes—A Perspective on the Search for Extraterrestrial Intelligence. <i>Astrobiology</i> , 2016, 16, 661-676.	1.5	54
189	Early life processes: A geo- and astrobiological approach. <i>International Journal of Astrobiology</i> , 2016, 15, 161-163.	0.9	1
190	Planktonic marine iron oxidizers drive iron mineralization under low-oxygen conditions. <i>Geobiology</i> , 2016, 14, 499-508.	1.1	40
191	Delayed euxinia in Paleoproterozoic intracontinental seas: Vital havens for the evolution of eukaryotes?. <i>Precambrian Research</i> , 2016, 287, 108-114.	1.2	7
192	The multicellular nature of filamentous heterocyst-forming cyanobacteria. <i>FEMS Microbiology Reviews</i> , 2016, 40, 831-854.	3.9	215
193	Complexity, the Role of Oxygen in Evolution of. , 2016, , 334-340.		0
194	Trace elements at the intersection of marine biological and geochemical evolution. <i>Earth-Science Reviews</i> , 2016, 163, 323-348.	4.0	135
195	Molar tooth carbonates and benthic methane fluxes in Proterozoic oceans. <i>Nature Communications</i> , 2016, 7, 10317.	5.8	24
196	Sulfur-oxidizing bacteria prior to the Great Oxidation Event from the 2.52 Ga Gamohaan Formation of South Africa. <i>Geology</i> , 2016, 44, 983-986.	2.0	29
197	Laboratory Simulation of an Iron(II)-rich Precambrian Marine Upwelling System to Explore the Growth of Photosynthetic Bacteria. <i>Journal of Visualized Experiments</i> , 2016, , .	0.2	2
198	How Embryogenesis Began in Evolution. , 2016, , 1-74.		0
199	Phototrophic Microorganisms: The Basis of the Marine Food Web. , 2016, , 57-97.		4
200	Preface: Atmospheric and oceanic oxygenation and evolution of early life on Earth: New contributions from China. <i>Journal of Earth Science (Wuhan, China)</i> , 2016, 27, 167-169.	1.1	8
201	FeO <sub>2</sub> and FeOOH under deep lower-mantle conditions and Earth's oxygen-hydrogen cycles. <i>Nature</i> , 2016, 534, 241-244.	13.7	245

#	ARTICLE	IF	CITATIONS
202	A model for microbial phosphorus cycling in bioturbated marine sediments: Significance for phosphorus burial in the early Paleozoic. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 189, 251-268.	1.6	38
203	Empirical links between trace metal cycling and marine microbial ecology during a large perturbation to Earth's carbon cycle. <i>Earth and Planetary Science Letters</i> , 2016, 449, 407-417.	1.8	82
204	Pyrite nanoparticles: an Earth-abundant mineral catalyst for activation of molecular hydrogen and hydrogenation of nitroaromatics. <i>RSC Advances</i> , 2016, 6, 55220-55224.	1.7	16
205	Uranium isotope fractionation during coprecipitation with aragonite and calcite. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 188, 189-207.	1.6	86
206	Closing in on the marine <sup>238</sup> U/ <sup>235</sup> U budget. <i>Chemical Geology</i> , 2016, 420, 11-22.	1.4	92
207	Geochemistry of a paleosol horizon at the base of the Sausar Group, central India: Implications on atmospheric conditions at the Archean–Paleoproterozoic boundary. <i>Geoscience Frontiers</i> , 2016, 7, 759-773.	4.3	22
208	A shale-hosted Cr isotope record of low atmospheric oxygen during the Proterozoic. <i>Geology</i> , 2016, 44, 555-558.	2.0	228
209	Carbonate rocks and related facies with vestiges of biomarkers: Clues to redox conditions in the Mesoproterozoic ocean. <i>Gondwana Research</i> , 2016, 35, 411-424.	3.0	10
210	The Role of Microbial Electron Transfer in the Coevolution of the Biosphere and Geosphere. <i>Annual Review of Microbiology</i> , 2016, 70, 45-62.	2.9	82
211	Microbial respiration with chlorine oxyanions: diversity and physiological and biochemical properties of chlorate- and perchlorate-reducing microorganisms. <i>Annals of the New York Academy of Sciences</i> , 2016, 1365, 59-72.	1.8	25
212	Geochemistry and Re–Os geochronology of the organic-rich sedimentary rocks in the Jingtieshan Fe–Cu deposit, North Qilian Mountains, NW China. <i>Journal of Asian Earth Sciences</i> , 2016, 119, 65-77.	1.0	10
213	The Hypoxic Response and Aging. , 2016, , 133-159.		0
214	Ferroptosis: Death by Lipid Peroxidation. <i>Trends in Cell Biology</i> , 2016, 26, 165-176.	3.6	1,807
215	The Joffe banded iron formation, Hamersley Group, Western Australia: Assessing the palaeoenvironment through detailed petrology and chemostratigraphy. <i>Precambrian Research</i> , 2016, 273, 12-37.	1.2	55
216	Why did life develop on the surface of the Earth in the Cambrian?. <i>Geoscience Frontiers</i> , 2016, 7, 865-873.	4.3	30
217	The role of biology in planetary evolution: cyanobacterial primary production in low-oxygen Proterozoic oceans. <i>Environmental Microbiology</i> , 2016, 18, 325-340.	1.8	151
218	The biological chemistry of the transition metal –transportome– of <i>Cupriavidus metallidurans</i> . <i>Metallomics</i> , 2016, 8, 481-507.	1.0	75
219	Interpretation of the nitrogen isotopic composition of Precambrian sedimentary rocks: Assumptions and perspectives. <i>Chemical Geology</i> , 2016, 429, 93-110.	1.4	136

#	ARTICLE	IF	CITATIONS
220	Oxygen produced by cyanobacteria in simulated Archaean conditions partly oxidizes ferrous iron but mostly escapes" conclusions about early evolution. <i>Photosynthesis Research</i> , 2016, 130, 103-111.	1.6	8
221	Weathering during the Great Oxidation Event: Fennoscandia, arctic Russia 2.06 Ga ago. <i>Precambrian Research</i> , 2016, 275, 513-525.	1.2	15
222	The Great Oxidation Event. <i>BioScience</i> , 2016, 66, 189-195.	2.2	16
223	The Atmosphere and Hydrosphere. , 2016, , 237-278.		4
224	The role of geochemistry and energetics in the evolution of modern respiratory complexes from a proton-reducing ancestor. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2016, 1857, 958-970.	0.5	79
226	Extremely low oxygen concentration in mid-Proterozoic shallow seawaters. <i>Precambrian Research</i> , 2016, 276, 145-157.	1.2	91
227	IDENTIFYING PLANETARY BIOSIGNATURE IMPOSTORS: SPECTRAL FEATURES OF CO AND O <sub>4</sub> RESULTING FROM ABIOTIC O <sub>2</sub> /O <sub>3</sub> PRODUCTION. <i>Astrophysical Journal Letters</i> , 2016, 819, L13.	3.0	100
228	Evolution of photorespiration from cyanobacteria to land plants, considering protein phylogenies and acquisition of carbon concentrating mechanisms. <i>Journal of Experimental Botany</i> , 2016, 67, 2963-2976.	2.4	82
229	Early Microbial Evolution: The Age of Anaerobes. <i>Cold Spring Harbor Perspectives in Biology</i> , 2016, 8, a018127.	2.3	78
230	Mass-independent fractionation of even mercury isotopes. <i>Science Bulletin</i> , 2016, 61, 116-124.	4.3	56
231	Arsenic-induced phosphate limitation under experimental Early Proterozoic oceanic conditions. <i>Earth and Planetary Science Letters</i> , 2016, 434, 52-63.	1.8	9
232	Did mantle plume magmatism help trigger the Great Oxidation Event?. <i>Lithos</i> , 2016, 246-247, 128-133.	0.6	16
233	Estimates of atmospheric O <sub>2</sub> in the Paleoproterozoic from paleosols. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 174, 263-290.	1.6	23
234	The Role of Hydrogen Sulfide in Evolution and the Evolution of Hydrogen Sulfide in Metabolism and Signaling. <i>Physiology</i> , 2016, 31, 60-72.	1.6	181
235	Paired carbonate and organic carbon isotope variations of the Ediacaran Doushantuo Formation from an upper slope section at Siduping, South China. <i>Precambrian Research</i> , 2016, 273, 53-66.	1.2	79
236	An authigenic origin for Precambrian greenalite: Implications for iron formation and the chemistry of ancient seawater. <i>Bulletin of the Geological Society of America</i> , 2016, 128, 511-530.	1.6	153
237	Structure and function of natural sulphide-oxidizing microbial mats under dynamic input of light and chemical energy. <i>ISME Journal</i> , 2016, 10, 921-933.	4.4	32
238	Geochronological and geochemical studies of the metasedimentary rocks and diabase from the Jingtieshan deposit, North Qilian, NW China: Constraints on the associated banded iron formations. <i>Ore Geology Reviews</i> , 2016, 73, 42-58.	1.1	26

#	ARTICLE	IF	CITATIONS
239	Timescales of Oxygenation Following the Evolution of Oxygenic Photosynthesis. <i>Origins of Life and Evolution of Biospheres</i> , 2016, 46, 51-65.	0.8	72
240	Precambrian iron formations from the Cauvery Suture Zone, Southern India: Implications for sub-marine hydrothermal origin in Neoproterozoic convergent margin settings. <i>Ore Geology Reviews</i> , 2016, 72, 1177-1196.	1.1	8
241	Petrography and geochemistry of the Mesoarchean Bikoula banded iron formation in the Ntem complex (Congo craton), Southern Cameroon: Implications for its origin. <i>Ore Geology Reviews</i> , 2017, 80, 267-288.	1.1	45
242	The redox control of photorespiration: from biochemical and physiological aspects to biotechnological considerations. <i>Plant, Cell and Environment</i> , 2017, 40, 553-569.	2.8	35
243	Selenium isotopes record extensive marine suboxia during the Great Oxidation Event. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 875-880.	3.3	67
244	A distinctive biomarker assemblage in an Infracambrian oil and source rock from western India: Molecular signatures of eukaryotic sterols and prokaryotic carotenoids. <i>Precambrian Research</i> , 2017, 290, 101-112.	1.2	24
245	Conditions of stichtite (Mg <sub>6</sub> Cr <sub>2</sub> (OH) <sub>16</sub> [CO <sub>3</sub> ] $\cdot$ 4H <sub>2</sub> O) formation and its geochemical and isotope record of early phanerozoic serpentinizing environments. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 197, 43-61.	1.6	7
246	Equable end Mesoproterozoic climate in the absence of high CO <sub>2</sub> . <i>Geology</i> , 2017, 45, 231-234.	2.0	31
247	The molybdenum isotopic compositions of I-, S- and A-type granitic suites. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 205, 168-186.	1.6	55
248	Chromium Isotope Geochemistry. <i>Reviews in Mineralogy and Geochemistry</i> , 2017, 82, 379-414.	2.2	81
249	Iron Isotope Systematics. <i>Reviews in Mineralogy and Geochemistry</i> , 2017, 82, 415-510.	2.2	205
250	Selenium Isotopes as a Biogeochemical Proxy in Deep Time. <i>Reviews in Mineralogy and Geochemistry</i> , 2017, 82, 657-682.	2.2	37
251	THE STABLE ISOTOPE GEOCHEMISTRY OF MOLYBDENUM. <i>Reviews in Mineralogy and Geochemistry</i> , 2017, 82, 683-732.	2.2	191
252	Early phosphorus redigested. <i>Nature Geoscience</i> , 2017, 10, 75-76.	5.4	31
253	Uranium stable isotope fractionation in the Black Sea: Modern calibration of the <sup>238</sup> U/ <sup>235</sup> U paleo-redox proxy. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 203, 69-88.	1.6	92
254	Physiology, anaerobes, and the origin of mitosing cells 50 years on. <i>Journal of Theoretical Biology</i> , 2017, 434, 2-10.	0.8	34
255	An Early-Branching Freshwater Cyanobacterium at the Origin of Plastids. <i>Current Biology</i> , 2017, 27, 386-391.	1.8	275
256	Photosystem II is a Chimera of Reaction Centers. <i>Journal of Molecular Evolution</i> , 2017, 84, 149-151.	0.8	23



#	ARTICLE	IF	CITATIONS
257	Evolution of oceanic molybdenum and uranium reservoir size around the Ediacaran–Cambrian transition: Evidence from western Zhejiang, South China. <i>Earth and Planetary Science Letters</i> , 2017, 464, 84-94.	1.8	45
258	The geologic history of seawater pH. <i>Science</i> , 2017, 355, 1069-1071.	6.0	234
259	Dating the Gaofan and Hutuo Groups – Targets to investigate the Paleoproterozoic Great Oxidation Event in North China. <i>Journal of Asian Earth Sciences</i> , 2017, 138, 535-547.	1.0	20
260	Photosynthetic Carbon Metabolism and CO <sub>2</sub> -Concentrating Mechanism of Cyanobacteria. , 2017, , 271-303.		3
261	Experimental constraints on reconstruction of Archean seawater Ni isotopic composition from banded iron formations. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 206, 137-150.	1.6	33
262	Symbiosis in eukaryotic evolution. <i>Journal of Theoretical Biology</i> , 2017, 434, 20-33.	0.8	113
263	Onset of the aerobic nitrogen cycle during the Great Oxidation Event. <i>Nature</i> , 2017, 542, 465-467.	13.7	114
264	Ocean and Atmosphere Geochemical Proxies Derived from Trace Elements in Marine Pyrite: Implications for Ore Genesis in Sedimentary Basins. <i>Economic Geology</i> , 2017, 112, 423-450.	1.8	74
265	Paleoproterozoic sterol biosynthesis and the rise of oxygen. <i>Nature</i> , 2017, 543, 420-423.	13.7	105
266	Tracking the onset of Phanerozoic-style redox-sensitive trace metal enrichments: New results from basal Ediacaran post-glacial strata in NW Canada. <i>Chemical Geology</i> , 2017, 457, 24-37.	1.4	35
267	Perspectives on Proterozoic surface ocean redox from iodine contents in ancient and recent carbonate. <i>Earth and Planetary Science Letters</i> , 2017, 463, 159-170.	1.8	172
268	Tectonic controls on the long-term carbon isotope mass balance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4318-4323.	3.3	57
269	Cellularly preserved microbial fossils from ~3.4 Ga deposits of South Africa: A testimony of early appearance of oxygenic life?. <i>Precambrian Research</i> , 2017, 295, 117-129.	1.2	20
270	SAR202 Genomes from the Dark Ocean Predict Pathways for the Oxidation of Recalcitrant Dissolved Organic Matter. <i>MBio</i> , 2017, 8, .	1.8	168
271	Rise of Earth's atmospheric oxygen controlled by efficient subduction of organic carbon. <i>Nature Geoscience</i> , 2017, 10, 387-392.	5.4	95
272	Determinants of hypoxia-inducible factor activity in the intestinal mucosa. <i>Journal of Applied Physiology</i> , 2017, 123, 1328-1334.	1.2	13
273	False Negatives for Remote Life Detection on Ocean-Bearing Planets: Lessons from the Early Earth. <i>Astrobiology</i> , 2017, 17, 287-297.	1.5	97
274	The relationship between mantle pH and the deep nitrogen cycle. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 209, 149-160.	1.6	40



#	ARTICLE	IF	CITATIONS
275	Emergence of cytochrome <i>bc<sub>1</sub></i> complexes in the context of photosynthesis. <i>Physiologia Plantarum</i> , 2017, 161, 150-170.	2.6	13
276	Molybdenum in natural waters: A review of occurrence, distributions and controls. <i>Applied Geochemistry</i> , 2017, 84, 387-432.	1.4	223
277	Biotic effects on oxygen consumption during weathering: Implications for the second rise of oxygen. <i>Geology</i> , 2017, 45, 611-614.	2.0	9
278	Iron and sulfur isotope constraints on redox conditions associated with the 3.2 Ga barite deposits of the Mapepe Formation (Barberton Greenstone Belt, South Africa). <i>Geochimica Et Cosmochimica Acta</i> , 2017, 210, 247-266.	1.6	25
279	Transient receptor potential (TRP) channels as molecular targets in lung toxicology and associated diseases. <i>Cell Calcium</i> , 2017, 67, 123-137.	1.1	50
280	Unmiraculous facultative anaerobes (comment on DOI 10.1002/bies.201600174). <i>BioEssays</i> , 2017, 39, 1700041.	1.2	5
281	Oxidative Stress. <i>Annual Review of Biochemistry</i> , 2017, 86, 715-748.	5.0	2,180
282	Reflections on O <sub>2</sub> as a Biosignature in Exoplanetary Atmospheres. <i>Astrobiology</i> , 2017, 17, 1022-1052.	1.5	119
283	The energy expansions of evolution. <i>Nature Ecology and Evolution</i> , 2017, 1, 138.	3.4	75
284	Uranium isotope compositions of mid-Proterozoic black shales: Evidence for an episode of increased ocean oxygenation at 1.36 Ga and evaluation of the effect of post-depositional hydrothermal fluid flow. <i>Precambrian Research</i> , 2017, 298, 187-201.	1.2	61
285	Secular distribution of highly metalliferous black shales corresponds with peaks in past atmosphere oxygenation. <i>Mineralium Deposita</i> , 2017, 52, 791-798.	1.7	36
286	Geochemistry of Ediacaran cap dolostones across the Yangtze Platform, South China: implications for diagenetic modification and seawater chemistry in the aftermath of the Marinoan glaciation. <i>Journal of the Geological Society</i> , 2017, 174, 893-912.	0.9	17
287	Global water cycle and the coevolution of the Earth's interior and surface environment. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20150393.	1.6	119
288	Copper isotope signatures in modern marine sediments. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 212, 253-273.	1.6	51
289	Geochemical and stable isotope signatures of Proterozoic stromatolitic carbonates from the Vempalle and Tadpatri Formations, Cuddapah Supergroup, India: Implications on paleoenvironment and depositional conditions. <i>Precambrian Research</i> , 2017, 298, 365-384.	1.2	22
290	Microbial manganese(III) reduction fuelled by anaerobic acetate oxidation. <i>Environmental Microbiology</i> , 2017, 19, 3475-3486.	1.8	17
291	Whole rock and discrete pyrite geochemistry as complementary tracers of ancient ocean chemistry: An example from the Neoproterozoic Doushantuo Formation, China. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 216, 201-220.	1.6	57
292	Young ores in old rocks: Proterozoic iron mineralisation in Mesoproterozoic banded iron formation, northern Pilbara Craton, Australia. <i>Ore Geology Reviews</i> , 2017, 89, 40-69.	1.1	20

#	ARTICLE	IF	CITATIONS
293	A combinatorial strategy of alternative promoter use during differentiation of a heterocystous cyanobacterium. <i>Environmental Microbiology Reports</i> , 2017, 9, 449-458.	1.0	14
294	Stem cell evolutionary paradigm and cell engineering. <i>Transfusion Clinique Et Biologique</i> , 2017, 24, 251-255.	0.2	5
295	Mobility of nutrients and trace metals during weathering in the late Archean. <i>Earth and Planetary Science Letters</i> , 2017, 471, 148-159.	1.8	24
296	The diversity of CO <sub>2</sub> -concentrating mechanisms in marine diatoms as inferred from their genetic content. <i>Journal of Experimental Botany</i> , 2017, 68, 3937-3948.	2.4	27
297	Multiproxy isotope constraints on ocean compositional changes across the late Neoproterozoic Chaub glaciation, Otavi Group, Namibia. <i>Precambrian Research</i> , 2017, 298, 306-324.	1.2	22
298	Photochemistry of Sulfur Dioxide and the Origin of Mass-Independent Isotope Fractionation in Earth's Atmosphere. <i>Annual Review of Earth and Planetary Sciences</i> , 2017, 45, 301-329.	4.6	84
299	Sea level and climatic-induced facies variations in the Middle Cambrian House Range Embayment, western Laurentia. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2017, 475, 125-139.	1.0	3
300	Iron minerals within specific microfossil morphospecies of the 1.88â€‰Ga Gunflint Formation. <i>Nature Communications</i> , 2017, 8, 14890.	5.8	56
301	A theory of atmospheric oxygen. <i>Geobiology</i> , 2017, 15, 366-384.	1.1	73
302	Formation of shallow-water glaucony in weakly oxygenated Precambrian ocean: An example from the Mesoproterozoic Tieling Formation in North China. <i>Precambrian Research</i> , 2017, 294, 214-229.	1.2	37
303	Marine redox evolution in the early Cambrian Yangtze shelf margin area: evidence from trace elements, nitrogen and sulphur isotopes. <i>Geological Magazine</i> , 2017, 154, 1344-1359.	0.9	15
304	Metabolic evolution and the self-organization of ecosystems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E3091-E3100.	3.3	139
305	Archaean chromitites show constant Fe <sup>3+</sup> /∑Fe in Earth's asthenospheric mantle since 3.8 Ga. <i>Lithos</i> , 2017, 282-283, 316-325.	0.6	30
306	On the origins of oxygenic photosynthesis and aerobic respiration in Cyanobacteria. <i>Science</i> , 2017, 355, 1436-1440.	6.0	344
307	How Cyanobacteria went green. <i>Science</i> , 2017, 355, 1372-1373.	6.0	20
308	Molybdenum isotope variations in magmatic rocks. <i>Chemical Geology</i> , 2017, 449, 253-268.	1.4	110
309	Atmospheric oxygenation driven by unsteady growth of the continental sedimentary reservoir. <i>Earth and Planetary Science Letters</i> , 2017, 460, 68-75.	1.8	62
310	Raising the continental crust. <i>Earth and Planetary Science Letters</i> , 2017, 460, 112-122.	1.8	45

#	ARTICLE	IF	CITATIONS
311	Greenalite precipitation linked to the deposition of banded iron formations downslope from a late Archean carbonate platform. <i>Precambrian Research</i> , 2017, 290, 49-62.	1.2	72
312	Was the Ediacaran Shuram Excursion a globally synchronized early diagenetic event? Insights from methane-derived authigenic carbonates in the uppermost Doushantuo Formation, South China. <i>Chemical Geology</i> , 2017, 450, 59-80.	1.4	115
314	Uncovering the spatial heterogeneity of Ediacaran carbon cycling. <i>Geobiology</i> , 2017, 15, 211-224.	1.1	91
315	Evolution of the global phosphorus cycle. <i>Nature</i> , 2017, 541, 386-389.	13.7	397
316	Learning To Breathe: Developmental Phase Transitions in Oxygen Status. <i>Trends in Plant Science</i> , 2017, 22, 140-153.	4.3	54
317	SIMS U-Pb zircon geochronological constraints on upper Ediacaran stratigraphic correlations, South China. <i>Geological Magazine</i> , 2017, 154, 1202-1216.	0.9	31
318	Elemental and stable isotopes geochemistry of Paleoproterozoic dolomites from Fecho do Funil Formation, Quadril�terro Ferr�fero ���Brazil. <i>Journal of South American Earth Sciences</i> , 2017, 79, 525-536.	0.6	4
319	RubisCO Early Oxygenase Activity: A Kinetic and Evolutionary Perspective. <i>BioEssays</i> , 2017, 39, 1700071.	1.2	17
320	The post-collisional late Variscan ferroan granites of southern Sardinia (Italy): Inferences for inhomogeneity of lower crust. <i>Lithos</i> , 2017, 294-295, 263-282.	0.6	21
321	An integrated U-Pb, Hf, and O isotopic provenance analysis of the Paleoproterozoic Murmac Bay Group, northern Saskatchewan, Canada. <i>Precambrian Research</i> , 2017, 302, 18-32.	1.2	6
322	A review of exoplanetary biosignatures. <i>Physics Reports</i> , 2017, 713, 1-17.	10.3	47
323	Fraction-specific controls on the trace element distribution in iron formations: Implications for trace metal stable isotope proxies. <i>Chemical Geology</i> , 2017, 474, 17-32.	1.4	18
324	Oxygen, climate and the chemical evolution of a 1400 million year old tropical marine setting. <i>Numerische Mathematik</i> , 2017, 317, 861-900.	0.7	67
325	Differential metamorphic effects on nitrogen isotopes in kerogen extracts and bulk rocks. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 217, 80-94.	1.6	61
326	Crustal recycling evolution. <i>Nature Geoscience</i> , 2017, 10, 623-624.	5.4	3
327	Metal availability and the expanding network of microbial metabolisms in the Archaean eon. <i>Nature Geoscience</i> , 2017, 10, 629-636.	5.4	116
328	The origin and evolution of cyanobacteria. <i>Biology Bulletin Reviews</i> , 2017, 7, 259-272.	0.3	20
329	Environmental niches and metabolic diversity in Neoproterozoic lakes. <i>Geobiology</i> , 2017, 15, 767-783.	1.1	25

#	ARTICLE	IF	CITATIONS
330	Nanoscale analysis of preservation of ca. 2.1 Ga old Francevillian microfossils, Gabon. <i>Precambrian Research</i> , 2017, 301, 1-18.	1.2	23
331	Earth's early O <sub>2</sub> cycle suppressed by primitive continents. <i>Nature Geoscience</i> , 2017, 10, 788-792.	5.4	65
332	Oxygenation by a changing crust. <i>Nature Geoscience</i> , 2017, 10, 713-714.	5.4	2
333	Eukaryotic origins and the Proterozoic Earth system: A link between global scale glaciations and eukaryogenesis?. <i>Earth-Science Reviews</i> , 2017, 174, 22-38.	4.0	5
334	Red-edge position of habitable exoplanets around M-dwarfs. <i>Scientific Reports</i> , 2017, 7, 7561.	1.6	19
335	Heterogeneous oceanic redox conditions through the Ediacaran-Cambrian boundary limited the metazoan zonation. <i>Scientific Reports</i> , 2017, 7, 8550.	1.6	27
336	Nano-hybrid plasmonic photocatalyst for hydrogen production at 20% efficiency. <i>Scientific Reports</i> , 2017, 7, 8670.	1.6	35
337	Recurrent horizontal transfer of arsenite methyltransferase genes facilitated adaptation of life to arsenic. <i>Scientific Reports</i> , 2017, 7, 7741.	1.6	60
338	<i>Escherichia coli</i> responds to environmental changes using enolase degradosomes and stabilized DicF sRNA to alter cellular morphology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E8025-E8034.	3.3	66
339	A model for the decrease in amplitude of carbon isotope excursions across the Phanerozoic. <i>Numerische Mathematik</i> , 2017, 317, 641-676.	0.7	47
340	Significant role of organic sulfur in supporting sedimentary sulfate reduction in low-sulfate environments. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 213, 502-516.	1.6	39
341	Iron mineralization and taphonomy of microfossils of the 2.45–2.21 Ga Turee Creek Group, Western Australia. <i>Precambrian Research</i> , 2017, 298, 530-551.	1.2	20
342	The evolution of diatoms and their biogeochemical functions. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017, 372, 20160397.	1.8	134
343	Temporal record of osmium concentrations and <sup>187</sup> O/ <sup>188</sup> O in organic-rich mudrocks: Implications for the osmium geochemical cycle and the use of osmium as a paleoceanographic tracer. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 216, 221-241.	1.6	22
344	Constraining the timing of the Great Oxidation Event within the Rubisco phylogenetic tree. <i>Geobiology</i> , 2017, 15, 628-640.	1.1	37
345	Glacial weathering, sulfide oxidation, and global carbon cycle feedbacks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 8716-8721.	3.3	130
346	Molecular structure of FoxE, the putative iron oxidase of <i>Rhodobacter ferrooxidans</i> SW2. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2017, 1858, 847-853.	0.5	10
347	The Search for Another Earth-Like Planet and Life Elsewhere. , 0, , 30-56.		0

#	ARTICLE	IF	CITATIONS
348	The rise of algae in Cryogenian oceans and the emergence of animals. <i>Nature</i> , 2017, 548, 578-581.	13.7	401
349	Food for early animal evolution. <i>Nature</i> , 2017, 548, 528-530.	13.7	35
350	Rare earth element characteristics of Paleoproterozoic cap carbonates pertaining to the Sausar Group, Central India: Implications for ocean paleoredox conditions. <i>Journal of Asian Earth Sciences</i> , 2017, 148, 31-50.	1.0	19
351	Network analysis of mineralogical systems. <i>American Mineralogist</i> , 2017, 102, 1588-1596.	0.9	63
352	Experimental maturation of Archaea encrusted by Fe-phosphates. <i>Scientific Reports</i> , 2017, 7, 16984.	1.6	15
353	Physicochemical parameters and geochemical features of fluids of precambrian gold deposits. <i>Geochemistry International</i> , 2017, 55, 1047-1065.	0.2	7
354	2D/3D Microanalysis by Energy Dispersive X-ray Absorption Spectroscopy Tomography. <i>Scientific Reports</i> , 2017, 7, 16453.	1.6	15
355	Quantitative model evaluation of organic carbon oxidation hypotheses for the Ediacaran Shuram carbon isotopic excursion. <i>Science China Earth Sciences</i> , 2017, 60, 2118-2127.	2.3	13
356	Engineering the Anthropocene: Scalable social networks and resilience building in human evolutionary timescales. <i>Infrastructure Asset Management</i> , 2017, 4, 199-215.	1.2	25
357	Zircons reveal ancient perturbations. <i>Nature Geoscience</i> , 2017, 10, 884-886.	5.4	2
358	The role of public goods in planetary evolution. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160359.	1.6	6
359	Resurrecting ancestral genes in bacteria to interpret ancient biosignatures. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160352.	1.6	19
360	Atmospheric Beacons of Life from Exoplanets Around G and K Stars. <i>Scientific Reports</i> , 2017, 7, 14141.	1.6	26
361	Low oxygen and argon in the Neoproterozoic atmosphere at 815 Ma. <i>Earth and Planetary Science Letters</i> , 2017, 480, 66-74.	1.8	22
362	Evolution of Cytochrome c Oxidase in Hypoxia Tolerant Sculpins (Cottidae, Actinopterygii). <i>Molecular Biology and Evolution</i> , 2017, 34, 2153-2162.	3.5	27
363	Transition-Metal-Free C-H Hydroxylation of Carbonyl Compounds. <i>Organic Letters</i> , 2017, 19, 3628-3631.	2.4	68
365	The Rise of Animals in a Changing Environment: Global Ecological Innovation in the Late Ediacaran. <i>Annual Review of Earth and Planetary Sciences</i> , 2017, 45, 593-617.	4.6	117
367	Iron formations: A global record of Neoarchaeon to Palaeoproterozoic environmental history. <i>Earth-Science Reviews</i> , 2017, 172, 140-177.	4.0	304

#	ARTICLE	IF	CITATIONS
368	Sulfur and carbon isotopic evidence for metabolic pathway evolution and a four-stepped Earth system progression across the Archean and Paleoproterozoic. <i>Earth-Science Reviews</i> , 2017, 174, 1-21.	4.0	58
369	The Paleoproterozoic Baraboo paleosol revisited: Quantifying mass fluxes of weathering and metasomatism, chemical climofunctions, and atmospheric p CO <sub>2</sub> in a chemically heterogeneous protolith. <i>Precambrian Research</i> , 2017, 301, 179-194.	1.2	16
370	Chromium geochemistry of the ca. 1.85 Ga Flin Flon paleosol. <i>Geobiology</i> , 2017, 15, 30-50.	1.1	40
371	The human physiological impact of global deoxygenation. <i>Journal of Physiological Sciences</i> , 2017, 67, 97-106.	0.9	20
372	Uranium isotope evidence for temporary ocean oxygenation in the aftermath of the Sturtian Snowball Earth. <i>Earth and Planetary Science Letters</i> , 2017, 458, 282-292.	1.8	101
373	Prebiotic Synthesis of Glycine from Ethanolamine in Simulated Archean Alkaline Hydrothermal Vents. <i>Origins of Life and Evolution of Biospheres</i> , 2017, 47, 413-425.	0.8	8
374	A model for late Archean chemical weathering and world average river water. <i>Earth and Planetary Science Letters</i> , 2017, 457, 191-203.	1.8	46
375	Life's utilization of B vitamins on early Earth. <i>Geobiology</i> , 2017, 15, 3-18.	1.1	58
376	Known unknowns of cardiolipin signaling: The best is yet to come. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2017, 1862, 8-24.	1.2	94
377	Trace elements of magnetite and iron isotopes of the Zankan iron deposit, westernmost Kunlun, China: A case study of seafloor hydrothermal iron deposits. <i>Ore Geology Reviews</i> , 2017, 80, 1191-1205.	1.1	35
378	Spatial and temporal trends in Precambrian nitrogen cycling: A Mesoproterozoic offshore nitrate minimum. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 198, 315-337.	1.6	65
379	Matworld – the biogeochemical effects of early life on land. <i>New Phytologist</i> , 2017, 215, 531-537.	3.5	47
380	Biogeochemical Transformations in the History of the Ocean. <i>Annual Review of Marine Science</i> , 2017, 9, 31-58.	5.1	58
381	Palaeoecology of Ediacaran metazoan reefs. <i>Geological Society Special Publication</i> , 2017, 448, 195-210.	0.8	6
383	When water meets iron at Earth's core-mantle boundary. <i>National Science Review</i> , 2017, 4, 870-878.	4.6	75
384	Overcoming adversity through diversity: aquatic carbon concentrating mechanisms. <i>Journal of Experimental Botany</i> , 2017, 68, 3689-3695.	2.4	39
385	Antioxidants Against Environmental Factor-Induced Oxidative Stress. , 2017, , 189-215.		4
386	15 Selenium Isotopes as a Biogeochemical Proxy in Deep Time. , 2017, , 657-682.		0

#	ARTICLE	IF	CITATIONS
387	16 Good Golly, Why Moly? THE STABLE ISOTOPE GEOCHEMISTRY OF MOLYBDENUM. , 2017, , 683-732.		9
388	11 Iron Isotope Systematics. , 2017, , 415-510.		7
389	10 Chromium Isotope Geochemistry. , 2017, , .		2
390	Symbiogenesis, gradualism, and mitochondrial energy in eukaryote origin. <i>Periodicum Biologorum</i> , 2017, 119, 141-158.	0.1	31
391	A planetary perspective on Earth's space environment evolution. <i>Earth and Planetary Physics</i> , 2017, 1, 63-67.	0.4	3
392	Harnessing Evolutionary Toxins for Signaling: Reactive Oxygen Species, Nitric Oxide and Hydrogen Sulfide in Plant Cell Regulation. <i>Frontiers in Plant Science</i> , 2017, 8, 189.	1.7	44
393	Editorial: Assembly of the Photosystem II Membrane-Protein Complex of Oxygenic Photosynthesis. <i>Frontiers in Plant Science</i> , 2017, 8, 884.	1.7	14
394	Provenance of Detrital Pyrite in Archean Sedimentary Rocks. , 2017, , 509-531.		6
395	Iron (oxy)hydroxide and hematite micro- to nano-inclusions in diagenetic dolomite from a 2.4 Ga banded iron formation (Minas Gerais, Brazil). <i>European Journal of Mineralogy</i> , 2017, 29, 971-983.	0.4	2
396	A Statistical Approach to Illustrate the Challenge of Astrobiology for Public Outreach. <i>Life</i> , 2017, 7, 40.	1.1	1
397	On the Origin of Superoxide Dismutase: An Evolutionary Perspective of Superoxide-Mediated Redox Signaling. <i>Antioxidants</i> , 2017, 6, 82.	2.2	107
398	Photoferrotrophy: Remains of an Ancient Photosynthesis in Modern Environments. <i>Frontiers in Microbiology</i> , 2017, 08, 323.	1.5	75
399	Evolution of Life on Earth. , 2017, , 15-26.		0
400	Atmospheric loss from the dayside open polar region and its dependence on geomagnetic activity: implications for atmospheric escape on evolutionary timescales. <i>Annales Geophysicae</i> , 2017, 35, 721-731.	0.6	28
401	Superoxide Dismutase and Catalase. , 2018, , 251-259.		1
402	Redox condition in the Nanhua Basin during the waning of the Sturtian glaciation: A chromium-isotope perspective. <i>Precambrian Research</i> , 2018, 319, 198-210.	1.2	39
403	Early Archean origin of heterodimeric Photosystem I. <i>Heliyon</i> , 2018, 4, e00548.	1.4	35
404	A new macroalgal assemblage from the Xiaoshiba Biota (Cambrian Series 2, Stage 3) of southern China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2018, 499, 35-44.	1.0	7



#	ARTICLE	IF	CITATIONS
405	Great moments in evolution: the conquest of land by plants. <i>Current Opinion in Plant Biology</i> , 2018, 42, 49-54.	3.5	153
406	Earth: Atmospheric Evolution of a Habitable Planet. , 2018, , 1-37.		4
407	Nitrogen fixation sustained productivity in the wake of the Palaeoproterozoic Great Oxygenation Event. <i>Nature Communications</i> , 2018, 9, 978.	5.8	50
408	Evolution of alluvial mudrock forced by early land plants. <i>Science</i> , 2018, 359, 1022-1024.	6.0	117
409	The teleosts of metallo-reduction and metallo-oxidation in eukaryotic iron and copper trafficking. <i>Metallomics</i> , 2018, 10, 370-377.	1.0	22
410	Exoplanet Biosignatures: A Framework for Their Assessment. <i>Astrobiology</i> , 2018, 18, 709-738.	1.5	139
411	Testing models of pre-GOE environmental oxidation: A Paleoproterozoic marine signal in platform dolomites of the Tongwane Formation (South Africa). <i>Precambrian Research</i> , 2018, 313, 205-220.	1.2	7
412	Oxygenation of the Mesoproterozoic ocean and the evolution of complex eukaryotes. <i>Nature Geoscience</i> , 2018, 11, 345-350.	5.4	124
413	Trace Elements Characteristics of Black Shales from the Ediacaran Doushantuo Formation, Hubei Province, South China: Implications for Redox and Open vs. Restricted Basin Conditions. <i>Journal of Earth Science (Wuhan, China)</i> , 2018, 29, 342-352.	1.1	16
414	Carbonate REE+â€” signatures from the restricted early marine phase of South Atlantic Ocean (late Tj ETQq1 ancient carbonate rocks. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2018, 500, 69-83.	1.0	25
415	What the ~1.4ÂGa Xiamaling Formation can and cannot tell us about the midâ€”Proterozoic ocean. <i>Geobiology</i> , 2018, 16, 219-236.	1.1	62
416	The Ediacaran fossils of Charnwood Forest: Shining new light on a major biological revolution. <i>Proceedings of the Geologists Association</i> , 2018, 129, 264-277.	0.6	15
417	Depositional setting of the Late Archean Fe oxide- and sulfide-bearing chert and graphitic argillite in the Shaw Dome, Abitibi greenstone belt, Canada. <i>Precambrian Research</i> , 2018, 311, 98-116.	1.2	12
418	Iron isotope fractionation during pyrite formation in a sulfidic Precambrian ocean analogue. <i>Earth and Planetary Science Letters</i> , 2018, 488, 1-13.	1.8	41
419	Uranium isotope geochemistry in modern coastal sediments: Insights from Toulon Bay, France. <i>Chemical Geology</i> , 2018, 481, 133-145.	1.4	13
420	Two-step deoxygenation at the end of the Paleoproterozoic Lomagundi Event. <i>Earth and Planetary Science Letters</i> , 2018, 486, 70-83.	1.8	58
421	Multiproxy geochemical and isotope stratigraphy records of a Neoproterozoic Oxygenation Event in the Ediacaran Sete Lagoas cap carbonate, BambuÃ—Group, Brazil. <i>Chemical Geology</i> , 2018, 481, 119-132.	1.4	41
422	A model for the oceanic mass balance of rhenium and implications for the extent of Proterozoic ocean anoxia. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 227, 75-95.	1.6	66



#	ARTICLE	IF	CITATIONS
423	Sulfur isotope's signal of nanopyrates enclosed in 2.7 Ga stromatolitic organic remains reveal microbial sulfate reduction. <i>Geobiology</i> , 2018, 16, 121-138.	1.1	23
424	Evidence of oxygenic phototrophy in ancient phosphatic stromatolites from the Paleoproterozoic Vindhyan and Aravalli Supergroups, India. <i>Geobiology</i> , 2018, 16, 139-159.	1.1	31
425	Dating phototrophic microbial lineages with reticulate gene histories. <i>Geobiology</i> , 2018, 16, 179-189.	1.1	80
426	Variations in the Properties of Extractable "Humic Matter" and Associated Kerogen in Sediments through Geologic Time: Their Significance for Precambrian Biological Evolution and Paleoecology. <i>Geomicrobiology Journal</i> , 2018, 35, 334-353.	1.0	1
427	A physiological perspective on the origin and evolution of photosynthesis. <i>FEMS Microbiology Reviews</i> , 2018, 42, 205-231.	3.9	115
428	Reactive Oxygen Species: Radical Factors in the Evolution of Animal Life. <i>BioEssays</i> , 2018, 40, 1700158.	1.2	84
429	Tellurium, selenium and cobalt enrichment in Neoproterozoic black shales, Gwna Group, UK: Deep marine trace element enrichment during the Second Great Oxygenation Event. <i>Terra Nova</i> , 2018, 30, 244-253.	0.9	13
430	Anoxic to suboxic Mesoproterozoic ocean: Evidence from iron isotope and geochemistry of siderite in the Banded Iron Formations from North Qilian, NW China. <i>Precambrian Research</i> , 2018, 307, 115-124.	1.2	24
431	Role of upper-most crustal composition in the evolution of the Precambrian ocean's "atmosphere system. <i>Earth and Planetary Science Letters</i> , 2018, 487, 44-53.	1.8	43
432	The Coevolution of Life and Environment on Mars: An Ecosystem Perspective on the Robotic Exploration of Biosignatures. <i>Astrobiology</i> , 2018, 18, 1-27.	1.5	64
433	Disequilibrium biosignatures over Earth history and implications for detecting exoplanet life. <i>Science Advances</i> , 2018, 4, eaao5747.	4.7	111
434	Origin of the Mesoproterozoic Jingtieshan bedded barite deposit, North Qilian Mountains, NW China: Geochemical and isotope ( $O$ , $S$ , $Sr$ ) evidence. <i>Geological Journal</i> , 2018, 53, 21-32.	0.6	11
435	Tellurium and selenium in Mesoproterozoic red beds. <i>Precambrian Research</i> , 2018, 305, 145-150.	1.2	14
436	Geodynamics of kimberlites on a cooling Earth: Clues to plate tectonic evolution and deep volatile cycles. <i>Earth and Planetary Science Letters</i> , 2018, 484, 1-14.	1.8	177
437	The Martian subsurface as a potential window into the origin of life. <i>Nature Geoscience</i> , 2018, 11, 21-26.	5.4	91
438	Modern diversification of the amino acid repertoire driven by oxygen. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 41-46.	3.3	67
439	Did the transition to plate tectonics cause Neoproterozoic Snowball Earth?. <i>Terra Nova</i> , 2018, 30, 87-94.	0.9	25
440	U-Pb detrital zircon geochronology of the Turee Creek Group, Hamersley Basin, Western Australia: Timing and correlation of the Paleoproterozoic glaciations. <i>Precambrian Research</i> , 2018, 307, 34-50.	1.2	31

#	ARTICLE	IF	CITATIONS
441	Cyanobacterial photosynthesis under sulfidic conditions: insights from the isolate <i>Leptolyngbya</i> sp. strain hensonii. <i>ISME Journal</i> , 2018, 12, 568-584.	4.4	50
442	From orogenies to oxygen. <i>Nature Geoscience</i> , 2018, 11, 9-10.	5.4	10
443	Hydrothermal stamp on the oceans. <i>Nature Geoscience</i> , 2018, 11, 10-12.	5.4	3
444	A record of deep-ocean dissolved O <sub>2</sub> from the oxidation state of iron in submarine basalts. <i>Nature</i> , 2018, 553, 323-327.	13.7	124
445	Isotope Fractionation Processes of Selected Elements. <i>Springer Textbooks in Earth Sciences, Geography and Environment</i> , 2018, , 53-227.	0.1	2
446	Early emergence of the FtsH proteases involved in photosystem II repair. <i>Photosynthetica</i> , 2018, 56, 163-177.	0.9	22
447	Exoplanet Biosignatures: A Review of Remotely Detectable Signs of Life. <i>Astrobiology</i> , 2018, 18, 663-708.	1.5	328
448	Molybdenum record from black shales indicates oscillating atmospheric oxygen levels in the early Paleoproterozoic. <i>Numerische Mathematik</i> , 2018, 318, 275-299.	0.7	31
449	Evolution of atmospheric xenon and other noble gases inferred from Archean to Paleoproterozoic rocks. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 232, 82-100.	1.6	81
450	Highly heterogeneous $\epsilon_{\text{poikiloredox}}$ conditions in the early Ediacaran Yangtze Sea. <i>Precambrian Research</i> , 2018, 311, 157-166.	1.2	42
451	The effects of diagenesis on geochemical paleoredox proxies in sedimentary carbonates. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 232, 265-287.	1.6	92
452	Chronicles of hypoxia: Time-series buoy observations reveal annually recurring seasonal basin-wide hypoxia in Muskegon Lake – A Great Lakes estuary. <i>Journal of Great Lakes Research</i> , 2018, 44, 219-229.	0.8	41
453	Controls on O <sub>2</sub> Production in Cyanobacterial Mats and Implications for Earth's Oxygenation. <i>Annual Review of Earth and Planetary Sciences</i> , 2018, 46, 123-147.	4.6	37
454	Limitations on Limitation. <i>Global Biogeochemical Cycles</i> , 2018, 32, 486-496.	1.9	43
455	The early Earth geochemical and isotope record of serpentinizing environments from Archean stichtite (Mg <sub>6</sub> Cr <sub>2</sub> (OH) <sub>16</sub> [CO <sub>3</sub> ]·4H <sub>2</sub> O). <i>Precambrian Research</i> , 2018, 310, 198-212.	1.2	2
456	Synsedimentary fault control on the deposition of the Duitschland Formation (South Africa): Implications for depositional settings, Paleoproterozoic stratigraphic correlations, and the GOE. <i>Precambrian Research</i> , 2018, 310, 348-364.	1.2	17
457	The Tonian Beck Spring Dolomite: Marine dolomitization in a shallow, anoxic sea. <i>Sedimentary Geology</i> , 2018, 368, 83-104.	1.0	55
458	Episodic concentration of gold to ore grade through Earth's history. <i>Earth-Science Reviews</i> , 2018, 180, 148-158.	4.0	52

#	ARTICLE	IF	CITATIONS
459	Solids, liquids, and gases under high pressure. <i>Reviews of Modern Physics</i> , 2018, 90, .	16.4	337
460	Two-billion-year-old evaporites capture Earth's great oxidation. <i>Science</i> , 2018, 360, 320-323.	6.0	112
461	Molybdenum Burial Mechanism in Sulfidic Sediments: Iron-Sulfide Pathway. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 565-576.	1.2	50
462	The Boring Billion, a slingshot for Complex Life on Earth. <i>Scientific Reports</i> , 2018, 8, 4432.	1.6	63
463	Linking the rise of atmospheric oxygen to growth in the continental phosphorus inventory. <i>Earth and Planetary Science Letters</i> , 2018, 489, 28-36.	1.8	64
464	Evidence for episodic oxygenation in a weakly redox-buffered deep mid-Proterozoic ocean. <i>Chemical Geology</i> , 2018, 483, 581-594.	1.4	73
465	Chemical Warfare at the Microorganismal Level: A Closer Look at the Superoxide Dismutase Enzymes of Pathogens. <i>ACS Infectious Diseases</i> , 2018, 4, 893-903.	1.8	28
466	A Tonian age for the VisingsÅ Group in Sweden constrained by detrital zircon dating and biochronology: implications for evolutionary events. <i>Geological Magazine</i> , 2018, 155, 1175-1189.	0.9	18
467	Deep mantle roots and continental emergence: implications for whole-Earth elemental cycling, long-term climate, and the Cambrian explosion. <i>International Geology Review</i> , 2018, 60, 431-448.	1.1	58
468	The tectonics and mineral systems of Proterozoic Western Australia: Relationships with supercontinents and global secular change. <i>Geoscience Frontiers</i> , 2018, 9, 295-316.	4.3	18
469	Environmental Adaptation from the Origin of Life to the Last Universal Common Ancestor. <i>Origins of Life and Evolution of Biospheres</i> , 2018, 48, 35-54.	0.8	30
470	Depositional setting of the 2.1 Ga Francevillian macrobiota (Gabon): Rapid mud settling in a shallow basin swept by high-density sand flows. <i>Sedimentology</i> , 2018, 65, 670-701.	1.6	12
471	Manifestation, Drivers, and Emergence of Open Ocean Deoxygenation. <i>Annual Review of Marine Science</i> , 2018, 10, 229-260.	5.1	180
472	The Paleoproterozoic fossil record: Implications for the evolution of the biosphere during Earth's middle-age. <i>Earth-Science Reviews</i> , 2018, 176, 68-86.	4.0	109
473	Geobiological feedbacks and the evolution of thermoacidophiles. <i>ISME Journal</i> , 2018, 12, 225-236.	4.4	70
474	Innovation not recovery: dynamic redox promotes metazoan radiations. <i>Biological Reviews</i> , 2018, 93, 863-873.	4.7	71
475	Thallium isotope systematics in volcanic rocks from St. Helena – Constraints on the origin of the HIMU reservoir. <i>Chemical Geology</i> , 2018, 476, 292-301.	1.4	24
476	On the Early Evolution of Catabolic Pathways: A Comparative Genomics Approach. I. The Cases of Glucose, Ribose, and the Nucleobases Catabolic Routes. <i>Journal of Molecular Evolution</i> , 2018, 86, 27-46.	0.8	9

#	ARTICLE	IF	CITATIONS
477	Symbiosis: Why Was the Transition from Microbial Prokaryotes to Eukaryotic Organisms a Cosmic Gigayear Event?. , 2018, , 355-405.		5
478	Fe isotopes of a 2.4â€Ga hematite-rich IF constrain marine redox conditions around the GOE. Precambrian Research, 2018, 305, 218-235.	1.2	19
479	Ocean redox conditions between the snowballs â€ Geochemical constraints from Arena Formation, East Greenland. Precambrian Research, 2018, 319, 173-186.	1.2	28
480	Increased productivity as a primary driver of marine anoxia in the Lower Cambrian. Palaeogeography, Palaeoclimatology, Palaeoecology, 2018, 491, 1-9.	1.0	48
481	Chromium isotope fractionation in ferruginous sediments. Geochimica Et Cosmochimica Acta, 2018, 223, 198-215.	1.6	24
482	Neoproterozoic marine carbonates and their paleoceanographic significance. Global and Planetary Change, 2018, 160, 28-45.	1.6	57
483	â€Alternativeâ€ fuels contributing to mitochondrial electron transport: Importance of non-classical pathways in the diversity of animal metabolism. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2018, 224, 185-194.	0.7	44
484	Redox state of the Archean mantle: Evidence from V partitioning in 3.5â€2.4â€Ga komatiites. Geochimica Et Cosmochimica Acta, 2018, 222, 447-466.	1.6	53
485	Fluctuations in chemical weathering on the Yangtze Block during the Ediacaranâ€Cambrian transition: Implications for paleoclimatic conditions and the marine carbon cycle. Palaeogeography, Palaeoclimatology, Palaeoecology, 2018, 490, 280-292.	1.0	53
486	Oxygen, animals and aquatic bioturbation: An updated account. Geobiology, 2018, 16, 3-16.	1.1	68
487	The Roles of NRF2 in Modulating Cellular Iron Homeostasis. Antioxidants and Redox Signaling, 2018, 29, 1756-1773.	2.5	412
488	Marine redox fluctuation as a potential trigger for the Cambrian explosion. Geology, 2018, 46, 587-590.	2.0	97
489	A temporal and causal link between ca. 1380 Ma large igneous provinces and black shales: Implications for the Mesoproterozoic time scale and paleoenvironment. Geology, 2018, 46, 963-966.	2.0	41
490	Terrestrial methane fluxes and Proterozoic climate. Geology, 2018, 46, 139-142.	2.0	29
491	Abiotic O<sub>2</sub> Levels on Planets around F, G, K, and M Stars: Effects of Lightning-produced Catalysts in Eliminating Oxygen False Positives. Astrophysical Journal, 2018, 866, 56.	1.6	43
492	Change is in the air: dying to breathe oxygen in acute respiratory distress syndrome?. Journal of Thoracic Disease, 2018, 10, S2133-S2137.	0.6	7
493	Oxygen, temperature and the deep-marine stenothermal cradle of Ediacaran evolution. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20181724.	1.2	44
495	3.2 Ga detrital uraninite in the Witwatersrand Basin, South Africa: Evidence of a reducing Archean atmosphere. Geology, 2018, 46, 295-298.	2.0	16

#	ARTICLE	IF	CITATIONS
496	FTIR Laboratory Measurement of O i Spectra in the 0.77â€“12.5 Î¼m Spectral Range: Rydberg States and Oscillator Strengths. <i>Astrophysical Journal, Supplement Series</i> , 2018, 239, 11.	3.0	11
497	Combined Effects of Trace Metals and Light on Photosynthetic Microorganisms in Aquatic Environment. <i>Environments - MDPI</i> , 2018, 5, 81.	1.5	13
498	UV-shielding and wavelength conversion by centric diatom nanopatterned frustules. <i>Scientific Reports</i> , 2018, 8, 16285.	1.6	37
499	Earth: Atmospheric Evolution of a Habitable Planet. , 2018, , 2817-2853.		6
500	Factors Affecting Exoplanet Habitability. , 2018, , 2771-2794.		17
501	The Habitability of Icy Ocean Worlds in the Solar System. , 2018, , 2855-2877.		2
502	Biosignature False Positives. , 2018, , 3203-3224.		4
504	Evolutionary Success of Prokaryotes. , 2018, , 131-240.		0
506	The Paleomineralogy of the Hadean Eon Revisited. <i>Life</i> , 2018, 8, 64.	1.1	27
507	A New Method for Calibration of Gain Variation in a Detector System. <i>Astronomical Journal</i> , 2018, 156, 288.	1.9	3
508	Considering planetary environments in origin of life studies. <i>Nature Communications</i> , 2018, 9, 5170.	5.8	18
509	A unique ferredoxin acts as a player in the low-iron response of photosynthetic organisms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E12111-E12120.	3.3	28
510	Stepwise oxygenation of the Paleozoic atmosphere. <i>Nature Communications</i> , 2018, 9, 4081.	5.8	166
511	Something special about <sc>CO</sc>-dependent <sc>CO</sc><sub>2</sub> fixation. <i>FEBS Journal</i> , 2018, 285, 4181-4195.	2.2	26
512	Early Earth and the rise of complex life. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 121-124.	1.1	5
513	Radiation-chemical processes leading to origination and accumulation of oxygen in the Earthâ€™s atmosphere. <i>Russian Chemical Bulletin</i> , 2018, 67, 958-965.	0.4	7
514	Effect of Geologically Constrained Environmental Parameters on the Atmosphere and Biosphere of Early Earth. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 1112-1136.	1.2	8
515	Vivianite formation in methane-rich deep-sea sediments from the South China Sea. <i>Biogeosciences</i> , 2018, 15, 6329-6348.	1.3	26

#	ARTICLE	IF	CITATIONS
516	Is life most likely around Sun-like stars?. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 020-020.	1.9	25
517	Mineral Facilitated Horizontal Gene Transfer: A New Principle for Evolution of Life?. Frontiers in Microbiology, 2018, 9, 2217.	1.5	19
518	A Comparison of Oxygen Fugacities of Strongly Peraluminous Granites across the Archean-Proterozoic Boundary. Journal of Petrology, 2018, 59, 2123-2156.	1.1	29
519	Synthetic Fe/Cu Complexes: Toward Understanding Heme-Copper Oxidase Structure and Function. Chemical Reviews, 2018, 118, 10840-11022.	23.0	166
520	Transition-Metal-Free C(sp <sup>3</sup> )-H Oxidation of Diarylmethanes. Molecules, 2018, 23, 1922.	1.7	7
521	O <sub>2</sub> solubility in Martian near-surface environments and implications for aerobic life. Nature Geoscience, 2018, 11, 905-909.	5.4	57
522	Origin of the Neoproterozoic Fulu iron formation, South China: Insights from iron isotopes and rare earth element patterns. Geochimica Et Cosmochimica Acta, 2018, 242, 123-142.	1.6	36
523	Where and when did the Paleo-Asian ocean form?. Precambrian Research, 2018, 317, 241-252.	1.2	52
524	Shallow water anoxia in the Mesoproterozoic ocean: Evidence from the Bashkir Meganticlinorium, Southern Urals. Precambrian Research, 2018, 317, 196-210.	1.2	32
525	Protein evolution revisited. Systems Biology in Reproductive Medicine, 2018, 64, 403-416.	1.0	10
526	Step-like growth of the continental crust in South China: evidence from detrital zircons in Yangtze River sediments. Lithos, 2018, 320-321, 155-171.	0.6	10
527	Seeing Red: Some Aspects of the Geological and Climatic History of the Australian Arid Zone. , 2018, , 5-43.		7
528	Nitrogen isotope constraints on the early Ediacaran ocean redox structure. Geochimica Et Cosmochimica Acta, 2018, 240, 220-235.	1.6	51
529	Dating the late Proterozoic stratigraphic record. Emerging Topics in Life Sciences, 2018, 2, 137-147.	1.1	31
530	Marine Sediment. Encyclopedia of Earth Sciences Series, 2018, , 878-892.	0.1	1
531	Oxygenation variations in the atmosphere and shallow seawaters of the Yangtze Platform during the Ediacaran Period: Clues from Cr-isotope and Ce-anomaly in carbonates. Precambrian Research, 2018, 313, 78-90.	1.2	51
532	On the origin of vanillyl alcohol oxidases. Fungal Genetics and Biology, 2018, 116, 24-32.	0.9	28
533	Exploring the Atmosphere of Neoproterozoic Earth: The Effect of O <sub>2</sub> on Haze Formation and Composition. Astrophysical Journal, 2018, 858, 119.	1.6	18

#	ARTICLE	IF	CITATIONS
534	Dwindling vanadium in seawater during the early Cambrian, South China. <i>Chemical Geology</i> , 2018, 492, 20-29.	1.4	33
535	Did anoxia terminate Ediacaran benthic communities? Evidence from early diagenesis. <i>Precambrian Research</i> , 2018, 313, 134-147.	1.2	23
536	Searching for the Great Oxidation Event in North America: A Reappraisal of the Huronian Supergroup by SIMS Sulfur Four-Isotope Analysis. <i>Astrobiology</i> , 2018, 18, 519-538.	1.5	14
537	EarthN: A New Earth System Nitrogen Model. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 2516-2542.	1.0	30
538	Late inception of a resiliently oxygenated upper ocean. <i>Science</i> , 2018, 361, 174-177.	6.0	117
539	Earth dynamics and the origin of plate tectonics. <i>Astronomy and Geophysics</i> , 2018, 59, 3.38-3.40.	0.1	0
540	Exoplanet Biosignatures: Understanding Oxygen as a Biosignature in the Context of Its Environment. <i>Astrobiology</i> , 2018, 18, 630-662.	1.5	194
541	Emerging Roles of Nitric Oxide Synthase in Bacterial Physiology. <i>Advances in Microbial Physiology</i> , 2018, 72, 147-191.	1.0	11
542	Making Sense of Massive Carbon Isotope Excursions With an Inverse Carbon Cycle Model. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2018, 123, 2485-2496.	1.3	26
543	The multifaceted contributions of mitochondria to cellular metabolism. <i>Nature Cell Biology</i> , 2018, 20, 745-754.	4.6	969
544	Exoplanet Biosignatures: Future Directions. <i>Astrobiology</i> , 2018, 18, 779-824.	1.5	85
545	Oxygen and early animals. <i>ELife</i> , 2018, 7, .	2.8	6
546	Factors Affecting Exoplanet Habitability. , 2018, , 1-24.		4
547	Biosignature False Positives. , 2018, , 1-22.		2
548	Heterogeneous and dynamic marine shelf oxygenation and coupled early animal evolution. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 279-288.	1.1	64
549	On the edge of exceptional preservation: insights into the role of redox state in Burgess Shale-type taphonomic windows from the Mural Formation, Alberta, Canada. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 311-323.	1.1	21
550	Towards an Evolutionary Perspective in Teaching and Popularizing Microbiology. <i>Journal of Microbiology and Biology Education</i> , 2018, 19, .	0.5	6
551	A More Comprehensive Habitable Zone for Finding Life on Other Planets. <i>Geosciences (Switzerland)</i> , 2018, 8, 280.	1.0	54



#	ARTICLE	IF	CITATIONS
552	Folding and Catalysis Near Life's Origin: Support for Fe <sup>2+</sup> as a Dominant Divalent Cation. <i>Nucleic Acids and Molecular Biology</i> , 2018, , 227-243.	0.2	5
553	Nature of the sedimentary rock record and its implications for Earth system evolution. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 125-136.	1.1	29
554	A Mesoarchean shift in uranium isotope systematics. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 238, 438-452.	1.6	52
555	Contrasting Mo-U enrichments of the basal Datangpo Formation in South China: Implications for the Cryogenian interglacial ocean redox. <i>Precambrian Research</i> , 2018, 315, 66-74.	1.2	33
556	Constraints on Paleoproterozoic atmospheric oxygen levels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 8104-8109.	3.3	83
557	The iron paleoredox proxies: A guide to the pitfalls, problems and proper practice. <i>Numerische Mathematik</i> , 2018, 318, 491-526.	0.7	174
558	Analysis of gases in fossil amber. <i>Numerische Mathematik</i> , 2018, 318, 590-601.	0.7	3
559	After the boring billion and before the freezing millions: evolutionary patterns and innovations in the Tonian Period. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 161-171.	1.1	37
560	Dynamic oxygen and coupled biological and ecological innovation during the second wave of the Ediacara Biota. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 223-233.	1.1	26
561	Comparative Metagenomics Provides Insight Into the Ecosystem Functioning of the Shark Bay Stromatolites, Western Australia. <i>Frontiers in Microbiology</i> , 2018, 9, 1359.	1.5	34
562	Microalgal Systematics. , 2018, , 73-107.		2
563	Transient surface ocean oxygenation recorded in the ~4.66-Ga Jeerinah Formation, Australia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7711-7716.	3.3	46
564	1.1-billion-year-old porphyrins establish a marine ecosystem dominated by bacterial primary producers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6978-E6986.	3.3	68
565	Implications of Tides for Life on Exoplanets. <i>Astrobiology</i> , 2018, 18, 967-982.	1.5	21
566	Ab Initio Calculations. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 1-6.	0.1	0
567	Living with Oxygen. <i>Accounts of Chemical Research</i> , 2018, 51, 1850-1857.	7.6	106
568	Triple oxygen isotope evidence for limited mid-Proterozoic primary productivity. <i>Nature</i> , 2018, 559, 613-616.	13.7	144
569	Geochemistry of molybdenum in the continental crust. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 238, 36-54.	1.6	47



#	ARTICLE	IF	CITATIONS
570	Hydrocarbon biomarkers preserved in carbonate veins of potentially Paleoproterozoic age, and implications for the early biosphere. <i>Geobiology</i> , 2018, 16, 577-596.	1.1	7
571	A partner-switching regulatory system controls hormogonium development in the filamentous cyanobacterium <i>Nostoc punctiforme</i> . <i>Molecular Microbiology</i> , 2018, 109, 555-569.	1.2	20
573	Hafnium. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 629-631.	0.1	0
574	Incompatible Elements. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 719-721.	0.1	0
575	Magmatic Process Modeling. <i>Encyclopedia of Earth Sciences Series</i> , 2018, , 841-853.	0.1	0
576	The effect of oxygen availability on long-distance electron transport in marine sediments. <i>Limnology and Oceanography</i> , 2018, 63, 1799-1816.	1.6	22
577	Variations of Stable Isotope Ratios in Nature. <i>Springer Textbooks in Earth Sciences, Geography and Environment</i> , 2018, , 229-432.	0.1	4
578	Evaluation of phosphate-uptake mechanisms by Fe(III) (oxyhydr)oxides in Early Proterozoic oceanic conditions. <i>Environmental Chemistry</i> , 2018, 15, 18.	0.7	12
579	Atmospheric Seasonality as an Exoplanet Biosignature. <i>Astrophysical Journal Letters</i> , 2018, 858, L14.	3.0	40
580	Origin and evolution of the atmospheres of early Venus, Earth and Mars. <i>Astronomy and Astrophysics Review</i> , 2018, 26, 1.	9.1	124
581	Ocean Redox State at 2500–500 Ma: Modern Concepts. <i>Lithology and Mineral Resources</i> , 2018, 53, 190-211.	0.3	11
582	Direct Fe(III) Reduction from Synthetic Ferrihydrite by Haloalkaliphilic Lithotrophic Sulfidogens. <i>Microbiology</i> , 2018, 87, 164-172.	0.5	8
583	Rapid crustal growth and efficient crustal recycling in the early Earth: Implications for Hadean and Archean geodynamics. <i>Earth and Planetary Science Letters</i> , 2018, 494, 42-49.	1.8	84
584	Exoplanet Biosignatures: At the Dawn of a New Era of Planetary Observations. <i>Astrobiology</i> , 2018, 18, 619-629.	1.5	54
585	Integrated genomic and fossil evidence illuminates life's early evolution and eukaryote origin. <i>Nature Ecology and Evolution</i> , 2018, 2, 1556-1562.	3.4	274
586	Aerobic iron and manganese cycling in a redox-stratified Mesoarchean epicontinental sea. <i>Earth and Planetary Science Letters</i> , 2018, 500, 28-40.	1.8	54
587	Mid-Proterozoic redox evolution and the possibility of transient oxygenation events. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 235-245.	1.1	35
588	Anoxic ecosystems and early eukaryotes. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 299-309.	1.1	30

#	ARTICLE	IF	CITATIONS
589	Pervasive aerobic nitrogen cycling in the surface ocean across the Paleoproterozoic Era. <i>Earth and Planetary Science Letters</i> , 2018, 500, 117-126.	1.8	70
590	Prebiotic Chemistry and Chemical Evolution of Nucleic Acids. <i>Nucleic Acids and Molecular Biology</i> , 2018, , .	0.2	6
591	The effects of marine eukaryote evolution on phosphorus, carbon and oxygen cycling across the Proterozoicâ€“Phanerozoic transition. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 267-278.	1.1	34
592	Five-S-isotope evidence of two distinct mass-independent sulfur isotope effects and implications for the modern and Archean atmospheres. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 8541-8546.	3.3	37
593	The transition from a cyanobacterial to algal world and the emergence of animals. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 181-190.	1.1	50
594	A case for low atmospheric oxygen levels during Earth's middle history. <i>Emerging Topics in Life Sciences</i> , 2018, 2, 149-159.	1.1	64
595	Origin and Evolution of Flavin-Based Electron Bifurcating Enzymes. <i>Frontiers in Microbiology</i> , 2018, 9, 1762.	1.5	34
596	Nitrous oxide from chemodenitrification: A possible missing link in the Proterozoic greenhouse and the evolution of aerobic respiration. <i>Geobiology</i> , 2018, 16, 597-609.	1.1	39
597	Carbonate Transfer during the Onset of Slab Devolatilization: New Insights from Fe and Zn Stable Isotopes. <i>Journal of Petrology</i> , 2018, 59, 1145-1166.	1.1	55
598	Everything is not everywhere: a tale on the biogeography of cyanobacteria. <i>Hydrobiologia</i> , 2018, 820, 23-48.	1.0	39
599	Globally asynchronous sulphur isotope signals require re-definition of the Great Oxidation Event. <i>Nature Communications</i> , 2018, 9, 2245.	5.8	82
600	A case study for late Archean and Proterozoic biogeochemical ironâ€“and sulphur cycling in a modern habitatâ€“the Arvadi Spring. <i>Geobiology</i> , 2018, 16, 353-368.	1.1	5
601	Isotope measurements help pin down the ancient rise of oxygen. <i>Physics Today</i> , 2018, 71, 16-19.	0.3	2
602	Oxygen and the Energetic Requirements of the First Multicellular Animals. <i>Integrative and Comparative Biology</i> , 2018, 58, 666-676.	0.9	31
603	The deep history of Earth's biomass. <i>Journal of the Geological Society</i> , 2018, 175, 716-720.	0.9	28
604	Unusual microbial matâ€“related structural diversity 2.1 billion years ago and implications for the Francevillian biota. <i>Geobiology</i> , 2018, 16, 476-497.	1.1	20
605	Spinelâ€“Sapphirine Reaction Structures in the Garnet Metaultramafic Rocks of the Omolon Massif: Petrogenesis and Geological Interpretation (Northeast Asia). <i>Russian Journal of Pacific Geology</i> , 2018, 12, 174-189.	0.1	2
606	Atmospheric sulfur isotopic anomalies recorded at Mt. Everest across the Anthropocene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6964-6969.	3.3	20

#	ARTICLE	IF	CITATIONS
607	Trace, Rare-Earth Elements and C, O Isotope Systematics of Carbonate Rocks of Proterozoic Bhima Group, Eastern Dharwar Craton, India: Implications for the Source of Dissolved Components, Redox Condition and Biogeochemical Cycling of Mesoproterozoic Ocean. Society of Earth Scientists Series, 2019, , 297-326.	0.2	7
608	Subseafloor life and its biogeochemical impacts. Nature Communications, 2019, 10, 3519.	5.8	56
609	New insights on the paleobiology, biostratigraphy and paleogeography of the pre-Sturtian microfossil index taxon Cerebrosphaera. Precambrian Research, 2019, 332, 105410.	1.2	11
610	The Evolution of Oxygen-Independent Energy Metabolism in Eukaryotes with Hydrogenosomes and Mitosomes. Microbiology Monographs, 2019, , 7-29.	0.3	0
611	Intrinsic Climate Cooling. Astrobiology, 2019, 19, 1388-1397.	1.5	2
612	Adaptation to life on land at high O <sub>2</sub> via transition from ferredoxin-to NADH-dependent redox balance. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20191491.	1.2	14
613	Geoscience for Understanding Habitability in the Solar System and Beyond. Space Science Reviews, 2019, 215, 1.	3.7	14
614	A Celebration of Science amidst Nature: The 54th BÃ¼rgenstock Conference. Angewandte Chemie - International Edition, 2019, 58, 17107-17113.	7.2	0
615	Zircon Uâ€“Pb ages and Hf isotope compositions of the Neoproterozoic magmatic rocks in the Helan Mountains, North China. Geological Magazine, 2019, 156, 2104-2112.	0.9	5
616	Exoplanet interiors and habitability. Advances in Physics: X, 2019, 4, 1630316.	1.5	9
617	The Role of N <sub>2</sub> as a Geo-Biosignature for the Detection and Characterization of Earth-like Habitats. Astrobiology, 2019, 19, 927-950.	1.5	38
618	Nitrogen isotope evidence for stepwise oxygenation of the ocean during the Great Oxidation Event. Geochimica Et Cosmochimica Acta, 2019, 261, 224-247.	1.6	16
619	Decimeter-scale mapping of carbonate-controlled trace element distribution in Neoproterozoic cusped stromatolites. Geochimica Et Cosmochimica Acta, 2019, 261, 56-75.	1.6	5
620	Paleoproterozoic (ca. 1.9â€“Ga) megascopic life on land in Western Australia. Palaeogeography, Palaeoclimatology, Palaeoecology, 2019, 532, 109266.	1.0	13
621	Anoxygenic photosynthesis and the delayed oxygenation of Earthâ€™s atmosphere. Nature Communications, 2019, 10, 3026.	5.8	47
622	Anticipating alien cells with alternative genetic codes: away from the alanine world!. Current Opinion in Biotechnology, 2019, 60, 242-249.	3.3	23
623	Follow the Oxygen: Comparative Histories of Planetary Oxygenation and Opportunities for Aerobic Life. Astrobiology, 2019, 19, 811-824.	1.5	17
624	Organic-walled microfossils from the Tonian Tongjiashuang Formation of the Tumen Group in western Shandong, North China Craton and their biostratigraphic significance. Gondwana Research, 2019, 76, 260-289.	3.0	29

#	ARTICLE	IF	CITATIONS
625	Mass Spectrometry in Advancement of Redox Precision Medicine. <i>Advances in Experimental Medicine and Biology</i> , 2019, 1140, 327-358.	0.8	7
626	The <sup>238</sup> U/ <sup>235</sup> U Ratio as an Indicator of Redox Conditions in the Ediacaran Paleobasin (Sequence of the Tj ETQq1 1 0.784314 rgBT /Ov 485, 336-340.	0.2	2
627	Development and evolution of a euxinic wedge on the ferruginous outer shelf of the early Cambrian Yangtze sea. <i>Chemical Geology</i> , 2019, 524, 259-271.	1.4	27
628	De novo design of symmetric ferredoxins that shuttle electrons in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 14557-14562.	3.3	41
629	Methane in the Precambrian atmosphere. <i>Earth and Planetary Science Letters</i> , 2019, 522, 48-54.	1.8	14
630	Shallow-marine ironstones formed by microaerophilic iron-oxidizing bacteria in terminal Paleoproterozoic. <i>Gondwana Research</i> , 2019, 76, 1-18.	3.0	29
631	Planktonic adaptive evolution to the sea surface temperature in the Neoproterozoic inferred from ancestral NDK of marine cyanobacteria. <i>Earth and Planetary Science Letters</i> , 2019, 522, 98-106.	1.8	4
632	Phenomenon of the Evolution of Hydrothermal Fluids of Mineral Formation at the Archean-Proterozoic Boundary. <i>Journal of Water Chemistry and Technology</i> , 2019, 41, 137-142.	0.2	1
633	Redox-sensitive trace element distribution in the Loma Negra Formation in Argentina: The record of an Ediacaran oxygenation event. <i>Precambrian Research</i> , 2019, 332, 105384.	1.2	20
634	An Oxygen Paradox: Catalytic Use of Oxygen in Radical Photopolymerization. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 16811-16814.	7.2	48
635	An Oxygen Paradox: Catalytic Use of Oxygen in Radical Photopolymerization. <i>Angewandte Chemie</i> , 2019, 131, 16967-16970.	1.6	15
636	Triple oxygen isotope investigation of fine-grained sediments from major world's rivers: Insights into weathering processes and global fluxes into the hydrosphere. <i>Earth and Planetary Science Letters</i> , 2019, 528, 115851.	1.8	21
637	An essential role for sulfur in sulfide-silicate melt partitioning of gold and magmatic gold transport at subduction settings. <i>Earth and Planetary Science Letters</i> , 2019, 528, 115850.	1.8	33
638	Ediacaran ramp depositional model of the Tamengo Formation, Brazil. <i>Journal of South American Earth Sciences</i> , 2019, 96, 102348.	0.6	12
639	The redox budget of the Mariana subduction zone. <i>Earth and Planetary Science Letters</i> , 2019, 528, 115859.	1.8	23
640	The Alanine World Model for the Development of the Amino Acid Repertoire in Protein Biosynthesis. <i>International Journal of Molecular Sciences</i> , 2019, 20, 5507.	1.8	23
641	Tracing the formation and differentiation of the Earth by non-traditional stable isotopes. <i>Science China Earth Sciences</i> , 2019, 62, 1702-1715.	2.3	17
643	Theoretical Reflectance Spectra of Earth-like Planets through Their Evolutions: Impact of Clouds on the Detectability of Oxygen, Water, and Methane with Future Direct Imaging Missions. <i>Astronomical Journal</i> , 2019, 157, 213.	1.9	17

#	ARTICLE	IF	CITATIONS
644	Global atmospheric oxygen variations recorded by Th/U systematics of igneous rocks. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 18854-18859.	3.3	40
645	Iron homeostasis and oxidative stress: An intimate relationship. Biochimica Et Biophysica Acta - Molecular Cell Research, 2019, 1866, 118535.	1.9	402
646	Ein Fest der Wissenschaft inmitten der Natur: Die 54. BÃ¼rgerstock-Konferenz. Angewandte Chemie, 2019, 131, 17265-17271.	1.6	0
647	An empirical infrared transit spectrum of Earth: opacity windows and biosignatures. Monthly Notices of the Royal Astronomical Society, 2019, 489, 196-204.	1.6	17
648	Nitrogenase Inhibition Limited Oxygenation of Earth's Proterozoic Atmosphere. Trends in Plant Science, 2019, 24, 1022-1031.	4.3	36
649	Vanadium and its isotope composition of river water and seawater: Analytical improvement and implications for vanadium isotope fractionation. Chemical Geology, 2019, 528, 119261.	1.4	19
650	Late Vendian Kotlinian Crisis on the East European Platform: Lithogeochemical Indicators of Depositional Environment. Lithology and Mineral Resources, 2019, 54, 1-26.	0.3	3
651	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
652	Salt-Regulated Accumulation of the Compatible Solutes Sucrose and Glucosylglycerol in Cyanobacteria and Its Biotechnological Potential. Frontiers in Microbiology, 2019, 10, 2139.	1.5	69
653	Pyrite trace-element and sulfur isotope geochemistry of paleo-mesoproterozoic McArthur Basin: Proxy for oxidative weathering. American Mineralogist, 2019, 104, 1256-1272.	0.9	28
654	Redox rebalance against genetic perturbations and modulation of central carbon metabolism by the oxidative stress regulation. Biotechnology Advances, 2019, 37, 107441.	6.0	37
655	Plundering Carlow Castle: First Look at a Unique Mesoarchean-Hosted Cu-Co-Au Deposit. Economic Geology, 2019, 114, 1021-1031.	1.8	8
656	Ediacaran, Cambrian, Ordovician, Silurian and Permian shales of the Upper Yangtze Platform, South China: Deposition, thermal maturity and shale gas potential. International Journal of Coal Geology, 2019, 216, 103281.	1.9	33
657	A pulse of oxygen increase in the early Mesoproterozoic ocean at ca. 1.57-1.56 Ga. Earth and Planetary Science Letters, 2019, 527, 115797.	1.8	73
658	Modern weathering in outcrop samples versus ancient paleoredox information in drill core samples from a Mesoarchean marine oxygen oasis in Pongola Supergroup, South Africa. Geochimica Et Cosmochimica Acta, 2019, 265, 330-353.	1.6	28
659	Exoplanet Habitability: Potential O <sub>2</sub> /O <sub>3</sub> Biosignatures in the Ultraviolet. Solar System Research, 2019, 53, 322-331.	0.3	1
660	EvoChromo: towards a synthesis of chromatin biology and evolution. Development (Cambridge), 2019, 146, .	1.2	16
661	History of the Hadean - Living Microfossil-OD1 and Ultra-reducing Environments. Journal of Geography (Chigaku Zasshi), 2019, 128, 571-596.	0.1	13

#	ARTICLE	IF	CITATIONS
662	Long-term evolution of terrestrial inputs from the Ediacaran to early Cambrian: Clues from Nd isotopes in shallow-marine carbonates, South China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 535, 109367.	1.0	23
663	Deep Carbon through Deep Time. , 2019, , 620-652.		10
664	Geochemical and Metagenomic Characterization of Jinata Onsen, a Proterozoic-Analog Hot Spring, Reveals Novel Microbial Diversity including Iron-Tolerant Phototrophs and Thermophilic Lithotrophs. <i>Microbes and Environments</i> , 2019, 34, 278-292.	0.7	48
665	Energy business transformation & Earth system resilience: A metabolic approach. <i>Journal of Cleaner Production</i> , 2019, 215, 854-869.	4.6	5
666	A review of the mechanisms of mineral-based metabolism in early Earth analog rock-hosted hydrothermal ecosystems. <i>World Journal of Microbiology and Biotechnology</i> , 2019, 35, 29.	1.7	17
667	Variations in trace metal concentrations and Sr, Nd isotopic compositions in sediments from two contrasting settings in the Eastern Arabian Shelf: Implications for provenance and paleoclimate reconstruction. <i>Chemical Geology</i> , 2019, 509, 134-151.	1.4	6
668	Secular mantle oxidation across the Archean-Proterozoic boundary: Evidence from V partitioning in komatiites and picrites. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 250, 49-75.	1.6	88
669	Atmospheric gas in modern and ancient halite fluid inclusions: A screening protocol. <i>Gondwana Research</i> , 2019, 69, 163-176.	3.0	20
670	Insights Into the Evolution of Picocyanobacteria and Phycoerythrin Genes (mpeBA and cpeBA). <i>Frontiers in Microbiology</i> , 2019, 10, 45.	1.5	56
671	Highly siderophile elements in Archaean and Palaeoproterozoic marine shales of the Kaapvaal Craton, South Africa. <i>Mineralogy and Petrology</i> , 2019, 113, 307-327.	0.4	7
672	The third pillar of metal homeostasis in <i>Cupriavidus metallidurans</i> CH34: preferences are controlled by extracytoplasmic function sigma factors. <i>Metallomics</i> , 2019, 11, 291-316.	1.0	13
673	Origin and Evolution of Core Components Responsible for Monitoring Light Environment Changes during Plant Terrestrialization. <i>Molecular Plant</i> , 2019, 12, 847-862.	3.9	85
674	Hydrogeological constraints on the formation of Palaeoproterozoic banded iron formations. <i>Nature Geoscience</i> , 2019, 12, 558-563.	5.4	49
675	Linking the Bitter Springs carbon isotope anomaly and early Neoproterozoic oxygenation through $^{44}\text{Ca}/^{24}\text{Mg}$ ratios. <i>Chemical Geology</i> , 2019, 524, 119-135.	1.4	31
676	A tectonically driven Ediacaran oxygenation event. <i>Nature Communications</i> , 2019, 10, 2690.	5.8	37
677	Evaluating the carbon inventory, carbon fluxes and carbon cycles for a long-term sustainable world. <i>Green Chemistry</i> , 2019, 21, 3994-4013.	4.6	47
678	Algae. , 2019, , 95-120.		2
679	Why is Life the Way it Is?. <i>Molecular Frontiers Journal</i> , 2019, 03, 20-28.	0.9	0

#	ARTICLE	IF	CITATIONS
680	Ancient rust. <i>Nature Geoscience</i> , 2019, 12, 498-499.	5.4	5
681	A Limited Habitable Zone for Complex Life. <i>Astrophysical Journal</i> , 2019, 878, 19.	1.6	30
682	Active Galactic Nuclei: Boon or Bane for Biota?. <i>Astrophysical Journal</i> , 2019, 877, 62.	1.6	22
683	Geochemical constraints on the origin of Neoproterozoic cap carbonate in the Helan Mountains, North China: Implications for mid-late Ediacaran glaciation?. <i>Precambrian Research</i> , 2019, 331, 105361.	1.2	21
684	Economic phosphorite from the Ediacaran Doushantuo Formation, South China, and the Neoproterozoic-Cambrian Phosphogenic Event. <i>Sedimentary Geology</i> , 2019, 388, 1-19.	1.0	30
685	Algae and oxygen, humans and carbon: A Precambrian analogue for the Anthropocene. <i>Infrastructure Asset Management</i> , 2019, 6, 162-166.	1.2	1
686	Metabolic versatility in a modern lineage of cyanobacteria from terrestrial hot springs. <i>Free Radical Biology and Medicine</i> , 2019, 140, 224-232.	1.3	20
687	The Great Oxygenation Event. , 2019, , 129-154.		5
688	Redox Chemistry and Molybdenum Burial in a Mesoproterozoic Lake. <i>Geophysical Research Letters</i> , 2019, 46, 5871-5878.	1.5	11
689	Moving to the Light: The Evolution of Photosynthesis. , 2019, , 99-127.		0
690	Strongly Peraluminous Granites across the Archean-Proterozoic Transition. <i>Journal of Petrology</i> , 2019, 60, 1299-1348.	1.1	40
691	<i>Colloquium</i> : Physical constraints for the evolution of life on exoplanets. <i>Reviews of Modern Physics</i> , 2019, 91, .	16.4	39
692	Neoproterozoic magmatic arc evolution in the Wutai-Hengshan-Fuping area, North China Craton: New perspectives from zircon U-Pb ages and Hf isotopic data. <i>Precambrian Research</i> , 2019, 331, 105368.	1.2	11
693	Hypolithic Photosynthesis in Hydrothermal Areas and Implications for Cryptic Oxygen Oases on Archean Continental Surfaces. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	9
694	Growth mechanisms and environmental implications of carbonate concretions from the ~1.4 Ga Xiamaling Formation, North China. <i>Journal of Palaeogeography</i> , 2019, 8, .	0.9	23
695	Emergence of metal selectivity and promiscuity in metalloenzymes. <i>Journal of Biological Chemistry</i> , 2019, 24, 517-531.	1.1	40
696	Redox states of Archean surficial environments: The importance of H <sub>2</sub> ,g instead of O <sub>2</sub> ,g for weathering reactions. <i>Chemical Geology</i> , 2019, 521, 49-58.	1.4	14
697	An apical hypoxic niche sets the pace of shoot meristem activity. <i>Nature</i> , 2019, 569, 714-717.	13.7	137



#	ARTICLE	IF	CITATIONS
698	Cyanobacteria evolution: Insight from the fossil record. <i>Free Radical Biology and Medicine</i> , 2019, 140, 206-223.	1.3	116
699	The same and not the same: Ore geology, mineralogy and geochemistry of Rodinia assembly versus other supercontinents. <i>Earth-Science Reviews</i> , 2019, 196, 102860.	4.0	16
700	The trouble with oxygen: The ecophysiology of extant phototrophs and implications for the evolution of oxygenic photosynthesis. <i>Free Radical Biology and Medicine</i> , 2019, 140, 233-249.	1.3	38
701	Rates and stoichiometry of pyrite dissolution at pH $\approx$ 3 under low O <sub>2</sub> conditions. <i>Chemical Geology</i> , 2019, 522, 240-259.	1.4	4
702	The Redox architecture of physiological function. <i>Current Opinion in Physiology</i> , 2019, 9, 34-47.	0.9	79
703	Paleoproterozoic increase in zircon $\delta^{18}O$ driven by rapid emergence of continental crust. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 257, 16-25.	1.6	41
704	Cr isotopic insights into $\delta^{54}Fe$ . $\delta^{19}Ga$ oxidative weathering of the continents using the Beaverlodge Lake paleosol, Northwest Territories, Canada. <i>Geobiology</i> , 2019, 17, 467-489.	1.1	12
705	The chemistry of fine-grained terrigenous sediments reveals a chemically evolved Paleoproterozoic emerged crust. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 255, 247-264.	1.6	57
706	Variations of the $^{238}U/^{235}U$ Isotope Ratio in Metasedimentary Rocks and Evidence of Changes in Sedimentation Conditions during the Ediacarian Period of the Neoproterozoic. <i>Doklady Earth Sciences</i> , 2019, 484, 167-172.	0.2	4
707	Formation and evolution of the Ediacaran to Lower Cambrian black shales in the Yangtze Platform, South China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 527, 87-102.	1.0	31
708	Complete arsenic-based respiratory cycle in the marine microbial communities of pelagic oxygen-deficient zones. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 9925-9930.	3.3	38
709	Diagenesis and iron paleo-redox proxies: New perspectives from magnetic and iron speciation analyses in the Santa Barbara Basin. <i>Chemical Geology</i> , 2019, 519, 95-109.	1.4	11
710	The rise of oxygen-driven arsenic cycling at ca. 2.48 Ga. <i>Geology</i> , 2019, 47, 243-246.	2.0	27
711	Thinking twice about the evolution of photosynthesis. <i>Open Biology</i> , 2019, 9, 180246.	1.5	49
712	Milestones in Early Evolution. , 2019, , 31-52.		0
713	Unusually variable paleocommunity composition in the oldest metazoan fossil assemblages. <i>Paleobiology</i> , 2019, 45, 235-245.	1.3	18
714	GPX4 at the Crossroads of Lipid Homeostasis and Ferroptosis. <i>Proteomics</i> , 2019, 19, e1800311.	1.3	479
715	A novel framework for interpreting pyrite-based Fe isotope records of the past. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 253, 39-62.	1.6	38



#	ARTICLE	IF	CITATIONS
716	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
717	Widespread occurrence and unexpected diversity of red-shifted chlorophyll producing cyanobacteria in humid subtropical forest ecosystems. Environmental Microbiology, 2019, 21, 1497-1510.	1.8	41
718	Claypool continued: Extending the isotopic record of sedimentary sulfate. Chemical Geology, 2019, 513, 200-225.	1.4	102
719	Paleoenvironmental proxies and what the Xiamaling Formation tells us about the mid-Proterozoic ocean. Geobiology, 2019, 17, 225-246.	1.1	41
720	High-CO <sub>2</sub> , acidic and oxygen-starved weathering at the Fennoscandian Shield at the Archean-Proterozoic transition. Precambrian Research, 2019, 327, 68-80.	1.2	7
721	Hydrothermal dedolomitisation of carbonate rocks of the Paleoproterozoic Zaonega Formation, NW Russia – Implications for the preservation of primary C isotope signals. Chemical Geology, 2019, 512, 43-57.	1.4	23
722	Great Oxidation Event and Snowball Earth. , 2019, , 261-271.		2
723	Methanogenesis sustained by sulfide weathering during the Great Oxidation Event. Nature Geoscience, 2019, 12, 296-300.	5.4	44
725	Role of stellar physics in regulating the critical steps for life. International Journal of Astrobiology, 2019, 18, 527-546.	0.9	16
726	Exploiting Designed Oxidase-Peroxygenase Mutual Benefit System for Asymmetric Cascade Reactions. Journal of the American Chemical Society, 2019, 141, 5655-5658.	6.6	32
727	Hypothesized Evolutionary Consequences of the Alternative Oxidase (AOX) in Animal Mitochondria. Integrative and Comparative Biology, 2019, 59, 994-1004.	0.9	17
728	Atmosphere oxygen cycling through the Proterozoic and Phanerozoic. Mineralium Deposita, 2019, 54, 485-506.	1.7	73
729	Geochemical evidence for expansion of marine euxinia during an early Silurian (Llandovery-Wenlock) Tj ETQq0 0 0 rgBT /Overlock 10	1.8	29
730	Organic geochemical approaches to understanding early life. Free Radical Biology and Medicine, 2019, 140, 103-112.	1.3	27
731	Extreme sensitivity in Snowball Earth formation to mountains on PaleoProterozoic supercontinents. Scientific Reports, 2019, 9, 2349.	1.6	7
732	Microbial assemblage and palaeoenvironmental reconstruction of the 1.38 Ga Velkerri Formation, McArthur Basin, northern Australia. Geobiology, 2019, 17, 360-380.	1.1	27
733	An investigation into the effects of increasing salinity on photosynthesis in freshwater unicellular cyanobacteria during the late Archaean. Geobiology, 2019, 17, 343-359.	1.1	18
734	From Stars to Brains: Milestones in the Planetary Evolution of Life and Intelligence. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
735	Revisiting the Biological Ramifications of Variations in Earth's Magnetic Field. <i>Astrophysical Journal Letters</i> , 2019, 874, L28.	3.0	8
736	How to resurrect ancestral proteins as proxies for ancient biogeochemistry. <i>Free Radical Biology and Medicine</i> , 2019, 140, 260-269.	1.3	45
737	Iron isotope transformations in the meromictic Lake Cadagno. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 255, 205-221.	1.6	12
738	Neoproterozoic to early Phanerozoic rise in island arc redox state due to deep ocean oxygenation and increased marine sulfate levels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 8746-8755.	3.3	50
739	Shallow water redox conditions of the mid-Proterozoic Muskwa Assemblage, British Columbia, Canada. <i>Numerische Mathematik</i> , 2019, 319, 122-157.	0.7	14
740	Middle-late Mesoproterozoic tectonic geography of the North Australia Craton: U-Pb and Hf isotopes of detrital zircon grains in the Beetaloo Sub-basin, Northern Territory, Australia. <i>Journal of the Geological Society</i> , 2019, 176, 771-784.	0.9	23
741	How to define obligatory anaerobiosis? An evolutionary view on the antioxidant response system and the early stages of the evolution of life on Earth. <i>Free Radical Biology and Medicine</i> , 2019, 140, 61-73.	1.3	24
742	Energy metabolism in anaerobic eukaryotes and Earth's late oxygenation. <i>Free Radical Biology and Medicine</i> , 2019, 140, 279-294.	1.3	32
743	Oxygen Reductases in Alphaproteobacterial Genomes: Physiological Evolution From Low to High Oxygen Environments. <i>Frontiers in Microbiology</i> , 2019, 10, 499.	1.5	30
744	A new appraisal of depositional cyclicity in the Neoproterozoic Dales Gorge Member (Brockman Iron Formation, Hamersley Basin, Australia). <i>Precambrian Research</i> , 2019, 328, 27-47.	1.2	15
745	Photosynthesis on habitable planets around low-mass stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 485, 5924-5928.	1.6	24
746	Hydrocarbon generation characteristics and exploration prospects of Proterozoic source rocks in China. <i>Science China Earth Sciences</i> , 2019, 62, 909-934.	2.3	41
747	Nutrient and iron cycling in a modern analogue for the redoxcline of a Proterozoic ocean shelf. <i>Chemical Geology</i> , 2019, 511, 42-50.	1.4	10
748	Phosphorus cycling in Lake Cadagno, Switzerland: A low sulfate euxinic ocean analogue. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 251, 116-135.	1.6	51
749	Use of Isotope Effects To Understand the Present and Past of the Atmosphere and Climate and Track the Origin of Life. <i>Angewandte Chemie</i> , 2019, 131, 6898-6916.	1.6	4
750	Geobiological feedbacks, oxygen, and the evolution of nitrogenase. <i>Free Radical Biology and Medicine</i> , 2019, 140, 250-259.	1.3	56
751	Oxygen—A Critical, but Overlooked, Nutrient. <i>Frontiers in Nutrition</i> , 2019, 6, 10.	1.6	25
752	The evolution and productivity of carbon fixation pathways in response to changes in oxygen concentration over geological time. <i>Free Radical Biology and Medicine</i> , 2019, 140, 188-199.	1.3	59

#	ARTICLE	IF	CITATIONS
753	Organism motility in an oxygenated shallow-marine environment 2.1 billion years ago. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 3431-3436.	3.3	47
754	“Birth defects” of photosystem II make it highly susceptible to photodamage during chloroplast biogenesis. <i>Physiologia Plantarum</i> , 2019, 166, 165-180.	2.6	15
755	Taming chlorophylls by early eukaryotes underpinned algal interactions and the diversification of the eukaryotes on the oxygenated Earth. <i>ISME Journal</i> , 2019, 13, 1899-1910.	4.4	10
756	Fully oxygenated water columns over continental shelves before the Great Oxidation Event. <i>Nature Geoscience</i> , 2019, 12, 186-191.	5.4	95
757	Microbial diversity involved in iron and cryptic sulfur cycling in the ferruginous, low-sulfate waters of Lake Pavin. <i>PLoS ONE</i> , 2019, 14, e0212787.	1.1	43
758	Cellular Microfossils and Possible Microfossils in the Paleo- and Mesoarchean. , 2019, , 229-259.		0
759	Primary Productivity Was Limited by Electron Donors Prior to the Advent of Oxygenic Photosynthesis. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 211-226.	1.3	69
760	A nephelinitic component with unusual $\delta^{56}\text{Fe}$ in Cenozoic basalts from eastern China and its implications for deep oxygen cycle. <i>Earth and Planetary Science Letters</i> , 2019, 512, 175-183.	1.8	47
761	Atmosphere-ocean oxygen and productivity dynamics during early animal radiations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 19352-19361.	3.3	72
762	Metrological assessment of the indirect method of measuring the concentration of oxygen in the air. , 2019, , .		6
763	Photoferrotrophy, deposition of banded iron formations, and methane production in Archean oceans. <i>Science Advances</i> , 2019, 5, eaav2869.	4.7	43
764	Constraining the rise of oxygen with oxygen isotopes. <i>Nature Communications</i> , 2019, 10, 4924.	5.8	15
765	The Evolution of Cholesterol-Rich Membrane in Oxygen Adaption: The Respiratory System as a Model. <i>Frontiers in Physiology</i> , 2019, 10, 1340.	1.3	13
766	Stepwise Earth oxygenation is an inherent property of global biogeochemical cycling. <i>Science</i> , 2019, 366, 1333-1337.	6.0	85
767	$\text{CH}_3\text{NO}$ as a potential intermediate for early atmospheric HCN: a quantum chemical insight. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 25126-25138.	1.3	5
768	Conflict and complementarity of paleontological and molecular chronologies?. <i>Paleobiology</i> , 2019, 45, 7-20.	1.3	10
769	A comparison of bulk versus laser ablation trace element analyses in banded iron formations: Insights into the mechanisms leading to compositional variability. <i>Chemical Geology</i> , 2019, 506, 197-224.	1.4	12
770	Evaluating the fidelity of the cerium paleoredox tracer during variable carbonate diagenesis on the Great Bahamas Bank. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 248, 25-42.	1.6	82

#	ARTICLE	IF	CITATIONS
771	Organic-walled microfossils from the late Mesoproterozoic to early Neoproterozoic lower Shaler Supergroup (Arctic Canada): Diversity and biostratigraphic significance. <i>Precambrian Research</i> , 2019, 321, 349-374.	1.2	41
772	Dynamics of oceanic iron prior to the Great Oxygenation Event. <i>Earth and Planetary Science Letters</i> , 2019, 506, 360-370.	1.8	31
773	Early Archean origin of Photosystem $\text{II}$ . <i>Geobiology</i> , 2019, 17, 127-150.	1.1	95
774	A small marine biosphere in the Proterozoic. <i>Geobiology</i> , 2019, 17, 161-171.	1.1	42
775	Peroxide Bond Cleavage of Nonheme Iron-(Hydro/Alkyl)Peroxo Complexes Induced by Endogenous and Exogenous Factors. <i>Chemistry Letters</i> , 2019, 48, 80-85.	0.7	8
776	Core formation, mantle differentiation and core-mantle interaction within Earth and the terrestrial planets. <i>Tectonophysics</i> , 2019, 760, 165-198.	0.9	67
777	Absence of biomarker evidence for early eukaryotic life from the Mesoproterozoic Roper Group: Searching across a marine redox gradient in mid-Proterozoic habitability. <i>Geobiology</i> , 2019, 17, 247-260.	1.1	39
778	Pervasively anoxic surface conditions at the onset of the Great Oxidation Event: New multi-proxy constraints from the Cooper Lake paleosol. <i>Precambrian Research</i> , 2019, 323, 126-163.	1.2	26
779	Use of Isotope Effects To Understand the Present and Past of the Atmosphere and Climate and Track the Origin of Life. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6826-6844.	7.2	22
780	Triple oxygen and hydrogen isotopic study of hydrothermally altered rocks from the 2.43–2.41 Ga Vetreny belt, Russia: An insight into the early Paleoproterozoic seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 248, 185-209.	1.6	30
781	Mo isotopic variations of a Cambrian sedimentary profile in the Huangling area, South China: Evidence for redox environment corresponding to the Cambrian Explosion. <i>Gondwana Research</i> , 2019, 69, 45-55.	3.0	12
782	Altered chemistry of oxygen and iron under deep Earth conditions. <i>Nature Communications</i> , 2019, 10, 153.	5.8	35
783	Vanadium isotope composition of seawater. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 244, 403-415.	1.6	32
784	Phosphogenesis in the immediate aftermath of the Great Oxidation Event: Evidence from the Turee Creek Group, Western Australia. <i>Precambrian Research</i> , 2019, 320, 193-212.	1.2	9
785	Life Under Aerobic Conditions. , 2019, , 3-8.		1
786	Oxygen, evolution and redox signalling in the human brain; quantum in the quotidian. <i>Journal of Physiology</i> , 2019, 597, 15-28.	1.3	54
787	A Polyextreme Hydrothermal System Controlled by Iron: The Case of Dallol at the Afar Triangle. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 90-99.	1.2	32
788	Energy-cane and RenovaBio: Brazilian vectors to boost the development of Biofuels. <i>Industrial Crops and Products</i> , 2019, 129, 201-205.	2.5	97

#	ARTICLE	IF	CITATIONS
789	New record of organic-walled, morphologically distinct microfossils from the late Paleoproterozoic Changcheng Group in the Yanshan Range, North China. <i>Precambrian Research</i> , 2019, 321, 172-198.	1.2	76
790	Syn-tectonic hematite growth in Paleoproterozoic Stirling Range <i>œ</i> red beds $\text{œ}$ , Albany-Fraser Orogen, Australia: Evidence for oxidation during late-stage orogenic uplift. <i>Precambrian Research</i> , 2019, 321, 54-63.	1.2	10
791	Influence of dissolved oxygen on secular patterns of marine microbial carbonate abundance during the past 490 $\text{œ}$ Myr. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 514, 135-143.	1.0	32
792	Redox induced sulfur-selenium isotope decoupling recorded in pyrite. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 244, 24-39.	1.6	17
793	A sluggish mid $\text{œ}$ Proterozoic biosphere and its effect on Earth's redox balance. <i>Geobiology</i> , 2019, 17, 3-11.	1.1	52
794	Geochemistry of carbonate formations of the Chhattisgarh Supergroup, central India: implications for Mesoproterozoic global events. <i>Canadian Journal of Earth Sciences</i> , 2019, 56, 335-346.	0.6	13
795	A systematic description of new macrofossil material from the upper Ediacaran Miaohe Member in South China. <i>Journal of Systematic Palaeontology</i> , 2019, 17, 183-238.	0.6	43
796	Lipid biomarkers for the reconstruction of deep-time environmental conditions. <i>Earth-Science Reviews</i> , 2019, 189, 99-124.	4.0	39
797	U-Pb geochronology and coupled Hf-Nd-Sr isotopic-chemical constraints of the Cassiterita Orthogneiss (2.47 $\text{œ}$ 2.41-Ga) in the Mineiro belt, S $\text{œ}$ o Francisco craton: Geodynamic fingerprints beyond the Archean-Paleoproterozoic Transition. <i>Precambrian Research</i> , 2019, 326, 399-416.	1.2	44
798	Magnetization age from paleomagnetism of the Copper Harbor red beds, Northern Michigan, USA, and its Keweenaw geologic consequences. <i>Canadian Journal of Earth Sciences</i> , 2019, 56, 1-15.	0.6	6
799	Subsurface exolife. <i>International Journal of Astrobiology</i> , 2019, 18, 112-141.	0.9	33
800	<i>Attenborrites janeae</i> : a new enigmatic organism from the Ediacara Member (Rawnsley Quartzite), South Australia. <i>Australian Journal of Earth Sciences</i> , 2020, 67, 915-921.	0.4	6
801	Single $\text{œ}$ cell determination of iron content in magnetotactic bacteria: implications for the iron biogeochemical cycle. <i>Environmental Microbiology</i> , 2020, 22, 823-831.	1.8	37
802	Modeling the short-term and long-term behaviour of the Oklo natural nuclear reactor phenomenon. <i>Progress in Nuclear Energy</i> , 2020, 118, 103080.	1.3	2
803	On the origin of microbial magnetoreception. <i>National Science Review</i> , 2020, 7, 472-479.	4.6	46
804	Not all Neoproterozoic iron formations are glaciogenic: Sturtian-aged non-Rapitan exhalative iron formations from the Arabian $\text{œ}$ Nubian Shield. <i>Mineralium Deposita</i> , 2020, 55, 577-596.	1.7	17
805	Molybdenum contents of sulfides in ancient glacial diamictites: Implications for molybdenum delivery to the oceans prior to the Great Oxidation Event. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 278, 30-50.	1.6	7
806	Radiation-chemical decomposition of seawater: The appearance and accumulation of oxygen in the Earth's atmosphere. <i>Radiation Physics and Chemistry</i> , 2020, 168, 108530.	1.4	9

#	ARTICLE	IF	CITATIONS
807	Spatial and temporal evolution of Ediacaran carbon and sulfur cycles in the Lower Yangtze Block, South China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2020, 537, 109417.	1.0	10
808	Archean banded iron formations of India. <i>Earth-Science Reviews</i> , 2020, 201, 102927.	4.0	19
809	Reconstruction of nearshore chemical conditions in the Mesoproterozoic: evidence from red and grey beds of the Yangzhuang formation, North China Craton. <i>International Geology Review</i> , 2020, 62, 1433-1449.	1.1	5
810	Development of an apatite oxygen paleobarometer: Experimental characterization of Sm <sup>3+</sup> -substituted apatite fluorescence as a function of oxygen availability. <i>Precambrian Research</i> , 2020, 349, 105389.	1.2	3
811	Terrestrial microbialites provide constraints on the mesoproterozoic atmosphere. <i>Depositional Record</i> , 2020, 6, 4-20.	0.8	2
812	Plate subduction, oxygen fugacity, and mineralization. <i>Journal of Oceanology and Limnology</i> , 2020, 38, 64-74.	0.6	31
813	Impact of space weather on climate and habitability of terrestrial-type exoplanets. <i>International Journal of Astrobiology</i> , 2020, 19, 136-194.	0.9	125
814	SIMS U-Pb Zircon Geochronological and Carbon Isotope Chemostratigraphic Constraints on the Ediacaran-Cambrian Boundary Succession in the Three Gorges Area, South China. <i>Journal of Earth Science (Wuhan, China)</i> , 2020, 31, 69-78.	1.1	16
815	Heterogeneity in the Ediacaran-Cambrian coastal oceans: a sulphur isotope perspective. <i>Geological Magazine</i> , 2020, 157, 1112-1120.	0.9	1
816	Sedimentation of ballasted cells-free EPS in meromictic Fayetteville Green Lake. <i>Geobiology</i> , 2020, 18, 80-92.	1.1	4
817	An expanded shale <sup>98</sup> Mo record permits recurrent shallow marine oxygenation during the Neoproterozoic. <i>Chemical Geology</i> , 2020, 532, 119391.	1.4	15
818	On the biogenicity of Fe-oxhydroxide filaments in silicified low-temperature hydrothermal deposits: Implications for the identification of Fe-oxidizing bacteria in the rock record. <i>Geobiology</i> , 2020, 18, 31-53.	1.1	17
819	On the origin of oxygenic photosynthesis and Cyanobacteria. <i>New Phytologist</i> , 2020, 225, 1440-1446.	3.5	132
820	Bottom-current depositional model and characterization of the Paraburdoo Member surrounding the Paraburdoo Spherule Layer, Hamersley Basin, Western Australia. <i>Precambrian Research</i> , 2020, 338, 105596.	1.2	1
821	Bioenergetic constraints on the origin of autotrophic metabolism. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190151.	1.6	33
822	Recurrent anoxia recorded in shallow marine facies at Zhangcunping (western Hubei, China) throughout the Ediacaran to earliest Cambrian. <i>Precambrian Research</i> , 2020, 340, 105617.	1.2	7
823	Oxygenation of acid sulfate soils stimulates CO <sub>2</sub> emission: Roles of acidic dissolution and hydroxyl radical oxidation. <i>Chemical Geology</i> , 2020, 533, 119437.	1.4	20
824	Basinal hydrographic and redox controls on selenium enrichment and isotopic composition in Paleozoic black shales. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 287, 229-250.	1.6	12

#	ARTICLE	IF	CITATIONS
825	Metabolic activity analyses demonstrate that Lokiarchaeon exhibits homoacetogenesis in sulfidic marine sediments. <i>Nature Microbiology</i> , 2020, 5, 248-255.	5.9	48
826	Lethality caused by ADP-glucose accumulation is suppressed by salt-induced carbon flux redirection in cyanobacteria. <i>Journal of Experimental Botany</i> , 2020, 71, 2005-2017.	2.4	10
827	Mo-Ni and organic carbon isotope signatures of the mid-late Mesoproterozoic oxygenation. <i>Journal of Asian Earth Sciences</i> , 2020, 191, 104201.	1.0	5
828	Carbonates before skeletons: A database approach. <i>Earth-Science Reviews</i> , 2020, 201, 103065.	4.0	49
829	Oxidative stress and the early coevolution of life and biospheric oxygen. , 2020, , 67-85.		6
830	The influence of thermal maturity on the stable isotope compositions and concentrations of molybdenum, zinc and cadmium in organic-rich marine mudrocks. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 287, 205-220.	1.6	37
831	Dynamic carbon and sulfur cycling in the aftermath of the Lomagundi-Jatuli Event: Evidence from the Paleoproterozoic Hutuo Supergroup, North China Craton. <i>Precambrian Research</i> , 2020, 337, 105549.	1.2	6
832	What goes down must come up. <i>Nature Geoscience</i> , 2020, 13, 5-7.	5.4	0
833	Neoproterozoic origin and multiple transitions to macroscopic growth in green seaweeds. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2551-2559.	3.3	85
834	Spatiotemporal redox heterogeneity and transient marine shelf oxygenation in the Mesoproterozoic ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 270, 201-217.	1.6	39
835	Investigating the molybdenum and uranium redox proxies in a modern shallow anoxic carbonate rich marine sediment setting of the Malo Jezero (Mljet Lakes, Adriatic Sea). <i>Chemical Geology</i> , 2020, 533, 119441.	1.4	14
836	Chromium isotope composition of organic-rich marine sediments and their mineral phases and implications for using black shales as a paleoredox archive. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 270, 338-359.	1.6	28
838	Dating hypogene iron mineralization events in Archean BIF at Weld Range, Western Australia: insights into the tectonomagmatic history of the northern margin of the Yilgarn Craton. <i>Mineralium Deposita</i> , 2020, 55, 1307-1332.	1.7	5
839	Great Oxidation and Lomagundi events linked by deep cycling and enhanced degassing of carbon. <i>Nature Geoscience</i> , 2020, 13, 71-76.	5.4	54
840	The bio-habitable zone and atmospheric properties for planets of red dwarfs. <i>International Journal of Astrobiology</i> , 2020, 19, 126-135.	0.9	11
841	Free and kerogen-bound biomarkers from late Tonian sedimentary rocks record abundant eukaryotes in mid-Neoproterozoic marine communities. <i>Geobiology</i> , 2020, 18, 326-347.	1.1	48
842	Recycled selenium in hot spot-influenced lavas records ocean-atmosphere oxygenation. <i>Science Advances</i> , 2020, 6, .	4.7	11
843	Estimating ancient seawater isotope compositions and global ocean redox conditions by coupling the molybdenum and uranium isotope systems of euxinic organic-rich mudrocks. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 290, 76-103.	1.6	27



#	ARTICLE	IF	CITATIONS
844	Development and distribution rules of the main Neoproterozoic source and reservoir strata in the Yangtze Block, Southern China. <i>Precambrian Research</i> , 2020, 350, 105915.	1.2	11
845	The role of authigenic carbonate in Neoproterozoic carbon isotope excursions. <i>Earth and Planetary Science Letters</i> , 2020, 549, 116534.	1.8	16
846	The redox structure of Ediacaran and early Cambrian oceans and its controls. <i>Science Bulletin</i> , 2020, 65, 2141-2149.	4.3	67
847	Water Photolysis and Its Contributions to the Hydroxyl Dayglow Emissions in the Atmospheres of Earth and Mars. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 9086-9092.	2.1	19
848	How to survive winter?. , 2020, , 101-125.		1
849	Vertebrate viruses in polar ecosystems. , 2020, , 126-148.		0
851	Life in the extreme environments of our planet under pressure. , 2020, , 151-183.		0
852	Chemical ecology in the Southern Ocean. , 2020, , 251-278.		1
856	Physiological traits of the Greenland shark <i>Somniosus microcephalus</i> obtained during the TUNU-Expeditions to Northeast Greenland. , 2020, , 11-41.		0
857	Metazoan adaptation to deep-sea hydrothermal vents. , 2020, , 42-67.		4
858	Extremophiles populating high-level natural radiation areas (HLNRAs) in Iran. , 2020, , 68-86.		1
860	Metazoan life in anoxic marine sediments. , 2020, , 89-100.		0
861	The ecophysiology of responding to change in polar marine benthos. , 2020, , 184-217.		0
862	The Southern Ocean: an extreme environment or just home of unique ecosystems?. , 2020, , 218-233.		1
863	Metabolic and taxonomic diversity in antarctic subglacial environments. , 2020, , 279-296.		2
864	Analytical astrobiology: the search for life signatures and the remote detection of biomarkers through their Raman spectral interrogation. , 2020, , 301-318.		1
865	Adaptation/acclimatisation mechanisms of oxyphototrophic microorganisms and their relevance to astrobiology. , 2020, , 319-342.		0
866	Life at the extremes. , 2020, , 343-354.		0

#	ARTICLE	IF	CITATIONS
867	Evolution of the Earth's atmosphere during Late Veneer accretion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 499, 5334-5362.	1.6	17
868	Deep abiotic weathering of pyrite. <i>Science</i> , 2020, 370, .	6.0	63
869	Microorganisms in cryoturbated organic matter of Arctic permafrost soils. , 2020, , 234-250.		0
872	Open-system fractional melting of Archean basalts: implications for tonalite-trondhjemite-granodiorite (TTG) magma genesis. <i>Contributions To Mineralogy and Petrology</i> , 2020, 175, 1.	1.2	15
873	How Special Is the Solar System?. , 2020, , 412-457.		0
874	Shedding light on manganese cycling in the early oceans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 25960-25962.	3.3	17
875	The Isotopic Imprint of Life on an Evolving Planet. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	3
876	Manganese-rich deposits in the Mesoproterozoic Gaoyuzhuang Formation (ca. 1.58 Ga), North China Platform: Genesis and paleoenvironmental implications. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2020, 559, 109966.	1.0	17
877	A seawater-sulfate origin for early Earth's volcanic sulfur. <i>Nature Geoscience</i> , 2020, 13, 576-583.	5.4	23
878	Redrawing the early sulfur cycle. <i>Nature Geoscience</i> , 2020, 13, 526-527.	5.4	5
879	Nonenzymatic Metabolic Reactions and Life's Origins. <i>Chemical Reviews</i> , 2020, 120, 7708-7744.	23.0	154
880	Oxygenated conditions in the aftermath of the Lomagundi-Jatuli Event: The carbon isotope and rare earth element signatures of the Paleoproterozoic Zaonega Formation, Russia. <i>Precambrian Research</i> , 2020, 347, 105855.	1.2	10
881	Uranium isotope compositions of biogenic carbonates – Implications for U uptake in shells and the application of the paleo-ocean oxygenation proxy. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 287, 50-64.	1.6	28
883	Anomalous positive pyrite sulfur isotope in lacustrine black shale of the Yanchang Formation, Ordos Basin: Triggered by paleoredox chemistry changes. <i>Marine and Petroleum Geology</i> , 2020, 121, 104587.	1.5	18
884	Global or regional? Constraining the origins of the middle Bamburgh-carbon cycle anomaly in Brazil. <i>Precambrian Research</i> , 2020, 348, 105861.	1.2	21
885	Anaerobic metabolism of Foraminifera thriving below the seafloor. <i>ISME Journal</i> , 2020, 14, 2580-2594.	4.4	31
886	The coupling of Phanerozoic continental weathering and marine phosphorus cycle. <i>Scientific Reports</i> , 2020, 10, 5794.	1.6	11
887	Iron uptake proteins in algae and the role of Iron Starvation-Induced Proteins (ISIPs). <i>European Journal of Phycology</i> , 2020, 55, 339-360.	0.9	38

#	ARTICLE	IF	CITATIONS
889	The role of environmental factors in the long-term evolution of the marine biological pump. <i>Nature Geoscience</i> , 2020, 13, 812-816.	5.4	38
890	Redox constraints on a Cenozoic imbalance in the organic carbon cycle. <i>Numerische Mathematik</i> , 2020, 320, 730-751.	0.7	6
891	Evolution of Flight Muscle Contractility and Energetic Efficiency. <i>Frontiers in Physiology</i> , 2020, 11, 1038.	1.3	25
893	The Global Carbon and Oxygen Cycles. , 2020, , 453-481.		1
894	Biophysical analysis of the structural evolution of substrate specificity in RuBisCO. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30451-30457.	3.3	14
895	Mantle degassing related to changing redox and thermal conditions during the Precambrian supercontinent cycle. <i>Precambrian Research</i> , 2020, 350, 105895.	1.2	6
896	Versatile cyanobacteria control the timing and extent of sulfide production in a Proterozoic analog microbial mat. <i>ISME Journal</i> , 2020, 14, 3024-3037.	4.4	14
897	Signatures of early microbial life from the Archean (4 to 2.5 ÅGa) eon. <i>Earth-Science Reviews</i> , 2020, 209, 103296.	4.0	71
898	The Role of Cyanobacteria in Marine Ecosystems. <i>Russian Journal of Marine Biology</i> , 2020, 46, 154-165.	0.2	13
899	Light in the transcription landscape: chromatin, RNA polymerase II and splicing throughout <i>Arabidopsis thaliana</i> ™s life cycle. <i>Transcription</i> , 2020, 11, 117-133.	1.7	11
900	Astrochronology of the Ediacaran Shuram carbon isotope excursion, Oman. <i>Earth and Planetary Science Letters</i> , 2020, 547, 116462.	1.8	37
901	NRF2 and Hypoxia-Inducible Factors: Key Players in the Redox Control of Systemic Iron Homeostasis. <i>Antioxidants and Redox Signaling</i> , 2021, 35, 433-452.	2.5	43
903	Stratigraphy and geochronological constraints of the Serra Sul Formation (Carajás Basin, Amazonian) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.2	8
904	Sulfur Cycling During Progressive Burial in Sulfate-Rich Marine Carbonates. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009383.	1.0	4
905	From the LIPS of a serial killer: Endogenic retardation of biological evolution on unstable stagnant-lid planets. <i>Planetary and Space Science</i> , 2020, 192, 105068.	0.9	14
906	Anoxic photogeochemical oxidation of manganese carbonate yields manganese oxide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 22698-22704.	3.3	39
907	Using modern low-oxygen marine ecosystems to understand the nitrogen cycle of the Paleozoic and Mesoproterozoic oceans. <i>Environmental Microbiology</i> , 2020, 23, 2801-2822.	1.8	4
908	Large influence of dust on the Precambrian climate. <i>Nature Communications</i> , 2020, 11, 4427.	5.8	10

#	ARTICLE	IF	CITATIONS
909	Modern arsenotrophic microbial mats provide an analogue for life in the anoxic Archean. <i>Communications Earth &amp; Environment</i> , 2020, 1, .	2.6	24
910	Marinoan glacial aftermath in South China: Paleo-environmental evolution and organic carbon accumulation in the Doushantuo shales. <i>Chemical Geology</i> , 2020, 555, 119838.	1.4	14
911	Chemical evolution of seawater in the Transvaal Ocean between 2426 Ma (Ongeluk Large Igneous) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	8.0	14
912	Marinoan-aged red beds at Shennongjia, South China: Evidence against global-scale glaciation during the Cryogenian. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2020, 559, 109967.	1.0	22
913	Estimating survival probability using the terrestrial extinction history for the search for extraterrestrial life. <i>Scientific Reports</i> , 2020, 10, 12795.	1.6	3
914	Evolution of the Earth's Polar Outflow From Mid-Archean to Present. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA027837.	0.8	10
915	Deep Water Cycling and the Multi-Stage Cooling of the Earth. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009106.	1.0	7
916	The formation of marine red beds and iron cycling on the Mesoproterozoic North China Platform. <i>American Mineralogist</i> , 2020, 105, 1412-1423.	0.9	17
917	Siderite-based anaerobic iron cycle driven by autotrophic thermophilic microbial consortium. <i>Scientific Reports</i> , 2020, 10, 21661.	1.6	9
918	An introduction to electrochemical energy conversion. <i>EPJ Web of Conferences</i> , 2020, 246, 00018.	0.1	0
919	Hydrocarbon generation from bacterial biomass in ca. 1320 million years ago. <i>IOP Conference Series: Earth and Environmental Science</i> , 2020, 600, 012032.	0.2	3
920	Exceptional sulfur and iron isotope enrichment in millimetre-sized, early Palaeozoic animal burrows. <i>Scientific Reports</i> , 2020, 10, 20270.	1.6	4
921	Exploration of marine phytoplankton: from their historical appreciation to the omics era. <i>Journal of Plankton Research</i> , 0, , .	0.8	2
922	The biogeochemistry of ferruginous lakes and past ferruginous oceans. <i>Earth-Science Reviews</i> , 2020, 211, 103430.	4.0	36
923	Both Enolase and the DEAD-Box RNA Helicase CrhB Can Form Complexes with RNase E in <i>Anabaena</i> sp. Strain PCC 7120. <i>Applied and Environmental Microbiology</i> , 2020, 86, .	1.4	3
924	Natural radioactivity and formation of oxygen in Earth's atmosphere: Decay of radioactive <sup>40</sup> K and radiolysis of ocean water. <i>Precambrian Research</i> , 2020, 346, 105786.	1.2	7
925	A phylogenetically novel cyanobacterium most closely related to <i>Gloeobacter</i> . <i>ISME Journal</i> , 2020, 14, 2142-2152.	4.4	45
926	Biosignature surveys to exoplanet yields and beyond. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 495, 1000-1015.	1.6	8

#	ARTICLE	IF	CITATIONS
927	Identifying global vs. basinal controls on Paleoproterozoic organic carbon and sulfur isotope records. <i>Earth-Science Reviews</i> , 2020, 207, 103230.	4.0	10
928	The impacts of land plant evolution on Earth's climate and oxygenation state – An interdisciplinary review. <i>Chemical Geology</i> , 2020, 547, 119665.	1.4	77
929	Regulation of Iron Homeostasis and Use in Chloroplasts. <i>International Journal of Molecular Sciences</i> , 2020, 21, 3395.	1.8	90
930	Oxygen Pathology and Oxygen-Functional Materials for Therapeutics. <i>Matter</i> , 2020, 2, 1115-1147.	5.0	8
931	Significance of granite-greenstone terranes in the formation of Witwatersrand-type gold mineralisation – A case study of the Neoarchaean Black Reef Formation, South Africa. <i>Ore Geology Reviews</i> , 2020, 121, 103572.	1.1	4
932	Petrography and sulfur isotopic compositions of SEDEX ores in the early Cambrian Nanhua Basin, South China. <i>Precambrian Research</i> , 2020, 345, 105757.	1.2	13
933	Transient shallow-ocean oxidation associated with the late Ediacaran Nama skeletal fauna: Evidence from iodine contents of the Lower Nama Group, southern Namibia. <i>Precambrian Research</i> , 2020, 343, 105732.	1.2	12
934	Iron- $\epsilon$ biomineralizing organelle in magnetotactic bacteria: function, synthesis and preservation in ancient rock samples. <i>Environmental Microbiology</i> , 2020, 22, 3611-3632.	1.8	54
935	Weathering, alteration and reconstructing Earth's oxygenation. <i>Interface Focus</i> , 2020, 10, 20190140.	1.5	25
936	Generation of reactive oxygen species on pyrite surfaces: A likely oxidation mechanism for near-vent, hydrothermal fluid-dominated BIFs. <i>Chemical Geology</i> , 2020, 551, 119766.	1.4	2
937	Cooperation can promote rescue or lead to evolutionary suicide during environmental change. <i>Evolution; International Journal of Organic Evolution</i> , 2020, 74, 1255-1273.	1.1	13
938	Highly dynamic marine redox state through the Cambrian explosion highlighted by authigenic $^{238}\text{U}$ records. <i>Earth and Planetary Science Letters</i> , 2020, 544, 116361.	1.8	27
939	Co-evolution of primitive methane-cycling ecosystems and early Earth's atmosphere and climate. <i>Nature Communications</i> , 2020, 11, 2705.	5.8	28
940	Co-evolution of trace elements and life in Precambrian oceans: The pyrite edition. <i>Geology</i> , 2020, 48, 1018-1022.	2.0	18
941	Mantle data imply a decline of oxidizable volcanic gases could have triggered the Great Oxidation. <i>Nature Communications</i> , 2020, 11, 2774.	5.8	36
942	Clue on ocean redox condition from trace element and rare earth element (REE) composition of iron formation and carbonate rocks from the late Paleoproterozoic Morar Formation, Gwalior Group, central India. <i>Journal of Mineralogical and Petrological Sciences</i> , 2020, 115, 175-191.	0.4	4
943	Molybdenum speciation tracking hydrocarbon migration in fine-grained sedimentary rocks. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 283, 136-148.	1.6	18
944	Food sources for the Ediacara biota communities. <i>Nature Communications</i> , 2020, 11, 1261.	5.8	23

#	ARTICLE	IF	CITATIONS
945	Mission to Planet Earth: The First Two Billion Years. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	20
946	Associations between redox-sensitive trace metals and microbial communities in a Proterozoic ocean analogue. <i>Geobiology</i> , 2020, 18, 462-475.	1.1	3
947	Filamentous Cyanobacteria as a Prototype of Multicellular Organisms. <i>Russian Journal of Plant Physiology</i> , 2020, 67, 17-30.	0.5	5
948	Large isotopic variability at the micron-scale in $\delta^{13}\text{C}$ Shuram <sup>TM</sup> excursion carbonates from South Australia. <i>Earth and Planetary Science Letters</i> , 2020, 538, 116211.	1.8	27
949	In Situ Fe and S isotope analyses in pyrite from the 3.2 Ga Mendon Formation (Barberton Greenstone) Tj ETQ0 0 0 rgBT /Overlock 10 T	1.1	25
950	Sequence stratigraphy of the ca. 1730 Ma Wollgorang Formation, McArthur Basin, Australia. <i>Marine and Petroleum Geology</i> , 2020, 116, 104297.	1.5	10
951	The Impact of Molecular Oxygen on Anion Composition in a Hazy Archean Earth Atmosphere. <i>Astrobiology</i> , 2020, 20, 658-669.	1.5	4
952	Biogeochemical cycle of chromium isotopes at the modern Earth's surface and its applications as a paleo-environment proxy. <i>Chemical Geology</i> , 2020, 541, 119570.	1.4	46
953	Coupled Nitrate and Phosphate Availability Facilitated the Expansion of Eukaryotic Life at Circa 1.56 Ga. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2019JG005487.	1.3	17
954	Iron homeostasis of cyanobacteria: advancements in siderophores and metal transporters. , 2020, , 85-117.		10
955	Equilibrium fractionation and isotope exchange kinetics between aqueous Se(IV) and Se(VI). <i>Geochimica Et Cosmochimica Acta</i> , 2020, 277, 21-36.	1.6	7
956	Discovery of the oldest known biomarkers provides evidence for phototrophic bacteria in the 1.73 Ga Wollgorang Formation, Australia. <i>Geobiology</i> , 2020, 18, 544-559.	1.1	26
957	Triple oxygen isotope insight into terrestrial pyrite oxidation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 7650-7657.	3.3	39
958	High-resolution Transmission Spectra of Earth Through Geological Time. <i>Astrophysical Journal Letters</i> , 2020, 892, L17.	3.0	15
959	Using Mesoproterozoic sedimentary geochemistry to reconstruct basin tectonic geography and link organic carbon productivity to nutrient flux from a Northern Australian large igneous Province. <i>Basin Research</i> , 2020, 32, 1734-1750.	1.3	19
960	Large Mass-Independent Oxygen Isotope Fractionations in Mid-Proterozoic Sediments: Evidence for a Low-Oxygen Atmosphere?. <i>Astrobiology</i> , 2020, 20, 628-636.	1.5	18
961	Non-conservative behavior of dissolved molybdenum in hypersaline waters of the Guerrero Negro saltern, Mexico. <i>Applied Geochemistry</i> , 2020, 115, 104565.	1.4	2
962	Evaluating a primary carbonate pathway for manganese enrichments in reducing environments. <i>Earth and Planetary Science Letters</i> , 2020, 538, 116201.	1.8	42

#	ARTICLE	IF	CITATIONS
963	On the coâ€evolution of surface oxygen levels and animals. <i>Geobiology</i> , 2020, 18, 260-281.	1.1	82
964	The Archean atmosphere. <i>Science Advances</i> , 2020, 6, eaax1420.	4.7	276
965	Insights on Structure and Threshold Detection Limits of Stichtite (Magnesium-Chromium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 667 Td (215).	0.8	1
966	New insights on the palaeobiology and biostratigraphy of the acritarch <i>Trachyhystriosphera aimika</i> : A potential late Mesoproterozoic to Tonian index fossil. <i>Palaeoworld</i> , 2020, 29, 476-489.	0.5	9
967	Deep-water dissolved iron cycling and reservoir size across the Ediacaran-Cambrian transition. <i>Chemical Geology</i> , 2020, 541, 119575.	1.4	5
968	A window into the Great Unconformity: Insights from geochemistry and geochronology of Ediacaran glaciogenic rocks in the North China Craton. <i>Journal of Asian Earth Sciences</i> , 2020, 194, 104327.	1.0	16
969	Apatite-glaucopy association in the Ediacaran Doushantuo Formation, South China and implications for marine redox conditions. <i>Precambrian Research</i> , 2020, 347, 105842.	1.2	13
970	Surface ocean nitrate-limitation in the aftermath of Marinoan snowball Earth: Evidence from the Ediacaran Doushantuo Formation in the western margin of the Yangtze Block, South China. <i>Precambrian Research</i> , 2020, 347, 105846.	1.2	9
971	The Redox Boundaries of Earthâ€™s Interior. <i>Elements</i> , 2020, 16, 167-172.	0.5	22
972	Testing Earthlike Atmospheric Evolution on Exo-Earths through Oxygen Absorption: Required Sample Sizes and the Advantage of Age-based Target Selection. <i>Astrophysical Journal</i> , 2020, 896, 131.	1.6	11
973	Is the Faint Young Sun Problem for Earth Solved?. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	30
974	Are Reactive Sulfur Species the New Reactive Oxygen Species?. <i>Antioxidants and Redox Signaling</i> , 2020, 33, 1125-1142.	2.5	32
975	Niche expansion for phototrophic sulfur bacteria at the Proterozoicâ€“Phanerozoic transition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 17599-17606.	3.3	36
976	Biogeochemical Controls on the Redox Evolution of Earthâ€™s Oceans and Atmosphere. <i>Elements</i> , 2020, 16, 191-196.	0.5	19
977	The modern phosphorus cycle informs interpretations of Mesoproterozoic Era phosphorus dynamics. <i>Earth-Science Reviews</i> , 2020, 208, 103267.	4.0	36
978	Pyrite: Fool's gold records starvation of bacteria. <i>American Mineralogist</i> , 2020, 105, 282-283.	0.9	5
979	Recent advances in the biology of tumour hypoxia with relevance to diagnostic practice and tissueâ€“based research. <i>Journal of Pathology</i> , 2020, 250, 593-611.	2.1	23
980	Phosphorus-limited conditions in the early Neoproterozoic ocean maintained low levels of atmospheric oxygen. <i>Nature Geoscience</i> , 2020, 13, 296-301.	5.4	63



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981	Suboxic-dominated conditions in the Ediacaran shallow ocean: Geochemistry of pelitic siltstones in the Doushantuo Formation, South China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2020, 546, 109658.	1.0	3
982	Mesoproterozoic oxygenated deep seawater recorded by early diagenetic carbonate concretions from the Member IV of the Xiamaling Formation, North China. <i>Precambrian Research</i> , 2020, 341, 105667.	1.2	26
983	Reconstructing the evolutionary history of nitrogenases: Evidence for ancestral molybdenum cofactor utilization. <i>Geobiology</i> , 2020, 18, 394-411.	1.1	58
984	The impact of marine nutrient abundance on early eukaryotic ecosystems. <i>Geobiology</i> , 2020, 18, 139-151.	1.1	39
985	Iron-rich carbonate tidal deposits, Angepena Formation, South Australia: A redox-stratified Cryogenian basin. <i>Precambrian Research</i> , 2020, 342, 105668.	1.2	13
986	Nanomaterials/microorganism-integrated microbiotic nanomedicine. <i>Nano Today</i> , 2020, 32, 100854.	6.2	35
987	Desiccation tolerance in streptophyte algae and the algae to land plant transition: evolution of LEA and MIP protein families within the Viridiplantae. <i>Journal of Experimental Botany</i> , 2020, 71, 3270-3278.	2.4	23
988	Euxinia in the Neoproterozoic: The starting point for early oxygenation in a Brazilian Craton. <i>Precambrian Research</i> , 2020, 341, 105655.	1.2	10
989	Rhenium-Osmium isotope systematics of an Early Mesoproterozoic SEDEX polymetallic pyrite deposit in the North China Craton: Implications for geological significance and the marine osmium isotopic record. <i>Ore Geology Reviews</i> , 2020, 117, 103331.	1.1	6
990	Paleoproterozoic to Paleoproterozoic crustal evolution in the Guanambi-Correntina block (GCB), north São Francisco Craton, Brazil, unraveled by U-Pb Geochronology, Nd-Sr isotopes and geochemical constraints. <i>Precambrian Research</i> , 2020, 340, 105614.	1.2	23
991	Isolation of an archaeon at the prokaryote-eukaryote interface. <i>Nature</i> , 2020, 577, 519-525.	13.7	449
992	Secular variation in the elemental composition of marine shales since 840 Ma: Tectonic and seawater influences. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 287, 367-390.	1.6	17
993	Textural and geochemical investigation of pyrite in Jacobina Basin, São Francisco Craton, Brazil: Implications for paleoenvironmental conditions and formation of pre-GOE metaconglomerate-hosted Au-(U) deposits. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 273, 331-353.	1.6	9
994	Precise radiometric age establishes Yarrabubba, Western Australia, as Earth's oldest recognised meteorite impact structure. <i>Nature Communications</i> , 2020, 11, 300.	5.8	44
995	Atmospheric CO <sub>2</sub> levels from 2.7 billion years ago inferred from micrometeorite oxidation. <i>Science Advances</i> , 2020, 6, eaay4644.	4.7	22
996	The non-photochemical quenching protein LHCSR3 prevents oxygen-dependent photoinhibition in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Experimental Botany</i> , 2020, 71, 2650-2660.	2.4	41
997	Molybdenum isotope fractionation in glacial diamictites tracks the onset of oxidative weathering of the continental crust. <i>Earth and Planetary Science Letters</i> , 2020, 534, 116083.	1.8	20
998	Mineral self-organization on a lifeless planet. <i>Physics of Life Reviews</i> , 2020, 34-35, 62-82.	1.5	28

#	ARTICLE	IF	CITATIONS
999	Constraints on the coevolution of oxic and sulfidic ocean iron sinks from Archean–Paleoproterozoic iron isotope records. <i>Geology</i> , 2020, 48, 358-362.	2.0	23
1000	Zn–ZnO Heterostructure Nanorings Grown under a Possible Early Earth Atmosphere. <i>Crystal Growth and Design</i> , 2020, 20, 1196-1202.	1.4	1
1001	A practical guide to the double-spike technique for calcium isotope measurements by thermal ionization mass spectrometry (TIMS). <i>International Journal of Mass Spectrometry</i> , 2020, 450, 116307.	0.7	12
1002	The Great Oxidation Event expanded the genetic repertoire of arsenic metabolism and cycling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 10414-10421.	3.3	96
1003	Transient and stepwise ocean oxygenation during the late Ediacaran Shuram Excursion: Insights from carbonate $\delta^{238}\text{U}$ of northwestern Mexico. <i>Precambrian Research</i> , 2020, 344, 105741.	1.2	30
1004	Key problems of the four-dimensional Earth system. <i>Matter and Radiation at Extremes</i> , 2020, 5, .	1.5	43
1005	Chemical archeoceanography. <i>Chemical Geology</i> , 2020, 548, 119625.	1.4	9
1006	A numerical examination of the effect of sulfide dissolution on silicate weathering. <i>Earth and Planetary Science Letters</i> , 2020, 539, 116239.	1.8	12
1007	Evidence for elevated and variable atmospheric oxygen in the Precambrian. <i>Precambrian Research</i> , 2020, 343, 105722.	1.2	30
1008	Fe isotope composition of Archean sulfides do not record progressive oxygenation of the ocean. <i>Geology</i> , 2020, 48, 415-416.	2.0	1
1009	Earth Matters: A tempo to our planet's evolution. <i>Geology</i> , 2020, 48, 525-526.	2.0	42
1010	A framework for understanding Mo isotope records of Archean and Paleoproterozoic Fe- and Mn-rich sedimentary rocks: Insights from modern marine hydrothermal Fe-Mn oxides. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 280, 221-236.	1.6	17
1011	Quantification of sulphide oxidation rates in marine sediment. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 280, 441-452.	1.6	27
1012	Biological Soil Crusts as Modern Analogs for the Archean Continental Biosphere: Insights from Carbon and Nitrogen Isotopes. <i>Astrobiology</i> , 2020, 20, 815-819.	1.5	5
1014	Glycolytic reprogramming in <i>Salmonella</i> counters NOX2-mediated dissipation of $\text{pH}$ . <i>Nature Communications</i> , 2020, 11, 1783.	5.8	19
1015	Absence of hexavalent chromium in marine carbonates: implications for chromium isotopes as paleoenvironment proxy. <i>National Science Review</i> , 2021, 8, nwaa090.	4.6	20
1016	<i>Geobiology and Geomicrobiology</i> . , 2021, , 554-568.		3
1017	Crustal thickness, rift-drift and potential links to key global events. <i>Terra Nova</i> , 2021, 33, 12-20.	0.9	2

#	ARTICLE	IF	CITATIONS
1018	Through fat and thin – a journey with the adipose tissues. Proceedings of the Nutrition Society, 2021, 80, 92-104.	0.4	2
1019	An appraisal of uranium deposits of India and their style of deposition with reference to the Paleoproterozoic great oxidation event. International Geology Review, 2021, 63, 571-584.	1.1	4
1020	Early evolution of purple retinal pigments on Earth and implications for exoplanet biosignatures. International Journal of Astrobiology, 2021, 20, 241-250.	0.9	34
1021	Radiation of nitrogen-metabolizing enzymes across the tree of life tracks environmental transitions in Earth history. Geobiology, 2021, 19, 18-34.	1.1	36
1022	A pre-Sturtian depositional age of the lower Paraguay Belt, Western Brazil, and its relationship to western Gondwana magmatism. Gondwana Research, 2021, 89, 238-246.	3.0	3
1023	Episodic ferruginous conditions associated with submarine volcanism led to the deposition of a Late Carboniferous iron formation. Geochimica Et Cosmochimica Acta, 2021, 292, 1-23.	1.6	11
1024	The evolution of biogeochemistry: revisited. Biogeochemistry, 2021, 154, 141-181.	1.7	19
1025	Taming fitness: Organism-environment interdependencies preclude long-term fitness forecasting. BioEssays, 2021, 43, 2000157.	1.2	10
1026	Abiotic Influences on the Early Evolution of Life. Encyclopedia of the UN Sustainable Development Goals, 2021, , 1-12.	0.0	0
1027	Editorial: The co-evolution of life and environments in South China from Snowball Earth to Cambrian Explosion. Palaeogeography, Palaeoclimatology, Palaeoecology, 2021, 563, 110181.	1.0	3
1028	Occurrence and chemical composition of the Eoarchean carbonate rocks of the Nulliak supracrustal rocks in the Saglek Block of northeastern Labrador, Canada. Island Arc, 2021, 30, e12381.	0.5	3
1029	Geochemistry of carbonate rocks of the Chilpi Group, Bastar Craton, India: Implications on ocean paleoredox conditions at the late Paleoproterozoic Era. Precambrian Research, 2021, 353, 106023.	1.2	13
1030	Cyanorak v2.1: a scalable information system dedicated to the visualization and expert curation of marine and brackish picocyanobacteria genomes. Nucleic Acids Research, 2021, 49, D667-D676.	6.5	38
1031	How Microbes Evolved to Tolerate Oxygen. Trends in Microbiology, 2021, 29, 428-440.	3.5	56
1032	Using cyclostratigraphic evidence to define the unconformity caused by the Mesoproterozoic Qinyu Uplift in the North China Craton. Journal of Asian Earth Sciences, 2021, 206, 104608.	1.0	16
1033	Evolutionary History of Bioessential Elements Can Guide the Search for Life in the Universe. ChemBioChem, 2021, 22, 114-119.	1.3	14
1034	Gulf of Nuna: Astrochronologic correlation of a Mesoproterozoic oceanic euxinic event. Geology, 2021, 49, 25-29.	2.0	30
1035	Tracing the Early Emergence of Microbial Sulfur Metabolisms. Geomicrobiology Journal, 2021, 38, 66-86.	1.0	9

#	ARTICLE	IF	CITATIONS
1036	Evolution of Earth's Atmosphere. , 2021, , 571-584.		3
1037	Depositional history of the Mesoproterozoic Chhattisgarh Basin, central India: insights from geochemical provenance of siliciclastic sediments. <i>International Geology Review</i> , 2021, 63, 380-395.	1.1	9
1039	Phanerozoic radiation of ammonia oxidizing bacteria. <i>Scientific Reports</i> , 2021, 11, 2070.	1.6	14
1040	Non-pollen palynomorphs in deep time: unravelling the evolution of early eukaryotes. <i>Geological Society Special Publication</i> , 2021, 511, 321-342.	0.8	7
1041	Earth's First Redox Revolution. <i>Annual Review of Earth and Planetary Sciences</i> , 2021, 49, 337-366.	4.6	42
1042	Functional and protective hole hopping in metalloenzymes. <i>Chemical Science</i> , 2021, 12, 13988-14003.	3.7	31
1043	Changes in ATP Sulfurylase Activity in Response to Altered Cyanobacteria Growth Conditions. <i>Microbes and Environments</i> , 2021, 36, n/a.	0.7	2
1044	Origin and Evolution of Atmospheres. , 2021, , 1-29.		1
1047	Time Between 3 and 2 Ga: Transitional Events in the Earth's History. <i>Russian Geology and Geophysics</i> , 2021, 62, 25-43.	0.3	2
1048	The <i>Thermosynechococcus</i> Genus: Wide Environmental Distribution, but a Highly Conserved Genomic Core. <i>Microbes and Environments</i> , 2021, 36, n/a.	0.7	5
1049	Carbon isotope and genesis studies of graphite deposits in the Liaohe Group of the Jiao-Liao-Ji Orogenic Belt. <i>Acta Petrologica Sinica</i> , 2021, 37, 599-618.	0.3	3
1052	Prokaryotic Basis of Eukaryotic Eco-Evo Development. , 2021, , 313-330.		0
1053	Elemental and isotopic compositions of trench-slope black shales, Bohemian Massif, with implications for oceanic and atmospheric oxygenation in early Cambrian. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 564, 110195.	1.0	6
1054	Atmospheric CO <sub>2</sub> availability induces varying responses in net photosynthesis, toxin production and N <sub>2</sub> fixation rates in heterocystous filamentous Cyanobacteria ( <i>Nostoc</i> and <i>Nodularia</i> ). <i>Aquatic Sciences</i> , 2021, 83, 1.	0.6	4
1055	Probing the Capability of Future Direct-imaging Missions to Spectrally Constrain the Frequency of Earth-like Planets. <i>Astronomical Journal</i> , 2021, 161, 150.	1.9	17
1056	Oxygen consumption of individual cable bacteria. <i>Science Advances</i> , 2021, 7, .	4.7	28
1057	A significant seawater sulfate reservoir at 2.0 Ga determined from multiple sulfur isotope analyses of the Paleoproterozoic Degruusa Cu-Au volcanogenic massive sulfide deposit, Western Australia. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 295, 178-193.	1.6	4
1058	Life on Mars: Clues, Evidence or Proof?. , 0, , .		1

#	ARTICLE	IF	CITATIONS
1059	High Organic Burial Efficiency Is Required to Explain Mass Balance in Earth's Early Carbon Cycle. <i>Global Biogeochemical Cycles</i> , 2021, 35, .	1.9	17
1060	The origin of animals: an ancestral reconstruction of the unicellular-to-multicellular transition. <i>Open Biology</i> , 2021, 11, 200359.	1.5	67
1062	Global aerobics before Earth's oxygenation. <i>Nature Ecology and Evolution</i> , 2021, 5, 407-408.	3.4	2
1063	Finding Signs of Life in Transits: High-resolution Transmission Spectra of Earth-like Planets around FGKM Host Stars. <i>Astrophysical Journal Letters</i> , 2021, 909, L2.	3.0	8
1064	Dissipation-driven selection of states in non-equilibrium chemical networks. <i>Communications Chemistry</i> , 2021, 4, .	2.0	19
1065	Orogenic quiescence in Earth's middle age. <i>Science</i> , 2021, 371, 728-731.	6.0	113
1066	The photogeochemical cycle of Mn oxides on the Earth's surface. <i>Mineralogical Magazine</i> , 2021, 85, 22-38.	0.6	25
1067	The Fundamental Connections between the Solar System and Exoplanetary Science. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006643.	1.5	15
1068	A microbial marriage reminiscent of mitochondrial evolution. <i>Nature</i> , 2021, 591, 375-376.	13.7	2
1069	The trilobite upper limb branch is a well-developed gill. <i>Science Advances</i> , 2021, 7, .	4.7	17
1070	The diversity and evolution of microbial dissimilatory phosphite oxidation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	17
1071	Heterogeneous oxygenation coupled with low phosphorus bio-availability delayed eukaryotic diversification in Mesoproterozoic oceans: Evidence from the ca 1.46 Ga Hongshuizhuang Formation of North China. <i>Precambrian Research</i> , 2021, 354, 106050.	1.2	9
1072	The cyanobacterium <i>Prochlorococcus</i> has divergent light-harvesting antennae and may have evolved in a low-oxygen ocean. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	20
1073	A southern African perspective on the co-evolution of early life and environments. <i>South African Journal of Geology</i> , 2021, 124, 225-252.	0.6	3
1074	Primordial bioenergy sources: The two facets of adenosine triphosphate. <i>Journal of Inorganic Biochemistry</i> , 2021, 216, 111347.	1.5	12
1075	The metabolic network of the last bacterial common ancestor. <i>Communications Biology</i> , 2021, 4, 413.	2.0	33
1076	Anaerobic endosymbiont generates energy for ciliate host by denitrification. <i>Nature</i> , 2021, 591, 445-450.	13.7	53
1077	Carbon cycle inverse modeling suggests large changes in fractional organic burial are consistent with the carbon isotope record and may have contributed to the rise of oxygen. <i>Geobiology</i> , 2021, 19, 342-363.	1.1	23

#	ARTICLE	IF	CITATIONS
1078	Mo isotope records from Lower Cambrian black shales, northwestern Tarim Basin (China): Implications for the early Cambrian ocean. <i>Bulletin of the Geological Society of America</i> , 2022, 134, 3-14.	1.6	16
1079	Cracking the superheavy pyrite enigma: possible roles of volatile organosulfur compound emission. <i>National Science Review</i> , 2021, 8, nwab034.	4.6	9
1080	The oxygen cycle and a habitable Earth. <i>Science China Earth Sciences</i> , 2021, 64, 511-528.	2.3	22
1081	A transient swing to higher oxygen levels in the atmosphere and oceans at ~1.4 Ga. <i>Precambrian Research</i> , 2021, 354, 106058.	1.2	24
1082	Play among the stars: Astrobiology and intra-action in Pryor's <i>Living with Tiny Aliens</i> . <i>Dialog</i> , 2021, 60, 86-93.	0.1	0
1083	Iron Isotopes Reveal a Benthic Iron Shuttle in the Palaeoproterozoic Zaonega Formation: Basinal Restriction, Euxinia, and the Effect on Global Palaeoredox Proxies. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 368.	0.8	5
1084	Global marine redox evolution from the late Neoproterozoic to the early Paleozoic constrained by the integration of Mo and U isotope records. <i>Earth-Science Reviews</i> , 2021, 214, 103506.	4.0	52
1085	The future lifespan of Earth's oxygenated atmosphere. <i>Nature Geoscience</i> , 2021, 14, 138-142.	5.4	19
1086	Filamentous cyanobacteria and associated microorganisms, structurally preserved in a Late Jurassic chert from Patagonia, Argentina. <i>Journal of South American Earth Sciences</i> , 2021, 107, 103111.	0.6	2
1087	Bioverse: A Simulation Framework to Assess the Statistical Power of Future Biosignature Surveys. <i>Astronomical Journal</i> , 2021, 161, 228.	1.9	9
1089	Heterogeneous redox evolution of the Meso-Neoproterozoic ocean: Insights from eastern China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 567, 110304.	1.0	2
1090	Life as the Only Reason for the Existence of N <sub>2</sub> -O <sub>2</sub> -Dominated Atmospheres. <i>Astronomy Reports</i> , 2021, 65, 275-296.	0.2	12
1091	Oxygen False Positives on Habitable Zone Planets Around Sun-Like Stars. <i>AGU Advances</i> , 2021, 2, e2020AV000294.	2.3	18
1092	Diverse cuticular remains in Cambrian (Series 2) SSF assemblages from China and the pioneer metazoan colonization of offshore environments. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 567, 110192.	1.0	2
1093	Dramatic changes in the carbonate-hosted barium isotopic compositions in the Ediacaran Yangtze Platform. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 299, 113-129.	1.6	13
1094	Hydrothermal recycling of sedimentary ammonium into oceanic crust and the Archean ocean at 3.24 Ga. <i>Geology</i> , 2021, 49, 822-826.	2.0	11
1095	The curious consistency of carbon biosignatures over billions of years of Earth-life coevolution. <i>ISME Journal</i> , 2021, 15, 2183-2194.	4.4	26
1096	The supercontinent cycle. <i>Nature Reviews Earth &amp; Environment</i> , 2021, 2, 358-374.	12.2	102

#	ARTICLE	IF	CITATIONS
1097	Molybdenum-uranium-vanadium geochemistry in the lower Paleozoic Alum Shale of Scandinavia: Implications for vanadium exploration. <i>International Journal of Coal Geology</i> , 2021, 239, 103730.	1.9	13
1098	Progressive ocean oxygenation at 2.2 Ga inferred from geochemistry and molybdenum isotopes of the Nsuta Mn deposit, Ghana. <i>Chemical Geology</i> , 2021, 567, 120116.	1.4	6
1099	Microbial helpers allow cyanobacteria to thrive in ferruginous waters. <i>Geobiology</i> , 2021, 19, 510-520.	1.1	3
1100	A benthic oxygen oasis in the early Neoproterozoic ocean. <i>Precambrian Research</i> , 2021, 355, 106085.	1.2	13
1101	Photosynthetic biomaterials: applications of photosynthesis in algae as oxygenerator in biomedical therapies. <i>Bio-Design and Manufacturing</i> , 2021, 4, 596-611.	3.9	14
1102	Revisiting stepwise ocean oxygenation with authigenic barium enrichments in marine mudrocks. <i>Geology</i> , 2021, 49, 1059-1063.	2.0	13
1103	Feedback Between Carbon and Nitrogen Cycles During the Ediacaran Shuram Excursion. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	3
1104	A Pulsed Oxygenation in Terminal Paleoproterozoic Ocean: Evidence From the Transition Between the Chuanlinggou and Tuanshanzi Formations, North China. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009612.	1.0	10
1105	Oxygen suppression of macroscopic multicellularity. <i>Nature Communications</i> , 2021, 12, 2838.	5.8	30
1107	The formation of Neoproterozoic continental crust in the south-east Superior Craton by two distinct geodynamic processes. <i>Precambrian Research</i> , 2021, 356, 106104.	1.2	47
1108	Differentiating between hydrothermal and diagenetic carbonate using rare earth element and yttrium (REE+Y) geochemistry: a case study from the Paleoproterozoic George Fisher massive sulfide Zn deposit, Mount Isa, Australia. <i>Mineralium Deposita</i> , 2022, 57, 187-206.	1.7	14
1110	Photochemical modelling of atmospheric oxygen levels confirms two stable states. <i>Earth and Planetary Science Letters</i> , 2021, 561, 116818.	1.8	24
1111	Oxidative Stress in Bacteria and the Central Dogma of Molecular Biology. <i>Frontiers in Molecular Biosciences</i> , 2021, 8, 671037.	1.6	92
1112	Iron and sulfur cycling in the cGENIE.muffin Earth system model (v0.9.21). <i>Geoscientific Model Development</i> , 2021, 14, 2713-2745.	1.3	12
1114	The uranium isotopic record of shales and carbonates through geologic time. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 300, 164-191.	1.6	28
1115	Hexagonal magnetite in Algoma-type banded iron formations of the ca. 2.52 Ga Baizhiyan Formation, North China: Evidence for a green rust precursor?. <i>American Mineralogist</i> , 2022, 107, 970-984.	0.9	5
1116	Evolutionary Origins of DNA Repair Pathways: Role of Oxygen Catastrophe in the Emergence of DNA Glycosylases. <i>Cells</i> , 2021, 10, 1591.	1.8	6
1117	Characterization of the Multicellular Membrane-Bearing Algae From the Kuanchuanpu Biota (Cambrian: Terreneuvian). <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006102.	1.3	2



#	ARTICLE	IF	CITATIONS
1118	Precambrian and early Cambrian palaeobiology of India: Quo Vadis. Proceedings of the Indian National Science Academy, 2021, 87, 199-233.	0.5	2
1119	Sedimentation across the Paraburdoo spherule layer: Implications for the Neoproterozoic Earth system. , 2021, , 269-295.		0
1120	Differentiating modern and prebiotic Earth scenarios for TRAPPIST-1e: high-resolution transmission spectra and predictions for JWST. Monthly Notices of the Royal Astronomical Society, 2021, 505, 3562-3578.	1.6	24
1121	Geochemical Characteristics of Late Ordovician Shales in the Upper Yangtze Platform, South China: Implications for Redox Environmental Evolution. Minerals (Basel, Switzerland), 2021, 11, 710.	0.8	2
1122	A quantification of the effect of diagenesis on the paleoredox record in mid-Proterozoic sedimentary rocks. Geology, 2021, 49, 1143-1147.	2.0	7
1123	Oldest-known Neoproterozoic carbon isotope excursion: Earlier onset of Neoproterozoic carbon cycle volatility. Gondwana Research, 2021, 94, 1-11.	3.0	13
1124	Identification of a Novel Class of Photolyases as Possible Ancestors of Their Family. Molecular Biology and Evolution, 2021, 38, 4505-4519.	3.5	8
1125	Constraining Shallow Seawater Oxygenation for the Yangtze Platform During the Early Cambrian. Paleoceanography and Paleoclimatology, 2021, 36, e2021PA004282.	1.3	3
1126	Depositional age and geochemistry of the 2.44–2.32 Ga Granular Iron Formation in the Songshan Group, North China Craton: Tracing the effects of atmospheric oxygenation on continental weathering and seawater environment. Precambrian Research, 2021, 357, 106142.	1.2	11
1127	Iron transport in cyanobacteria – from molecules to communities. Trends in Microbiology, 2022, 30, 229-240.	3.5	19
1128	Past, present and future stars that can see Earth as a transiting exoplanet. Nature, 2021, 594, 505-507.	13.7	15
1129	Reductive dissolution of pyrite by methanogenic archaea. ISME Journal, 2021, 15, 3498-3507.	4.4	22
1130	Revisiting Rhenium-Osmium Isotopic Investigations of Petroleum Systems: From Geochemical Behaviours to Geological Interpretations. Journal of Earth Science (Wuhan, China), 2021, 32, 1226-1249.	1.1	7
1131	Geochemistry of meta-sediments from Neoproterozoic Shimla and Chail Groups of Outer Lesser Himalaya: Implications for provenance, tectonic setting, and paleo-weathering conditions. Geological Journal, 2021, 56, 4451-4478.	0.6	11
1132	The grandest of them all: the Lomagundi-Jatuli Event and Earth's oxygenation. Journal of the Geological Society, 2022, 179, .	0.9	21
1133	When anaerobes encounter oxygen: mechanisms of oxygen toxicity, tolerance and defence. Nature Reviews Microbiology, 2021, 19, 774-785.	13.6	108
1134	The Great Oxygenation Event as a consequence of ecological dynamics modulated by planetary change. Nature Communications, 2021, 12, 3985.	5.8	24
1136	Major biological events and fossil energy formation: On the development of energy science under the earth system framework. Petroleum Exploration and Development, 2021, 48, 581-594.	3.0	17

#	ARTICLE	IF	CITATIONS
1137	The Microalga <i>Chlorella vulgaris</i> as a Natural Bioenergetic System for Effective CO <sub>2</sub> Mitigation—New Perspectives against Global Warming. <i>Symmetry</i> , 2021, 13, 997.	1.1	20
1138	Redox fluctuation and $\delta^{13}\text{C}_{\text{org}}-\delta^{34}\text{S}$ perturbations recorded in the 1.9 Ga Nuvilik Formation of the Cape Smith belt, Canada. <i>Precambrian Research</i> , 2021, 359, 106191.	1.2	3
1139	Extracellular superoxide dismutase VdSOD5 is required for virulence in <i>Verticillium dahliae</i> . <i>Journal of Integrative Agriculture</i> , 2021, 20, 1858-1870.	1.7	11
1140	Benthic redox conditions and nutrient dynamics in the ca. 2.1 Ga Franceville sub-basin. <i>Precambrian Research</i> , 2021, 360, 106234.	1.2	2
1141	A long-term record of early to mid-Paleozoic marine redox change. <i>Science Advances</i> , 2021, 7, .	4.7	33
1142	Precipitation of Marinoan cap carbonate from Mn-enriched seawater. <i>Earth-Science Reviews</i> , 2021, 218, 103666.	4.0	14
1143	Stromatolites as geochemical archives to reconstruct microbial habitats through deep time: Potential and pitfalls of novel radiogenic and stable isotope systems. <i>Earth-Science Reviews</i> , 2021, 218, 103683.	4.0	18
1145	Cyanobacteria and biogeochemical cycles through Earth history. <i>Trends in Microbiology</i> , 2022, 30, 143-157.	3.5	108
1146	Light intensity stimulates the production of extracellular polymeric substances (EPS) in a culture of the desert cyanobacterium <i>Trichormus</i> sp. <i>Journal of Applied Phycology</i> , 2021, 33, 2795-2804.	1.5	4
1147	The environmental context of carbonaceous compressions and implications for organism preservation 1.40 Ga and 0.63 Ga. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 573, 110449.	1.0	8
1148	Evolution of Superoxide Dismutases and Catalases in Cyanobacteria: Occurrence of the Antioxidant Enzyme Genes before the Rise of Atmospheric Oxygen. <i>Journal of Molecular Evolution</i> , 2021, 89, 527-543.	0.8	8
1149	Mariana-type ophiolites constrain the establishment of modern plate tectonic regime during Gondwana assembly. <i>Nature Communications</i> , 2021, 12, 4189.	5.8	34
1150	Microalgae strategy in anoxic atmospheres with various CO <sub>2</sub> concentrations — Environmental and (astro)biotechnological perspectives. <i>Environmental and Experimental Botany</i> , 2021, 187, 104474.	2.0	4
1151	Staged formation of the supergiant Olympic Dam uranium deposit, Australia. <i>Geology</i> , 2021, 49, 1312-1316.	2.0	14
1153	Cobalt concentration in a sulfidic sea and mobilization during orogenesis: Implications for targeting epigenetic sediment-hosted Cu-Co deposits. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 305, 1-18.	1.6	24
1154	The Peak Absorbance Wavelength of Photosynthetic Pigments Around Other Stars From Spectral Optimization. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 8, .	1.1	9
1155	Enhanced deep carbon cycle marked by the upsurge of silica-undersaturated nephelinitic magmatism at the Proterozoic-Phanerozoic boundary. <i>Journal of Asian Earth Sciences</i> , 2021, 214, 104772.	1.0	1
1156	Paired U and Mo isotope evidence for pervasive anoxia in the Cryogenian early interglacial ocean. <i>Precambrian Research</i> , 2021, 361, 106244.	1.2	10

#	ARTICLE	IF	CITATIONS
1157	Coupling sulfur and oxygen isotope ratios in sediment melts across the Archean-Proterozoic transition. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 307, 242-257.	1.6	12
1158	A New Depositional Framework for Massive Iron Formations After the Great Oxidation Event. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009113.	1.0	3
1159	Carbon isotope and geochemical characteristics of the Paleoproterozoic graphite deposits in the Jiao-Liao-Ji belt, North China Craton: Implications for genesis and depositional environment. <i>Precambrian Research</i> , 2021, 362, 106320.	1.2	5
1160	Introduction of First Billion Years: Habitability. <i>Astrobiology</i> , 2021, 21, 893-905.	1.5	2
1163	A copper isotope investigation of methane cycling in Late Archaean sediments. <i>Precambrian Research</i> , 2021, 362, 106267.	1.2	2
1164	The cause for Nuna breakup in the Early to Middle Mesoproterozoic. <i>Precambrian Research</i> , 2021, 362, 106287.	1.2	6
1165	Timing the evolution of antioxidant enzymes in cyanobacteria. <i>Nature Communications</i> , 2021, 12, 4742.	5.8	57
1166	Vertical structure of the bacterial diversity in meromictic Fayetteville Green Lake. <i>MicrobiologyOpen</i> , 2021, 10, e1228.	1.2	13
1167	Possible link between Earth's rotation rate and oxygenation. <i>Nature Geoscience</i> , 2021, 14, 564-570.	5.4	27
1168	Ediacaran banded iron formations and carbonates of the Cachoeirinha Group of NE Brazil: Paleoenvironment and paleoredox conditions. <i>Journal of South American Earth Sciences</i> , 2021, 109, 103282.	0.6	9
1169	Oxygenation, Life, and the Planetary System during Earth's Middle History: An Overview. <i>Astrobiology</i> , 2021, 21, 906-923.	1.5	85
1170	The Molecular Record of Metabolic Activity in the Subsurface of the Río Tinto Mars Analog. <i>Astrobiology</i> , 2021, 21, 1387-1405.	1.5	6
1171	Hypoxia Inducible Factors as Central Players in the Pathogenesis and Pathophysiology of Cardiovascular Diseases. <i>Frontiers in Cardiovascular Medicine</i> , 2021, 8, 709509.	1.1	14
1172	Dietary nutrients and their control of the redox bioenergetic networks as therapeutics in redox dysfunctions sustained pathologies. <i>Pharmacological Research</i> , 2021, 170, 105709.	3.1	4
1173	Partial Deoxygenation and Dehydration of Ferric Oxyhydroxide in Earth's Subducting Slabs. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094446.	1.5	2
1174	Antimicrobial Activity of Metals and Metalloids. <i>Annual Review of Microbiology</i> , 2021, 75, 175-197.	2.9	32
1175	Habitability and Biosignatures of Hycean Worlds. <i>Astrophysical Journal</i> , 2021, 918, 1.	1.6	46
1176	Neuroprotective Potential of Mild Uncoupling in Mitochondria. <i>Pros and Cons. Brain Sciences</i> , 2021, 11, 1050.	1.1	16

#	ARTICLE	IF	CITATIONS
1177	Comparative Genomics Provides Insights into the Genetic Diversity and Evolution of the DPANN Superphylum. <i>MSystems</i> , 2021, 6, e0060221.	1.7	9
1178	Carbon isotope variations of high magnitude recorded in carbonate rocks from the Stenian-Tonian Lajeado Group, Southeast Brazil. <i>Journal of South American Earth Sciences</i> , 2021, 109, 103268.	0.6	4
1179	Hypoxia triggers collective aerotactic migration in <i>Dictyostelium discoideum</i> . <i>ELife</i> , 2021, 10, .	2.8	19
1180	The History of Ocean Oxygenation. <i>Annual Review of Marine Science</i> , 2022, 14, 331-353.	5.1	22
1183	The Archean origin of oxygenic photosynthesis and extant cyanobacterial lineages. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021, 288, 20210675.	1.2	48
1184	Phosphorus Chemistry in the Earth's Upper Atmosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029881.	0.8	6
1185	Unraveling the histories of Proterozoic shales through <i>in situ</i> Rb-Sr dating and trace element laser ablation analysis. <i>Geology</i> , 2022, 50, 66-70.	2.0	13
1186	Bloom and bust: Historical trends of harmful algal blooms in Muskegon Lake, Michigan, a Great Lakes estuary. <i>Freshwater Science</i> , 2021, 40, 463-477.	0.9	0
1187	MoS <sub>2</sub> Nanosheetsâ€“Cyanobacteria Interaction: Reprogrammed Carbon and Nitrogen Metabolism. <i>ACS Nano</i> , 2021, 15, 16344-16356.	7.3	28
1189	Radiation-induced oxidation of iron in the ocean of the early Earth. <i>Precambrian Research</i> , 2021, 364, 106360.	1.2	7
1190	A dynamic planet. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	2.6	0
1191	Ecological Dichotomies Arise in Microbial Communities Due to Mixing of Deep Hydrothermal Waters and Atmospheric Gas in a Circumneutral Hot Spring. <i>Applied and Environmental Microbiology</i> , 2021, 87, e0159821.	1.4	6
1192	Dynamic interplay of biogeochemical C, S and Ba cycles in response to the Shuram oxygenation event. <i>Journal of the Geological Society</i> , 2022, 179, .	0.9	12
1193	Underestimated cyanobacterial diversity: trends and perspectives of research in tropical environments. <i>Fottea</i> , 2021, 21, 110-127.	0.4	12
1194	On the paragenetic modes of minerals: A mineral evolution perspective. <i>American Mineralogist</i> , 2022, 107, 1262-1287.	0.9	31
1195	Phosphorite generative processes around the Precambrian-Cambrian boundary in South China: An integrated study of Mo and phosphate O isotopic compositions. <i>Geoscience Frontiers</i> , 2021, 12, 101187.	4.3	18
1196	Rapid, Concurrent Formation of Organic Sulfur and Iron Sulfides During Experimental Sulfurization of Sinking Marine Particles. <i>Global Biogeochemical Cycles</i> , 2021, 35, e2021GB007062.	1.9	10
1197	Stable W and Mo isotopic evidence for increasing redox-potentials from the Paleoproterozoic deep ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 309, 366-387.	1.6	13

#	ARTICLE	IF	CITATIONS
1198	Oxidizing atmosphere and life on land during the late Paleoproterozoic outset of the "oxygenation" event. <i>Precambrian Research</i> , 2021, 364, 106361.	1.2	12
1199	Cyanobakteriene: Mikroorganismene som styrte utviklingen av livet på jorden. <i>Naturen</i> , 2021, 145, 178-182.	0.0	0
1200	A largely invariant marine dissolved organic carbon reservoir across Earth's history. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	22
1201	New constraints on mid-Proterozoic ocean redox from stable thallium isotope systematics of black shales. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 315, 185-206.	1.6	6
1203	Origin of cyanobacterial thylakoids via a non-vesicular glycolipid phase transition and their impact on the Great Oxygenation Event. <i>Journal of Experimental Botany</i> , 2022, 73, 2721-2734.	2.4	7
1204	Early Neoproterozoic oxygenation dynamics along the northern margin of the West African Craton, Anti-Atlas Mountains, Morocco. <i>Chemical Geology</i> , 2021, 581, 120404.	1.4	3
1205	Reconciling evidence of oxidative weathering and atmospheric anoxia on Archean Earth. <i>Science Advances</i> , 2021, 7, eabj0108.	4.7	21
1206	Global continental volcanism controlled the evolution of the oceanic nickel reservoir. <i>Earth and Planetary Science Letters</i> , 2021, 572, 117116.	1.8	6
1207	Microbialite development through the Ediacaran-Cambrian transition in China: Distribution, characteristics, and paleoceanographic implications. <i>Global and Planetary Change</i> , 2021, 205, 103586.	1.6	18
1208	Sulfur and oxygen isotopic compositions of carbonate associated sulfate (CAS) of Cambrian ribbon rocks: Implications for the constraints on using CAS to reconstruct seawater sulfate sulfur isotopic compositions. <i>Chemical Geology</i> , 2021, 580, 120369.	1.4	6
1209	Evolution of the 1.8-1.6 Ga Yanliao and Xiong'er basins, north China Craton. <i>Precambrian Research</i> , 2021, 365, 106383.	1.2	12
1210	Carbon-sulfur signals of methane versus crude oil diagenetic decomposition and U-Th age relationships for authigenic carbonates from asphalt seeps, southern Gulf of Mexico. <i>Chemical Geology</i> , 2021, 581, 120395.	1.4	1
1211	Metallogenetic Mn-model of the Rhyacian-aged Buritirama Formation, Carajás domain (Amazon) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	1.1	0
1212	Working up an Apatite: Enigmatic Mesoarchean Hydrothermal Cu-Co-Au Mineralization in the Pilbara Craton. <i>Economic Geology</i> , 2021, 116, 1561-1573.	1.8	2
1213	Depositional and Environmental Constraints on the Late Neoproterozoic Dagushan Deposit (Anshan-Benxi) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	1.8	10
1214	A carbonate molybdenum isotope and cerium anomaly record across the end-GOE: Local records of global oxygenation. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 313, 313-339.	1.6	3
1215	Human transferrin: An inorganic biochemistry perspective. <i>Coordination Chemistry Reviews</i> , 2021, 449, 214186.	9.5	26
1217	The atmosphere and hydrosphere. , 2022, , 229-268.		1

#	ARTICLE	IF	CITATIONS
1219	Recent Advances in Geochemical Paleo-Oxybarometers. Annual Review of Earth and Planetary Sciences, 2021, 49, 399-433.	4.6	25
1220	A persistently low level of atmospheric oxygen in Earth's middle age. Nature Communications, 2021, 12, 351.	5.8	48
1221	UV astronomy and the investigation of the origin of life. , 2021, , 15-73.		2
1222	Evolution of the structure and impact of Earth's biosphere. Nature Reviews Earth & Environment, 2021, 2, 123-139.	12.2	37
1224	Preandean Atacama Desert Endolithic Microbiology. , 2020, , 51-71.		3
1225	Was LUCA a Hyperthermophilic Prokaryote? The Impact-Bottleneck Hypothesis Revisited. Cuatro Ciénegas Basin: an Endangered Hyperdiverse Oasis, 2020, , 75-88.	0.4	1
1226	The Magic of Dioxygen. Metal Ions in Life Sciences, 2015, 15, 1-12.	2.8	12
1227	Molybdenum. Encyclopedia of Earth Sciences Series, 2016, , 1-4.	0.1	1
1228	Molybdenum. Encyclopedia of Earth Sciences Series, 2018, , 947-950.	0.1	1
1229	Diagenesis. Encyclopedia of Earth Sciences Series, 2018, , 353-362.	0.1	3
1230	Osmium Isotope Stratigraphy. , 2020, , 239-257.		6
1231	Oxygen distribution in the fluid/gel phases of lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2019, 1861, 879-886.	1.4	11
1232	CO2 drawdown and cooling at the onset of the Great Oxidation Event recorded in 2.45 Ga paleoweathering crust. Chemical Geology, 2020, 548, 119678.	1.4	5
1233	Estimating the formation age distribution of continental crust by unmixing zircon ages. Earth and Planetary Science Letters, 2018, 482, 388-395.	1.8	51
1234	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
1239	Bridge the planetary divide. Nature, 2016, 539, 25-27.	13.7	5
1240	Store and share ancient rocks. Nature, 2020, 581, 137-139.	13.7	5
1241	Addressing the Anthropocene. Environmental Chemistry, 2016, 13, 777.	0.7	4

#	ARTICLE	IF	CITATIONS
1242	Ediacaran reorganization of the marine phosphorus cycle. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11961-11967.	3.3	55
1243	Mineralogy of the deep lower mantle in the presence of H <sub>2</sub> O. National Science Review, 2021, 8, nwaa098.	4.6	20
1244	Oxygen and reactive oxygen species-dependent regulation of plant growth and development. Plant Physiology, 2021, 186, 79-92.	2.3	75
1255	Hypoxia-dependent regulation of inflammatory pathways in immune cells. Journal of Clinical Investigation, 2016, 126, 3716-3724.	3.9	151
1256	The evolution of universal adaptations of life is driven by universal properties of matter: energy, entropy, and interaction. F1000Research, 2020, 9, 626.	0.8	3
1257	The evolution of universal adaptations of life is driven by universal properties of matter: energy, entropy, and interaction. F1000Research, 0, 9, 626.	0.8	5
1258	Proterozoic Basins of Peninsular India: Status within the Global Proterozoic Systems. Proceedings of the Indian National Science Academy, 2016, 82, .	0.5	10
1259	Formation mechanism and geochemical process of porphyry molybdenum deposits. Acta Petrologica Sinica, 2020, 36, 77-84.	0.3	5
1260	Oxygen and Oxygen Toxicity: The Birth of Concepts. Reactive Oxygen Species (Apex, N C ), 2016, 1, 1-8.	5.4	14
1261	The Inner Solar System's Habitability Through Time. , 2005, , 1-1.		1
1262	Finding Signs of Life on Transiting Earthlike Planets: High-resolution Transmission Spectra of Earth through Time around FGKM Host Stars. Astrophysical Journal, 2020, 904, 10.	1.6	7
1263	A Framework for Relative Biosignature Yields from Future Direct Imaging Missions. Astrophysical Journal, 2020, 905, 108.	1.6	5
1264	Constraints on Aquatic Photosynthesis for Terrestrial Planets around Other Stars. Astrophysical Journal Letters, 2020, 889, L15.	3.0	7
1265	Abundant Atmospheric Methane from Volcanism on Terrestrial Planets Is Unlikely and Strengthens the Case for Methane as a Biosignature. Planetary Science Journal, 2020, 1, 58.	1.5	26
1266	Reviews and syntheses: Present, past, and future of the oxygen minimum zone in the northern Indian Ocean. Biogeosciences, 2020, 17, 6051-6080.	1.3	45
1268	Accelerating Neoproterozoic research through scientific drilling. Scientific Drilling, 0, 19, 17-25.	1.0	5
1269	Variations of Stable Isotope Ratios in Nature. Springer Textbooks in Earth Sciences, Geography and Environment, 2021, , 267-498.	0.1	1
1270	Isotope Fractionation Processes of Selected Elements. Springer Textbooks in Earth Sciences, Geography and Environment, 2021, , 49-265.	0.1	1



#	ARTICLE	IF	CITATIONS
1271	Geological evidences and mechanisms for oceanic anoxic events during the Early Paleozoic. Chinese Science Bulletin, 2022, 67, 1644-1659.	0.4	4
1272	Contrasting nutrient availability between marine and brackish waters in the late Mesoproterozoic: Evidence from the Paranoá Group, Brazil. Geobiology, 2022, 20, 159-174.	1.1	5
1273	A Review of the Neoproterozoic Global Glaciations and a Biotic Cause of Them. Earth Systems and Environment, 2021, 5, 811.	3.0	2
1274	Genome sequencing of the NIES Cyanobacteria collection with a focus on the heterocyst-forming clade. DNA Research, 2021, 28, .	1.5	12
1275	Delayed and variable late Archaean atmospheric oxidation due to high collision rates on Earth. Nature Geoscience, 2021, 14, 827-831.	5.4	15
1276	Atmospheric oxygenation of the early earth and earth-like planets driven by competition between land and seafloor weathering. Earth, Planets and Space, 2021, 73, .	0.9	3
1277	Quantifying Molybdenum Isotopic Speciation in Sulfidic Water: Implications for the Paleoredox Proxy. ACS Earth and Space Chemistry, 2021, 5, 2891-2899.	1.2	7
1278	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
1279	Lipid biomarkers: molecular tools for illuminating the history of microbial life. Nature Reviews Microbiology, 2022, 20, 174-185.	13.6	38
1280	Significance of $^{56}\text{Fe}$ depletions in late-Archaean shales and pyrite. Geochimica Et Cosmochimica Acta, 2022, 316, 87-104.	1.6	6
1281	Acidic fluids in the Earth's lower crust. Scientific Reports, 2021, 11, 21146.	1.6	2
1282	Thylakoid attachment to the plasma membrane in <i>Synechocystis</i> sp. PCC 6803 requires the AncM protein. Plant Cell, 2022, 34, 655-678.	3.1	1
1283	Marine oxygenation, deoxygenation, and life during the Early Paleozoic: An overview. Palaeogeography, Palaeoclimatology, Palaeoecology, 2021, 584, 110715.	1.0	8
1284	Magnesium isotope fractionation during alkaline brine evaporation and implications for Precambrian seawater chemistry. Chemical Geology, 2021, 585, 120565.	1.4	5
1285	A rapid rise of seawater $\delta^{13}\text{C}$ during the deglaciation of the Marinoan Snowball Earth. Global and Planetary Change, 2021, 207, 103672.	1.6	8
1286	Variations of Stable Isotope Ratios in Nature. , 2004, , 77-196.		2
1288	Earth as an Exoplanet. , 2005, , 1-1.		2
1289	A Very Solid Fuel: Ferrous Iron Oxide as a Geochemical Energy Source. Natural Resources, 2015, 06, 115-122.	0.2	0

#	ARTICLE	IF	CITATIONS
1301	Fossils, Feeding, and the Evolution of Complex Multicellularity. , 2016, , 3-16.		18
1303	Molybdenum Isotopes. Encyclopedia of Earth Sciences Series, 2017, , 1-6.	0.1	0
1304	Iron Formations. Encyclopedia of Earth Sciences Series, 2017, , 1-6.	0.1	0
1306	Diagenesis. Encyclopedia of Earth Sciences Series, 2017, , 1-11.	0.1	0
1307	History of Geochemistry. Encyclopedia of Earth Sciences Series, 2017, , 1-15.	0.1	0
1308	Geochemistry. Encyclopedia of Earth Sciences Series, 2017, , 1-10.	0.1	1
1309	Energieumwandlung: Mitochondrien und Chloroplasten. , 0, , 853-918.		0
1311	Atmospheric Evolution. Encyclopedia of Earth Sciences Series, 2018, , 1-15.	0.1	1
1313	Biogeochemistry. Encyclopedia of Earth Sciences Series, 2018, , 1-4.	0.1	0
1315	The Habitability of Icy Ocean Worlds in the Solar System. , 2018, , 1-23.		0
1316	Atmospheric Evolution. Encyclopedia of Earth Sciences Series, 2018, , 62-76.	0.1	1
1317	Geochemistry. Encyclopedia of Earth Sciences Series, 2018, , 561-571.	0.1	10
1318	In the Beginning, There Was Fire: Cuatro CiÃ©negas Basin (CCB) and the Long History of Life on Earth. Cuatro Cielnegas Basin: an Endangered Hyperdiverse Oasis, 2018, , 21-33.	0.4	8
1319	Iron Formations. Encyclopedia of Earth Sciences Series, 2018, , 751-756.	0.1	1
1320	Biogeochemistry. Encyclopedia of Earth Sciences Series, 2018, , 107-111.	0.1	0
1321	Hypoxia and Matrix Manipulation for Vascular Engineering. Biological and Medical Physics Series, 2018, , 73-119.	0.3	2
1322	Molybdenum Isotopes. Encyclopedia of Earth Sciences Series, 2018, , 950-955.	0.1	0
1324	Mineral-forming fluids as an indicator of the evolution of external shells of the early precambrian of the Earth. Reports National Academy of Science of Ukraine, 2018, , 72-76.	0.0	0

#	ARTICLE	IF	CITATIONS
1327	Time-resolved Fourier transform infrared spectroscopy and updated system of neutral oxygen (O I) levels. , 2018, , .		0
1329	How Much Fossil Fuel Is in the Earth?. Journal of Geoscience and Environment Protection, 2019, 07, 61-68.	0.2	1
1330	Signaturen des Lebens. , 2019, , 1-114.		0
1331	The Evolution of Larger Brains since the Vertebrateâ€“Invertebrate Divide. , 2019, , 15-26.		0
1332	How Biology Solved Its Energy Problem and Implications for the Future of Humankind. , 2019, , 1-30.		0
1338	Trace Metals. , 2020, , 1-5.		0
1339	Precambrian (4.56â€“1 Ga). , 2020, , 481-493.		3
1340	The Ancient Earth. Advances in Isotope Geochemistry, 2020, , 215-360.	1.4	2
1341	Oxygenation of Early Atmosphere and Potential Stratigraphic Records from India. Springer Geology, 2020, , 179-194.	0.2	0
1344	Modification of the hydro-thermal mineral-forming fluid composition in the Early Precambrian of the Earth. Reports National Academy of Science of Ukraine, 2020, , 77-84.	0.0	0
1345	The Probable Metapelite Nature of Sapphirineâ€“Spinel and Garnet Gedrites of the Aulandzha Block of the Omolon Massif. Russian Geology and Geophysics, 2020, 61, 689-699.	0.3	1
1346	Geochronology and geochemistry of the Paleoproterozoic Fangniushan supracrustal strata in the Xiaoshan area, southern North China Craton: Implications for tectonic evolution. Precambrian Research, 2020, 346, 105789.	1.2	2
1349	Nitrogen fixation: A poorly understood process along the freshwaterâ€“marine continuum. Limnology and Oceanography Letters, 2022, 7, 1-10.	1.6	22
1350	Dissolved oxygen modelling of the Yamuna River using different ANFIS models. Water Science and Technology, 2021, 84, 3359-3371.	1.2	8
1351	The Mesoproterozoic Oxygenation Event. Science China Earth Sciences, 2021, 64, 2043-2068.	2.3	20
1352	Carbonic anhydrase IX as a marker of hypoxia in gliomas: A narrative review. Glioma (Mumbai, India), 2020, 3, 97.	0.0	1
1354	On the oxygenation of the Archaean and Proterozoic oceans. Geological Magazine, 2022, 159, 212-219.	0.9	3
1355	Tectonic controls on sedimentary provenance and basin geography of the Mesoproterozoic Wilton package, McArthur Basin, northern Australia. Geological Magazine, 2022, 159, 179-198.	0.9	8

#	ARTICLE	IF	CITATIONS
1357	Abiotic Influences on the Early Evolution of Life. Encyclopedia of the UN Sustainable Development Goals, 2020, , 1-13.	0.0	0
1360	Introduction: Catalysis, Oxygen and Sustainability â€” Quo vadis? RSC Catalysis Series, 2020, , 1-15.	0.1	0
1361	Rhenium resource exploration prospects in China based on its geochemical properties. Acta Petrologica Sinica, 2020, 36, 55-67.	0.3	7
1363	Magmatic thickening of crust in non-plate tectonic settings initiated the subaerial rise of Earth's first continents 3.3 to 3.2 billion years ago. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	33
1366	The evolution of universal adaptations of life is driven by universal properties of matter: energy, entropy, and interaction. F1000Research, 0, 9, 626.	0.8	8
1369	Power of Place: Intravascular Superoxide Dismutase for Prevention of Acute Respiratory Distress Syndrome. American Journal of Respiratory Cell and Molecular Biology, 2017, 56, 147-149.	1.4	2
1370	Ages of the Proterozoic strata in Fanhe Basin revisited: Implications for geological records of the Great Oxidation Event in the North China Craton. Precambrian Research, 2022, 368, 106466.	1.2	3
1371	Authigenic uranium isotopes of late Proterozoic black shale. Chemical Geology, 2022, 588, 120644.	1.4	6
1372	Neoproterozoic Earth-life system. Precambrian Research, 2022, 368, 106486.	1.2	6
1373	Interactions with Arsenic: Mechanisms of Toxicity and Cellular Resistance in Eukaryotic Microorganisms. International Journal of Environmental Research and Public Health, 2021, 18, 12226.	1.2	17
1374	Biogeochemical Cycles. , 2022, , 1-9.		0
1375	An abiotic source of Archean hydrogen peroxide and oxygen that pre-dates oxygenic photosynthesis. Nature Communications, 2021, 12, 6611.	5.8	41
1376	Oxygen isotopic alteration rate of continental crust recorded by detrital zircon and its implication for deep-time weathering. Earth and Planetary Science Letters, 2022, 578, 117292.	1.8	2
1378	Quantifying the Seawater Sulfate Concentration in the Cambrian Ocean. Frontiers in Earth Science, 2021, 9, .	0.8	7
1379	Current Knowledge on Mechanisms Preventing Photosynthesis Redox Imbalance in Plants. Antioxidants, 2021, 10, 1789.	2.2	9
1380	Neoproterozoic Deposits of the Bashkir Mega-Anticlinorium (Southern Urals): State of the Art in Regional Stratigraphy. Russian Geology and Geophysics, 2021, 62, 1240-1255.	0.3	1
1381	Paleoproterozoic manganese oxide precipitation in oxic seawater surface and reductive enrichment in anoxic seafloor. Chemical Geology, 2021, 588, 120655.	1.4	1
1382	Origin and Early Evolution of the Eukaryotes: Perspectives from the Fossil Record. Advances in Astrobiology and Biogeophysics, 2021, , 255-289.	0.6	5

#	ARTICLE	IF	CITATIONS
1383	Ediacaran iron formations from the North Qilian Orogenic Belt, China: Age, geochemistry, Sm-Nd isotopes and link with submarine volcanism. <i>Precambrian Research</i> , 2022, 368, 106498.	1.2	12
1384	A transient oxygen increase in the Mesoproterozoic ocean at 1.44 Ga: Geochemical evidence from the Tieling Formation, North China Platform. <i>Precambrian Research</i> , 2022, 369, 106527.	1.2	9
1385	Reduction of iron with no systematic isotope fractionation during continental subduction observed in metamorphic rocks from the Dabie-Sulu orogen, China. <i>Journal of Asian Earth Sciences</i> , 2022, 225, 105054.	1.0	6
1386	Seeding the Solar System with Life: Mars, Venus, Earth, Moon, Protoplanets. <i>Open Astronomy</i> , 2020, 29, 124-157.	0.2	2
1388	Hydrothermal vents and organic ligands sustained the Precambrian copper budget. <i>Geochemical Perspectives Letters</i> , 0, , 12-16.	1.0	7
1389	地球早期生命起源的地球化学证据. <i>地球科学 - 中国地质大学学报/地球科学 - 中国地质大学学报/地球科学 - 中国地质大学学报</i> , 2021, 46, 4405.	0.1	1
1390	地球早期生命起源的地球化学证据. <i>地球科学 - 中国地质大学学报/地球科学 - 中国地质大学学报/地球科学 - 中国地质大学学报</i> , 2021, 46, 4427.	0.1	0
1391	Mechanistic Insight into Oxidative Stress-Triggered Signaling Pathways and Type 2 Diabetes. <i>Molecules</i> , 2022, 27, 950.	1.7	97
1392	Strong evidence for a weakly oxygenated ocean-atmosphere system during the Proterozoic. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	15
1393	Organellar Evolution: A Path from Benefit to Dependence. <i>Microorganisms</i> , 2022, 10, 122.	1.6	2
1394	How low can they go? Aerobic respiration by microorganisms under apparent anoxia. <i>FEMS Microbiology Reviews</i> , 2022, 46, .	3.9	26
1395	Active biogeochemical cycles during the Marinoan global glaciation. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 321, 155-169.	1.6	7
1396	Circadian clocks' interactions with oxygen sensing and signalling. <i>Acta Physiologica</i> , 2022, 234, e13770.	1.8	12
1397	Tectonic hydrogen and tectonic oxygen production through deforming piezoelectric minerals in the presence of water. , 2022, , .		0
1398	A 460-Ma-long, high-resolution record of Ediacaran paleotemperature. <i>Science Bulletin</i> , 2022, 67, 910-913.	4.3	5
1399	General chemistry of metals, sampling, analytical methods, and speciation. , 2022, , 15-54.		0
1400	A revised lower estimate of ozone columns during Earth's oxygenated history. <i>Royal Society Open Science</i> , 2022, 9, 211165.	1.1	13
1401	Experimental study of chromium (III) coprecipitation with calcium carbonate. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 322, 94-108.	1.6	9

#	ARTICLE	IF	CITATIONS
1402	Application of lithogeochemical and pyrite trace element data for the determination of vectors to ore in the Raja Au–Co prospect, northern Finland. <i>Solid Earth</i> , 2022, 13, 271-299.	1.2	10
1403	Feedback between surface and deep processes: Insight from time series analysis of sedimentary record. <i>Earth and Planetary Science Letters</i> , 2022, 579, 117352.	1.8	7
1404	The temporal distribution of Earth's supermountains and their potential link to the rise of atmospheric oxygen and biological evolution. <i>Earth and Planetary Science Letters</i> , 2022, 580, 117391.	1.8	21
1405	Important role of seawater radiolysis of the World Ocean in the chemical evolution of the early Earth. <i>Radiation Physics and Chemistry</i> , 2022, 193, 109959.	1.4	2
1406	Crustal magnetotelluric imaging of a Paleoproterozoic graphitic suture zone, Curnamona Province, Australia. <i>Gondwana Research</i> , 2022, 106, 1-14.	3.0	8
1407	Has the tectonic regime of the Baltic Shield always remained the same?. <i>Gff</i> , 0, , 1-12.	0.4	0
1408	Sedimentary pyrite proxy for atmospheric oxygen: evaluation of strengths and limitations. <i>Earth-Science Reviews</i> , 2022, 227, 103941.	4.0	7
1409	Evidence that the GOE was a prolonged event with a peak around 1900 Ma. <i>Geosystems and Geoenvironment</i> , 2022, 1, 100036.	1.7	13
1410	Local Electric Fields Dictate Function: The Different Product Selectivities Observed for Fatty Acid Oxidation by Two Deceptively Very Similar P450-Peroxygenases OleT and BSI <sup>2</sup> . <i>Journal of Chemical Information and Modeling</i> , 2022, 62, 1025-1035.	2.5	12
1412	Coupling of the redox history and enrichment of Ni-Mo in black shale during the early Cambrian: Constraints from S-Fe isotopes and trace elements of pyrite, South China. <i>Ore Geology Reviews</i> , 2022, 143, 104749.	1.1	3
1413	Spectres of Clock Evolution: Past, Present, and Yet to Come. <i>Frontiers in Physiology</i> , 2021, 12, 815847.	1.3	15
1414	The earliest history of eukaryotic life: uncovering an evolutionary story through the integration of biological and geological data. <i>Trends in Ecology and Evolution</i> , 2022, 37, 246-256.	4.2	17
1415	Geochemistry and mineralogy of Paleoproterozoic metasediments in the Imandra-Varzuga Greenstone Belt: Implications for sediment provenance, tectonic settings and weathering intensity at the transition to oxygenated surface environments. <i>Precambrian Research</i> , 2022, 371, 106578.	1.2	1
1416	Carbon assimilating fungi from surface ocean to seafloor revealed by coupled phylogenetic and stable isotope analysis. <i>ISME Journal</i> , 2022, 16, 1245-1261.	4.4	22
1417	Major Evolutionary Transitions and the Roles of Facilitation and Information in Ecosystem Transformations. <i>Frontiers in Ecology and Evolution</i> , 2021, 9, .	1.1	7
1419	“Big History”™, history and citations in nutritional science. <i>Journal of Nutritional Science</i> , 2022, 11, e18.	0.7	0
1420	Marine Cyanobacteria. <i>The Microbiomes of Humans, Animals, Plants, and the Environment</i> , 2022, , 103-157.	0.2	1
1421	Marine Protists: A Hitchhiker™s Guide to their Role in the Marine Microbiome. <i>The Microbiomes of Humans, Animals, Plants, and the Environment</i> , 2022, , 159-241.	0.2	3

#	ARTICLE	IF	CITATIONS
1422	Partitioning of Atmospheric O <sub>2</sub> into High-pressure Ice in Ocean Worlds. <i>Astrophysical Journal</i> , 2022, 926, 72.	1.6	0
1423	The phosphorus cycle and biological pump in Earth's middle age: Reappraisal of the "Boring Billion". <i>Chinese Science Bulletin</i> , 2022, 67, 1614-1623.	0.4	6
1424	Macrostratigraphy: Insights into Cyclic and Secular Evolution of the Earth-Life System. <i>Annual Review of Earth and Planetary Sciences</i> , 2022, 50, 419-449.	4.6	8
1425	Evidence for the oxidation of Earth's crust from the evolution of manganese minerals. <i>Nature Communications</i> , 2022, 13, 960.	5.8	15
1426	Mesoproterozoic marine biological carbon pump: Source, degradation, and enrichment of organic matter. <i>Chinese Science Bulletin</i> , 2022, 67, 1624-1643.	0.4	12
1427	Role of prolyl hydroxylase domain proteins in bone metabolism. <i>Osteoporosis and Sarcopenia</i> , 2022, 8, 1-10.	0.7	4
1428	A Thermodynamic Model for Water Activity and Redox Potential in Evolution and Development. <i>Journal of Molecular Evolution</i> , 2022, 90, 182-199.	0.8	4
1429	<sup>238</sup> U/ <sup>235</sup> U in calcite is more susceptible to carbonate diagenesis. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 326, 273-287.	1.6	7
1430	Perturbation of the deep-Earth carbon cycle in response to the Cambrian Explosion. <i>Science Advances</i> , 2022, 8, eabj1325.	4.7	14
1431	2470 million-year-old banded iron formation reveals a climatic oscillation consistent with the Gleissberg solar cycle. <i>Communications Earth &amp; Environment</i> , 2022, 3, .	2.6	3
1432	Redox signaling at the crossroads of human health and disease. <i>MedComm</i> , 2022, 3, e127.	3.1	44
1433	Environmental hypoxia: A threat to the gonadal development and reproduction in bony fishes. <i>Aquaculture and Fisheries</i> , 2022, 7, 572-582.	1.2	12
1434	Oxidative metabolisms catalyzed Earth's oxygenation. <i>Nature Communications</i> , 2022, 13, 1328.	5.8	17
1435	Oxidized primary arc magmas: Constraints from Cu/Zr systematics in global arc volcanics. <i>Science Advances</i> , 2022, 8, eabk0718.	4.7	8
1436	Proterozoic supercontinent break-up as a driver for oxygenation events and subsequent carbon isotope excursions. , 2022, 1, .		5
1437	Fantastic [FeFe]-Hydrogenases and Where to Find Them. <i>Frontiers in Microbiology</i> , 2022, 13, 853626.	1.5	22
1438	Characterization of the Crystallographic Preferred Orientation Relationships of the Magnetite-Hematite-Goethite Phase Transformation during Martitization. <i>Minerals (Basel)</i> , 2022, 12, 1097.		10
1439	Sedimentary Ce anomalies: Secular change and implications for paleoenvironmental evolution. <i>Earth-Science Reviews</i> , 2022, 229, 104015.	4.0	30



#	ARTICLE	IF	CITATIONS
1440	Photoreductive Dissolution of Iron (Hydr)oxides and Its Geochemical Significance. <i>ACS Earth and Space Chemistry</i> , 2022, 6, 811-829.	1.2	14
1441	A Model Earth-sized Planet in the Habitable Zone of $\hat{\pm}$ Centauri A/B. <i>Astrophysical Journal</i> , 2022, 927, 134.	1.6	4
1442	Slab-derived devolatilization fluids oxidized by subducted metasedimentary rocks. <i>Nature Geoscience</i> , 2022, 15, 320-326.	5.4	25
1443	Non-Photosynthetic Melainabacteria (Cyanobacteria) in Human Gut: Characteristics and Association with Health. <i>Life</i> , 2022, 12, 476.	1.1	22
1444	Bulk and grain-scale minor sulfur isotope data reveal complexities in the dynamics of Earth's oxygenation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2025606119.	3.3	17
1445	Microbial Diversity and Sulfur Cycling in an Early Earth Analogue: From Ancient Novelty to Modern Commonality. <i>MBio</i> , 2022, 13, e0001622.	1.8	15
1446	Phylotranscriptomic insights into a Mesoproterozoic–Neoproterozoic origin and early radiation of green seaweeds (Ulvophyceae). <i>Nature Communications</i> , 2022, 13, 1610.	5.8	21
1447	Patos Lagoon estuary and adjacent marine coastal biodiversity long-term data. <i>Earth System Science Data</i> , 2022, 14, 1015-1041.	3.7	8
1448	Sulfate-limited euxinic seawater facilitated Paleozoic massively bedded barite deposition. <i>Earth and Planetary Science Letters</i> , 2022, 582, 117419.	1.8	5
1449	Middle Jurassic - Early Cretaceous drastic paleoenvironmental changes in the Ordos Basin: Constraints on sandstone-type uranium mineralization. <i>Ore Geology Reviews</i> , 2022, 142, 104652.	1.1	4
1450	Long-term evolution of terrestrial weathering and its link to Earth's oxygenation. <i>Earth and Planetary Science Letters</i> , 2022, 584, 117490.	1.8	17
1451	The transcriptional regulator RbcR controls ribulose-1,5-bisphosphate carboxylase/oxygenase (RuBisCO) genes in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803. <i>New Phytologist</i> , 2022, 235, 432-445.	3.5	7
1453	Chromium isotope evidence for oxygenation events in the Ediacaran ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 323, 258-275.	1.6	8
1454	From manganese oxidation to water oxidation: assembly and evolution of the water-splitting complex in photosystem II. <i>Photosynthesis Research</i> , 2022, 152, 107-133.	1.6	22
1455	Abiotic anoxic iron oxidation, formation of Archean banded iron formations, and the oxidation of early Earth. <i>Earth and Planetary Science Letters</i> , 2022, 584, 117469.	1.8	14
1456	Early Archean biogeochemical iron cycling and nutrient availability: New insights from a 3.5 Ga land-sea transition. <i>Earth-Science Reviews</i> , 2022, 228, 103992.	4.0	12
1457	Cyanobacteria in hot pursuit: Characterization of cyanobacteria strains, including novel taxa, isolated from geothermal habitats from different ecoregions of the world. <i>Molecular Phylogenetics and Evolution</i> , 2022, 170, 107454.	1.2	10
1458	Mineral paragenesis in Paleozoic manganese ore deposits: Depositional versus post-depositional formation processes. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 325, 65-86.	1.6	8

#	ARTICLE	IF	CITATIONS
1459	Trace element and isotope (C, S, Sr, Nd, Fe) geochemistry constraints on the sedimentary environment of the early Neoproterozoic Shilu BIF and associated dolostones, South China. <i>Precambrian Research</i> , 2022, 372, 106610.	1.2	7
1460	Climate/ocean dynamics and possible atmospheric mercury depletion events during the Late Sturtian deglaciation. <i>Chemical Geology</i> , 2022, 598, 120830.	1.4	4
1461	Early Mesoproterozoic Ca-carbonate precipitates record fluctuations in shallow marine oxygenation. <i>Precambrian Research</i> , 2022, 373, 106630.	1.2	6
1462	Temporal variation of planetary iron as a driver of evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	24
1463	The role of the solid earth in regulating atmospheric O <sub>2</sub> levels. <i>Numerische Mathematik</i> , 2021, 321, 1381-1444.	0.7	5
1464	A Minimized Synthetic Carbon Fixation Cycle. <i>ACS Catalysis</i> , 2022, 12, 799-808.	5.5	33
1465	Decreasing extents of Archean serpentinization contributed to the rise of an oxidized atmosphere. <i>Nature Communications</i> , 2021, 12, 7341.	5.8	7
1466	Nitrogen Isotope Discrepancy Between Primary Producers and Sediments in an Anoxic and Alkaline Lake. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	3
1467	Hydrogen Peroxide in Ecological and Environmental Chemistry. <i>Chemistry Journal of Moldova</i> , 2021, 16, 28-45.	0.3	3
1468	Microbial processes during deposition and diagenesis of Banded Iron Formations. <i>Palaontologische Zeitschrift</i> , 2021, 95, 593-610.	0.8	9
1470	Triple oxygen isotope constraints on atmospheric O <sub>2</sub> and biological productivity during the mid-Proterozoic. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	9
1471	Atmospheric Pressure and Snowball Earth Deglaciation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, .	1.2	1
1472	Mineral Hydrogel from Inorganic Salts: Biocompatible Synthesis, All-in-One Charge Storage, and Possible Implications in the Origin of Life. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	14
1473	The expanding network of mineral chemistry throughout earth history reveals global shifts in crustal chemistry during the Proterozoic. <i>Scientific Reports</i> , 2022, 12, 4956.	1.6	4
1474	â...fââ®™æ— ©æœÿâSæ°SâCE—ä°â»¶çš,,æ^â»æœ°â^¶ä,Žæ°"ä€™ç"ÿæœæ^â°". <i>SCIENTIA SINICA Terrae</i> , 2022, , .	0.1	1
1475	Mercury isotopes in sedimentary rocks as a paleoenvironmental proxy. <i>Chinese Science Bulletin</i> , 2023, 68, 628-643.	0.4	1
1476	Mars as a time machine to Precambrian Earth. <i>Journal of the Geological Society</i> , 2022, 179, .	0.9	1
1477	A hundred spotlights on microbiology: how microorganisms shape our lives. <i>Microbial Cell</i> , 2022, 9, 72-79.	1.4	2

#	ARTICLE	IF	CITATIONS
1478	The Interdisciplinary Entanglement of Characterization and Explanation. <i>British Journal for the Philosophy of Science</i> , 0, , .	1.4	1
1479	Large igneous provinces track fluctuations in subaerial exposure of continents across the <scp>Archeanâ€“Proterozoic</scp> transition. <i>Terra Nova</i> , 2022, 34, 323-329.	0.9	11
1480	Bio-inspired hydrogels with fibrous structure: A review on design and biomedical applications. , 2022, 136, 212799.		17
1481	The Origin of Earth's Mantle Nitrogen: Primordial or Early Biogeochemical Cycling?. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	3
1482	Ancient roots of tungsten in western North America. <i>Geology</i> , 2022, 50, 791-795.	2.0	9
1483	Geochronology and geochemistry of 2.3ÂGa mafic intrusions in the Dengfeng area: Evidence for early Paleoproterozoic subduction in the southern North China Craton. <i>Precambrian Research</i> , 2022, 375, 106668.	1.2	3
1484	The Neoproterozoic, a turning point for geodynamic and magmatic processes within the Superior craton?. , 2022, , .		1
1506	Eukaryogenesis and oxygen in Earth history. <i>Nature Ecology and Evolution</i> , 2022, 6, 520-532.	3.4	48
1507	Destabilization of deep oxidized mantle drove the Great Oxidation Event. <i>Science Advances</i> , 2022, 8, eabg1626.	4.7	5
1508	Power of Place: Intravascular Superoxide Dismutase for Prevention of Acute Respiratory Distress Syndrome. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2017, 56, 147-149.	1.4	3
1509	Constraining the Ediacaran oceanic dissolved organic carbon reservoir: Insights from carbon isotopic records from a drill core from South China. , 2022, 52, 5.		0
1510	Chemical Constraints for Transition Metal Cation Allocation. <i>Advances in Environmental Microbiology</i> , 2022, , 21-52.	0.1	1
1511	Shale Heavy Metal Isotope Records of Low Environmental O <sub>2</sub> Between Two Archean Oxidation Events. <i>Frontiers in Earth Science</i> , 2022, 10, .	0.8	4
1514	Resurrected Rubisco suggests uniform carbon isotope signatures over geologic time. <i>Cell Reports</i> , 2022, 39, 110726.	2.9	18
1515	Engineering artificial photosynthetic life-forms through endosymbiosis. <i>Nature Communications</i> , 2022, 13, 2254.	5.8	11
1516	Sedimentary Hydrodynamic Processes Under Low-Oxygen Conditions: Implications for Past, Present, and Future Oceans. <i>Frontiers in Earth Science</i> , 2022, 10, .	0.8	3
1517	Carbon in Mineralised Plutons. <i>Geosciences (Switzerland)</i> , 2022, 12, 202.	1.0	1
1518	Vanadium isotope fractionation during hydrothermal sedimentation: Implications for the vanadium cycle in the oceans. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 328, 168-184.	1.6	10

#	ARTICLE	IF	CITATIONS
1519	Earliest Photic Zone Niches Probed by Ancestral Microbial Rhodopsins. <i>Molecular Biology and Evolution</i> , 2022, 39, .	3.5	5
1520	Photochemical Runaway in Exoplanet Atmospheres: Implications for Biosignatures. <i>Astrophysical Journal</i> , 2022, 930, 131.	1.6	11
1521	High precision noble gas measurements of hydrothermal quartz reveal variable loss rate of Xe from the Archean atmosphere. <i>Earth and Planetary Science Letters</i> , 2022, 588, 117577.	1.8	4
1522	Global Hg cycle over Ediacaran–Cambrian transition and its implications for environmental and biological evolution. <i>Earth and Planetary Science Letters</i> , 2022, 587, 117551.	1.8	11
1523	Constraining the redox landscape of Mesoproterozoic mat grounds: A possible oxygen oasis in the “Boring Billion” seafloor. <i>Precambrian Research</i> , 2022, 376, 106681.	1.2	1
1524	“Fit for surgery”: the relationship between cardiorespiratory fitness and postoperative outcomes. <i>Experimental Physiology</i> , 2022, 107, 787-799.	0.9	14
1525	On carbon burial and net primary production through Earth's history. <i>Numerische Mathematik</i> , 2022, 322, 413-460.	0.7	8
1526	The Effect of Ocean Salinity on Climate and Its Implications for Earth's Habitability. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	9
1527	Searching for Life, Mindful of Life's Possibilities. <i>Life</i> , 2022, 12, 783.	1.1	8
1528	Characterization of Formation of Ferrous and Ferric Oxides in Aqueous Solution from a Multidisciplinary Viewpoint. <i>ISIJ International</i> , 2022, 62, 800-810.	0.6	5
1529	Pulses of atmosphere oxygenation during the Cambrian radiation of animals. <i>Earth and Planetary Science Letters</i> , 2022, 590, 117565.	1.8	4
1530	Mantle plume-triggered rifting closely following Neoproterozoic cratonization revealed by 2.50–2.20 Ga magmatism across North China Craton. <i>Earth-Science Reviews</i> , 2022, 230, 104060.	4.0	16
1531	Characteristics of the carbon cycle in late Mesoproterozoic: Evidence from carbon isotope composition of paired carbonate and organic matter of the Shennongjia Group in South China. <i>Precambrian Research</i> , 2022, 377, 106726.	1.2	5
1532	Decoupled oxygenation of the Ediacaran ocean and atmosphere during the rise of early animals. <i>Earth and Planetary Science Letters</i> , 2022, 591, 117619.	1.8	17
1533	Terrestrial records of weathering indicate three billion years of dynamic equilibrium. <i>Gondwana Research</i> , 2022, 109, 376-393.	3.0	5
1535	Microbial Fe cycling in a simulated Precambrian ocean environment: Implications for secondary mineral (trans)formation and deposition during BIF genesis. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 331, 165-191.	1.6	8
1536	Evolutionary Adaptations of Parasitic Flatworms to Different Oxygen Tensions. <i>Antioxidants</i> , 2022, 11, 1102.	2.2	5
1537	Cadmium isotopes in Late Ediacaran–Early Cambrian Yangtze Platform carbonates – Reconstruction of bioproductivity in ambient surface seawater. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2022, 601, 111096.	1.0	7

#	ARTICLE	IF	CITATIONS
1538	Magnetotactic bacteria and magnetofossils: ecology, evolution and environmental implications. <i>Npj Biofilms and Microbiomes</i> , 2022, 8, .	2.9	20
1539	Constraints on Early Paleozoic deep-ocean oxygen concentrations from the iron geochemistry of the Bay of Islands ophiolite. <i>Geochemistry, Geophysics, Geosystems</i> , 0, .	1.0	0
1540	Oxygen reduction reaction in nature and its importance in life. , 2022, , 1-43.		1
1542	Bacterial, Phytoplankton, and Viral Distributions and Their Biogeochemical Contexts in Meromictic Lake Cadagno Offer Insights into the Proterozoic Ocean Microbial Loop. <i>MBio</i> , 2022, 13, .	1.8	8
1543	Moderately High Obliquity Promotes Biospheric Oxygenation. <i>Planetary Science Journal</i> , 2022, 3, 132.	1.5	4
1544	Diagenetic nutrient supplies to the Proterozoic biosphere archived in divergent nitrogen isotopic ratios between kerogen and silicate minerals. <i>Geobiology</i> , 2022, 20, 623-633.	1.1	3
1545	Potential impacts of titanium dioxide nanoparticles on trace metal speciation in estuarine sediments. <i>Science of the Total Environment</i> , 2022, 843, 156984.	3.9	1
1546	Whole-rock geochemistry and zircon O-Hf isotope compositions of ca. 2.35 Ga strongly peraluminous granites: Implications for increase in zircon $\delta^{18}O$ values during the Paleoproterozoic. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 332, 186-202.	1.6	6
1547	Conquering Space with Crops That Produce Ample Oxygen and Antioxidants. <i>Oxygen</i> , 2022, 2, 211-226.	1.6	9
1548	A one-million-year isotope record from siderites formed in modern ferruginous sediments. <i>Bulletin of the Geological Society of America</i> , 2023, 135, 504-522.	1.6	2
1549	Mo isotope composition of the 0.85 Ga ocean from coupled carbonate and shale archives: Some implications for pre-Cryogenian oxygenation. <i>Precambrian Research</i> , 2022, 378, 106760.	1.2	3
1550	The Earth's atmosphere "A stable isotope perspective and review. <i>Applied Geochemistry</i> , 2022, 143, 105355.	1.4	6
1551	Did high temperature rather than low O <sub>2</sub> hinder the evolution of eukaryotes in the Precambrian?. <i>Precambrian Research</i> , 2022, 378, 106755.	1.2	4
1552	Palaeo-environmental evolution and organic matter enrichment of Eopalaeozoic shales, northwestern Tarim Basin, China: Integrated organic and inorganic geochemistry approach. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2022, 601, 111123.	1.0	5
1553	Ferruginous biofilm preservation of Ediacaran fossils. <i>Gondwana Research</i> , 2022, 110, 73-89.	3.0	1
1554	Temporal and spatial distribution of Precambrian red beds and their formation mechanisms. <i>Geosystems and Geoenvironment</i> , 2022, 1, 100098.	1.7	6
1556	Adaptation of cyanobacterial photosynthesis to metal constraints. , 2022, , 109-128.		0
1558	Mechanisms and climatic-ecological effects of the Great Oxidation Event in the early Proterozoic. <i>Science China Earth Sciences</i> , 2022, 65, 1646-1672.	2.3	6

#	ARTICLE	IF	CITATIONS
1559	Geodynamic and Isotopic Constraints on the Genesis of Kimberlites, Lamproites and Related Magmas From the Finnish Segment of the Karelian Craton. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	4
1560	Mesoproterozoic oxygenation event: From shallow marine to atmosphere. <i>Bulletin of the Geological Society of America</i> , 2023, 135, 753-766.	1.6	12
1561	Anoxic photochemical weathering of pyrite on Archean continents. <i>Science Advances</i> , 2022, 8, .	4.7	6
1562	Editorial: Refining the Interpretation of Nitrogen Isotopes in Deep Time Systems. <i>Frontiers in Earth Science</i> , 0, 10, .	0.8	1
1563	Large Interferometer For Exoplanets (LIFE). <i>Astronomy and Astrophysics</i> , 2022, 665, A106.	2.1	16
1565	Inferred ancestry of scytonemin biosynthesis proteins in cyanobacteria indicates a response to Paleoproterozoic oxygenation. <i>Geobiology</i> , 2022, 20, 764-775.	1.1	2
1566	A critical review of mineral-microbe interaction and co-evolution: mechanisms and applications. <i>National Science Review</i> , 2022, 9, .	4.6	86
1567	Composition and evolution of the continental crust: Retrospect and prospect. <i>Geoscience Frontiers</i> , 2022, 13, 101428.	4.3	5
1568	Effects of sulfate reduction processes on the trace element geochemistry of sedimentary pyrite in modern seep environments. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 333, 75-94.	1.6	12
1569	The biogeochemical origin of sewage gases and control of their generation. <i>Journal of Hazardous Materials Advances</i> , 2022, 7, 100124.	1.2	0
1570	New Material of Carbonaceous Compressions from the $\sim 1.5$ Ga Singhora Group, Chhattisgarh Supergroup, India, and their Interpretation as Benthic Algae. <i>Frontiers in Earth Science</i> , 0, 10, .	0.8	0
1571	Beyond anoxia: Exploring sedimentary thallium isotopes in paleo-redox reconstructions from a new core top collection. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 333, 347-361.	1.6	9
1572	Melatonin-related signaling pathways and their regulatory effects in aging organisms. <i>Biogerontology</i> , 2022, 23, 529-539.	2.0	11
1573	Biogeodynamics: Coupled evolution of the biosphere, atmosphere, and lithosphere. <i>Geology</i> , 2022, 50, 867-868.	2.0	2
1574	Moderate levels of oxygenation during the late stage of Earth's Great Oxidation Event. <i>Earth and Planetary Science Letters</i> , 2022, 594, 117716.	1.8	8
1575	What are inorganic nanozymes? Artificial or inorganic enzymes. <i>New Journal of Chemistry</i> , 2022, 46, 15273-15291.	1.4	4
1576	Post-translational amino acid conversion in photosystem II as a possible origin of photosynthetic oxygen evolution. <i>Nature Communications</i> , 2022, 13, .	5.8	8
1577	Oxidative Stress Response in Bacteria: A Review. <i>Fine Focus</i> , 2022, 8, 36-46.	0.2	2

#	ARTICLE	IF	CITATIONS
1578	Investigating Influences on the Pb Pseudo-Isochron Using Three-Dimensional Mantle Convection Models With a Continental Reservoir. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	2
1579	Enhanced Weathering Triggered the Transient Oxygenation Event at $\sim 1.57$ Ga. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	13
1581	A scenario for the origin of life: Volume regulation by bacteriorhodopsin required extremely voltage sensitive Na <sup>+</sup> channels and very selective K <sup>+</sup> channels. <i>BioEssays</i> , 2022, 44, .	1.2	3
1582	Phylogenomic Evidence for the Origin of Obligate Anaerobic Anammox Bacteria Around the Great Oxidation Event. <i>Molecular Biology and Evolution</i> , 2022, 39, .	3.5	7
1583	Ecological Bodies and Relational Anatomies: Toward a Transversal Foundation for Planetary Health Education. <i>Challenges</i> , 2022, 13, 39.	0.9	5
1584	Low oxygen levels with high redox heterogeneity in the late Ediacaran shallow ocean: Constraints from I/(Ca+Mg) and Ce/Ce* of the Dengying Formation, South China. <i>Geobiology</i> , 0, .	1.1	3
1586	Interaction of Shibantan Biota and environment in the terminal Ediacaran ocean: Evidence from I/(Ca+Mg) and sulfur isotopes. <i>Precambrian Research</i> , 2022, 379, 106814.	1.2	6
1587	Shallow-ocean and atmospheric redox signatures preserved in the ca. 1.88 Ga Sokoman iron formation, Labrador Trough, Canada. <i>Precambrian Research</i> , 2022, 379, 106750.	1.2	0
1588	Formation of the massive bedded chert and coupled Silicon and Iron cycles during the Ediacaran-Cambrian transition. <i>Earth and Planetary Science Letters</i> , 2022, 594, 117721.	1.8	4
1589	Redbed formation in the redox-stratified mid-Proterozoic ocean. <i>Precambrian Research</i> , 2022, 379, 106815.	1.2	1
1590	What triggered the Late Ordovician mass extinction (LOME)? Perspectives from geobiology and biogeochemical modeling. <i>Global and Planetary Change</i> , 2022, 216, 103917.	1.6	7
1591	Mineralogical and geochemical characteristics of the Mesoproterozoic sedimentary rocks in Rwanda and their implication for hydrocarbon investigation. <i>Journal of African Earth Sciences</i> , 2022, 196, 104669.	0.9	0
1592	Global tectonics and oxygenation events drove the Earth-scale phosphorus cycle. <i>Earth-Science Reviews</i> , 2022, 233, 104166.	4.0	5
1593	Paleoenvironmental redox evolution of Ediacaran-Cambrian restricted seas in the core of West Gondwana: Insights from trace-metal geochemistry and stratigraphy of the Bambuí-Group, east Brazil. <i>Journal of South American Earth Sciences</i> , 2022, 119, 103998.	0.6	3
1594	Experimental Induction of Heterotrophic to Autotrophic Conversion, Realized by the Enforced Primary Endosymbiosis of Photosynthetic Bacteria onto Eukaryotic Amoebae. <i>Natural Science</i> , 2022, 14, 364-385.	0.2	0
1595	Impacts of Low Oxygen on Marine Life: Neglected, but a Crucial Priority for Research. <i>Biological Bulletin</i> , 2022, 243, 104-119.	0.7	15
1596	The origin and early evolution of complex organisms. <i>Chinese Science Bulletin</i> , 2023, 68, 169-187.	0.4	1
1597	Reduced Nucleotides, Thiols and O <sub>2</sub> in Cellular Redox Balance: A Biochemist's View. <i>Antioxidants</i> , 2022, 11, 1877.	2.2	2



#	ARTICLE	IF	CITATIONS
1598	Redox species and oxygen fugacity of slab-derived fluids: Implications for mantle oxidation and deep carbon-sulfur cycling. <i>Frontiers in Earth Science</i> , 0, 10, .	0.8	3
1599	The colonization of land was a likely driving force for the evolution of mitochondrial retrograde signalling in plants. <i>Journal of Experimental Botany</i> , 2022, 73, 7182-7197.	2.4	2
1600	Cerium anomaly as a tracer for paleo-oceanic redox conditions: A thermodynamics-based Ce oxidation modeling approach. <i>Frontiers in Earth Science</i> , 0, 10, .	0.8	5
1601	Clay mineralogy and provenance modeling of the Paleoproterozoic Kaladgi shales, Dharwar Craton, Southern India: Implications on paleoweathering and source rock compositions. <i>Geosystems and Geoenvironment</i> , 2023, 2, 100133.	1.7	1
1602	Breathless through Time: Oxygen and Animals across Earth's History. <i>Biological Bulletin</i> , 2022, 243, 184-206.	0.7	9
1603	Removal of contamination in helium for precise $\delta^{36}\text{S}$ measurements. <i>Rapid Communications in Mass Spectrometry</i> , 2022, 36, .	0.7	4
1604	Zircon U-Pb geochronology of manganese-rich rocks from the Borborema Province, Northeast Brazil: adding a new piece to the global inventory of Paleoproterozoic manganese mineralization. <i>Mineralium Deposita</i> , 0, , .	1.7	0
1605	Mesoproterozoic surface oxygenation accompanied major sedimentary manganese deposition at 1.4 and 1.1AGa. <i>Geobiology</i> , 2023, 21, 28-43.	1.1	5
1606	Investigating the behavior of mid-Archean tides and potential implications for biogeochemical cycling. <i>Precambrian Research</i> , 2022, 380, 106799.	1.2	3
1607	Stromatolite formation by Anaerolineae-dominated microbial communities in hot spring travertine in North Sumatra, Indonesia. <i>Sedimentary Geology</i> , 2022, 440, 106263.	1.0	2
1608	A geochemical and mineral chemical assessment of sediment provenance and post-depositional alteration of auriferous conglomerates in the Singhbhum Craton. <i>Journal of Geochemical Exploration</i> , 2022, 243, 107095.	1.5	1
1609	Redox evolution of crystallizing magmas with C-H-O-S volatiles and its implications for atmospheric oxygenation. <i>Geochimica Et Cosmochimica Acta</i> , 2022, 338, 302-321.	1.6	6
1610	Reconstructing Earth's atmospheric oxygenation history using machine learning. <i>Nature Communications</i> , 2022, 13, .	5.8	19
1611	A stable and moderate nitrate pool in largely anoxic Mesoproterozoic oceans and implications for eukaryote evolution. <i>Precambrian Research</i> , 2022, 381, 106868.	1.2	6
1612	How an assembly factor enhances covalent FAD attachment to the flavoprotein subunit of complex II. <i>Journal of Biological Chemistry</i> , 2022, 298, 102472.	1.6	4
1613	The Long-Term Evolution of the Atmosphere of Venus: Processes and Feedback Mechanisms. <i>Space Science Reviews</i> , 2022, 218, .	3.7	20
1614	Legitimacy and limitations of valuing the oxygen production of ecosystems. <i>Ecosystem Services</i> , 2022, 58, 101485.	2.3	4
1615	Introduction and Historical Background. , 2022, , 1-33.		0

#	ARTICLE	IF	CITATIONS
1616	A tectonic context for fluctuations in late Paleoproterozoic oxygen content. , 2022, , .		1
1617	Mediterraneanâ€“Black Sea gateway exchange: scientific drilling workshop on the BlackGate project. Scientific Drilling, 0, 31, 93-110.	1.0	2
1618	A genetically encoded system for oxygen generation in living cells. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	3
1619	Iodine incorporation into dolomite: Experimental constraints and implications for the iodine redox proxy and Proterozoic Ocean. Geochimica Et Cosmochimica Acta, 2022, 338, 365-381.	1.6	6
1620	Nitrogen Isotopes from the Neoproterozoic Liulaobei Formation, North China: Implications for Nitrogen Cycling and Eukaryotic Evolution. Journal of Earth Science (Wuhan, China), 2022, 33, 1309-1319.	1.1	2
1621	The origin and distribution of the main oxygen sensing mechanism across metazoans. Frontiers in Physiology, 0, 13, .	1.3	1
1622	Extreme variability in atmospheric oxygen levels in the late Precambrian. Science Advances, 2022, 8, .	4.7	14
1623	Chimeric inheritance and crown-group acquisitions of carbon fixation genes within Chlorobiales: Origins of autotrophy in Chlorobiales and implication for geological biomarkers. PLoS ONE, 2022, 17, e0275539.	1.1	2
1624	CANOPS-GRB v1.0: a new Earth system model for simulating the evolution of oceanâ€“atmosphere chemistry over geologic timescales. Geoscientific Model Development, 2022, 15, 7593-7639.	1.3	4
1625	Declining metal availability in the Mesozoic seawater reflected in phytoplankton succession. Nature Geoscience, 2022, 15, 932-941.	5.4	5
1626	Dynamics of the Great Oxidation Event from a 3D photochemicalâ€“climate model. Climate of the Past, 2022, 18, 2421-2447.	1.3	6
1627	Coexisting divergent and convergent plate boundary assemblages indicate plate tectonics in the Neoproterozoic. Nature Communications, 2022, 13, .	5.8	18
1628	The ghosts of ecosystem engineers: Legacy effects of biogenic modifications. Functional Ecology, 2024, 38, 52-72.	1.7	4
1629	Major, trace element, and Nd isotopic compositions of banded iron formation and shales from the Sirsi shelf, Dharwar Craton, India: Implications for paleo-seawater chemistry, post-depositional alteration, and provenance. Precambrian Research, 2022, 382, 106882.	1.2	0
1630	Cadmium isotope systematics in sedimentary carbonate: Extending the utility of the cadmium isotope palaeo-productivity proxy. Geochimica Et Cosmochimica Acta, 2022, 339, 80-96.	1.6	3
1631	Comparative analyses and molecular videography of MD simulations on WT human SOD1. Computational and Theoretical Chemistry, 2022, 1217, 113929.	1.1	0
1632	Extant mat microbes synchronize vertical migration to a diel tempo. Journal of Great Lakes Research, 2022, , .	0.8	3
1633	Microfabrics and organominerals as indicator of microbial dolomite in deep time: An example from the Mesoproterozoic of North China. Precambrian Research, 2022, 382, 106881.	1.2	3

#	ARTICLE	IF	CITATIONS
1634	Trace elements and stable isotopic geochemistry of two sedimentary sections in the lower Cambrian strata from the Tarim Basin, northwest China: Implications for silicification and biological evolution. <i>Marine and Petroleum Geology</i> , 2023, 147, 105991.	1.5	1
1635	Solar System/Exoplanet Science Synergies in a multidecadal perspective. , 2023, , 17-64.		0
1636	A naturalist perspective of microbiology: Examples from methanogenic archaea. <i>Environmental Microbiology</i> , 2023, 25, 184-198.	1.8	3
1638	Microscopic and geochemical analyses of the Tonian Longfengshan biota from the Luotuoling Formation (Hebei Province, North China) with taphonomic implications. <i>Precambrian Research</i> , 2022, 382, 106899.	1.2	4
1640	Mesoarchean banded iron-formation from the northern Yangtze Craton, South China and its geological and paleoenvironmental implications. <i>Precambrian Research</i> , 2022, 383, 106905.	1.2	2
1641	Radical change in tectonic regime and paleo-environment at the end of Neoproterozoic evidenced by a unique metal co-existing deposit. <i>Science Bulletin</i> , 2022, 67, 2438-2448.	4.3	1
1642	Paleomagnetism of the Ediacaran Avellaneda Formation (Argentina), part I: Paleogeography of the Río de la Plata craton at the dawn of Gondwana. <i>Precambrian Research</i> , 2022, 383, 106909.	1.2	6
1643	Neoproterozoic Stratigraphy, Depositional Environments and Hydrocarbon Source-Reservoir-Seal Bed Assemblage in South China. <i>Springer Geology</i> , 2022, , 181-227.	0.2	5
1644	«ä»€ä¹`è;†ç`ä;fäâ»†ää...fää»£äšæ°säCE-ä°ä»¶¼Ÿ. <i>Diqiu Kexue - Zhongguo Dizhi Daxue Xuebao/Earth Science - Journal of China University of Geosciences</i> , 2022, 47, 3842.	0.1	0
1645	Geochemical Indicators in Provenance Estimation. , 2022, , 95-121.		5
1646	Chromium isotope fractionation during adsorption of chromium(III) by soils and river sediments. , 2022, 52, 1.		0
1647	Photorespiration â€œ Rubisco's repair crew. <i>Journal of Plant Physiology</i> , 2023, 280, 153899.	1.6	12
1648	The nitrate-limited freshwater environment of the late Paleoproterozoic Embury Lake Formation, Flin Flon belt, Canada. <i>Chemical Geology</i> , 2023, 616, 121234.	1.4	2
1649	Microbial sulphur-cycling and atmospheric signatures in the 2.52 Ga Gamohaan Formation, South Africa. <i>Earth and Planetary Science Letters</i> , 2023, 602, 117941.	1.8	1
1650	Petrogenesis of the ca. 2.32 Ga low- $\delta^{18}O$ gabbroic diorites and granites in the Xiaoshan area, southern North China Craton: Implications for the early Paleoproterozoic tectonic evolution. <i>Precambrian Research</i> , 2023, 384, 106924.	1.2	1
1651	The paleoenvironmental implications of pre-Great Oxidation Event manganese deposition in the Mesoarchean Ijzermijn Iron Formation Bed, Mozaan Group, Pongola Supergroup, South Africa. <i>Precambrian Research</i> , 2023, 384, 106922.	1.2	6
1652	A DOM regulation model for dolomite versus calcite precipitation in the Ediacaran ocean: Implications for the â€œdolomite problemâ€œ. <i>Precambrian Research</i> , 2023, 385, 106947.	1.2	5
1653	Proterozoic basins of the Bundelkhand Craton, India: Correlations and significance in understanding the tectonic evolution. <i>Geosystems and Geoenvironment</i> , 2023, 2, 100155.	1.7	5

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1654	æ—©æœÿçœÿæ,ç”ÿç%©åšæ·æ€\$æ¼”åCE—çš,,é™å^¶æ€\$çŽ”âçfâç´æ”ä»€ä¹¼ÿ. Diqiu Kexue - Zhongguo Dizhi Daxue Xuebao/Earth Geosciences, 2022, 47, 3856.	0.1	0
1655	æ^â†°ç³â—âŽç,†åœ°æµ·æ°°æ°SåCE—èj~åŽÿæ€\$è”çš,,é”ç”³å°šåCE¼½ç´é™å°š. Chinese Science Bulletin, 2022, , .	0.4	0
1656	Rubisco, the imperfect winner: itâ€™s all about the base. Journal of Experimental Botany, 2023, 74, 562-580.	2.4	5
1657	Can genomics tools assist in gaining insights from the aquatic angiosperms to transform crop plants with multiple carbon concentrating mechanisms to adapt and yield better in challenging environment?. Plant Physiology Reports, 2022, 27, 580-589.	0.7	1
1658	Reduced Marine Molybdenum Inventory Related to Enhanced Organic Carbon Burial and an Expansion of Reducing Environments in the Toarcian (Early Jurassic) Oceans. AGU Advances, 2022, 3, .	2.3	0
1659	Chromium isotopes track redox fluctuations in Proterozoic successions of the Chapada Diamantina, SÃ£o Francisco craton, Brazil. Geology, 2023, 51, 69-74.	2.0	1
1660	Passive margins in accreting Archaean archipelagos signal continental stability promoting early atmospheric oxygen rise. Nature Communications, 2022, 13, .	5.8	14
1661	Can prebiotic systems survive in the wild? An interference chemistry approach. Frontiers in Earth Science, 0, 10, .	0.8	5
1662	Generation and Physiology of Hydrogen Sulfide and Reactive Sulfur Species in Bacteria. Antioxidants, 2022, 11, 2487.	2.2	7
1663	A sedimentary record of the evolution of the global marine phosphorus cycle. Geobiology, 2023, 21, 168-174.	1.1	9
1664	Petrography and geochemistry of the iron-rich rocks in the banded iron formation of the Chilpi Group, Central India: Implications on the level of oxygen in the Paleoproterozoic atmosphere before the â€œProterozoic iron ore gapâ€•. Chemie Der Erde, 2023, 83, 125943.	0.8	3
1665	Extreme climate changes influenced early life evolution atÂˆ¼1.4ÂˆGa: Implications from shales of the Xiamaling Formation, northern North China Craton. Precambrian Research, 2022, 383, 106901.	1.2	4
1666	Water oxidation in oxygenic photosynthesis studied by magnetic resonance techniques. FEBS Letters, 2023, 597, 6-29.	1.3	9
1667	Emerging Trends of Nanotechnology and Genetic Engineering in Cyanobacteria to Optimize Production for Future Applications. Life, 2022, 12, 2013.	1.1	7
1668	Genomic Legacies of Ancient Adaptation Illuminate GC-Content Evolution in Bacteria. Microbiology Spectrum, 2023, 11, .	1.2	7
1669	Natural Radioactivity and Chemical Evolution on the Early Earth: Prebiotic Chemistry and Oxygenation. Molecules, 2022, 27, 8584.	1.7	4
1670	The unaccounted dissolved iron (II) sink: Insights from dFe(II) concentrations in the deep Atlantic Ocean. Science of the Total Environment, 2023, 862, 161179.	3.9	4
1671	Secular Evolution of Continents and the Earth System. Reviews of Geophysics, 2022, 60, .	9.0	40

#	ARTICLE	IF	CITATIONS
1672	Archean to early Paleoproterozoic iron formations document a transition in iron oxidation mechanisms. <i>Geochimica Et Cosmochimica Acta</i> , 2023, 343, 286-303.	1.6	9
1673	Multiple sulphur isotope record of Paleoproterozoic sedimentary rocks across the Onverwacht Group, Barberton Greenstone Belt, South Africa. <i>Geobiology</i> , 0, , .	1.1	0
1675	The cryoEM structure of cytochrome bd from <i>C. glutamicum</i> provides novel insights into structural properties of actinobacterial terminal oxidases. <i>Frontiers in Chemistry</i> , 0, 10, .	1.8	2
1676	Anatomy of rocky planets formed by rapid pebble accretion. <i>Astronomy and Astrophysics</i> , 2023, 671, A74.	2.1	8
1677	An overview of experimental simulations of microbial activity in early Earth. <i>Frontiers in Microbiology</i> , 0, 13, .	1.5	2
1678	Evolution of Atmospheric O <sub>2</sub> Through the Phanerozoic, Revisited. <i>Annual Review of Earth and Planetary Sciences</i> , 2023, 51, 253-276.	4.6	15
1679	Characterization and biofouling potential analysis of two cyanobacterial strains isolated from Cape Verde and Morocco. <i>FEMS Microbiology Ecology</i> , 2023, 99, .	1.3	2
1680	Reconciling discrepant minor sulfur isotope records of the Great Oxidation Event. <i>Nature Communications</i> , 2023, 14, .	5.8	5
1681	Effects of RuBisCO and CO <sub>2</sub> concentration on cyanobacterial growth and carbon isotope fractionation. <i>Geobiology</i> , 2023, 21, 390-403.	1.1	3
1682	Stromatolitic carbonates from the Middle Miocene of the western Pannonian Basin reflect trace metal availability in microbial habitats during the Badenian Salinity Crisis. <i>Chemical Geology</i> , 2023, 618, 121301.	1.4	4
1683	Environmental controls on very high $\delta^{238}\text{U}$ values in reducing sediments: Implications for Neoproterozoic seawater records. <i>Earth-Science Reviews</i> , 2023, 237, 104306.	4.0	7
1684	Dynamic seawater redox status in the early Mesoproterozoic: Evidence from trace elements and sulfur isotopic compositions of carbonate associated sulfate in multiple sections. <i>Precambrian Research</i> , 2023, 385, 106953.	1.2	1
1685	The influence of oxygen and electronegativity on iron mineral chemistry throughout Earth's history. <i>Precambrian Research</i> , 2023, 386, 106960.	1.2	6
1686	Assessment on Oxidative Stress in Animals: From Experimental Models to Animal Production. <i>Biochemistry</i> , 0, , .	0.8	1
1687	Hydrothermal Regeneration of Ammonium as a Basin-Scale Driver of Primary Productivity. <i>Astrobiology</i> , 2023, 23, 195-212.	1.5	2
1688	Postglacial adaptations enabled colonization and quasi-clonal dispersal of ammonia-oxidizing archaea in modern European large lakes. <i>Science Advances</i> , 2023, 9, .	4.7	12
1690	Digging Deeper: Bioturbation increases the preserved sulfur isotope fractionation. <i>Frontiers in Marine Science</i> , 0, 9, .	1.2	0
1691	Re-Os isotope system in organic-rich samples for dating and tracing: Methodology, principle, and application. <i>Earth-Science Reviews</i> , 2023, 238, 104317.	4.0	5

#	ARTICLE	IF	CITATIONS
1692	Geological timeline of significant events on Earth. , 2023, , 55-114.		1
1694	Terminal Ediacaran microbialite lithofacies associations with paleo-environmental constraints in a high-frequency sequence stratigraphic framework of Sichuan Basin, SW China. <i>Frontiers in Earth Science</i> , 0, 11, .	0.8	0
1695	Earth Systems to Anthropocene Systems: An Evolutionary, System-of-Systems, Convergence Paradigm for Interdependent Societal Challenges. <i>Environmental Science &amp; Technology</i> , 2023, 57, 5504-5520.	4.6	1
1696	Dominance of felsic continental crust on Earth after 3 billion years ago is recorded by vanadium isotopes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2023, 120, .	3.3	9
1698	Enigmatic evolution of microbial nitrogen fixation: insights from Earth's past. <i>Trends in Microbiology</i> , 2023, , .	3.5	7
1699	Potential of the worldwide-cultivated cyanobacterium <i>Arthrospira platensis</i> for CO2 mitigation: Impacts of photoperiod lengths and abiotic parameters on yield and efficiency. <i>Bioresource Technology Reports</i> , 2023, 22, 101439.	1.5	1
1700	Earth's surface oxygenation and the rise of eukaryotic life: Relationships to the Lomagundi positive carbon isotope excursion revisited. <i>Earth-Science Reviews</i> , 2023, 240, 104398.	4.0	2
1701	Multiple ocean oxygenation events during the Ediacaran Period: Mo isotope evidence from the Nanhua Basin, South China. <i>Precambrian Research</i> , 2023, 388, 107004.	1.2	0
1703	Precessional pacing of early Proterozoic redox cycles. <i>Earth and Planetary Science Letters</i> , 2023, 610, 118117.	1.8	2
1704	The Palaeoproterozoic Hotazel BIF-Mn Formation as an archive of Earth's earliest oxygenation. <i>Earth-Science Reviews</i> , 2023, 240, 104389.	4.0	1
1705	Delivering impactful solutions for the bioeconomy. <i>Trends in Plant Science</i> , 2023, 28, 583-596.	4.3	2
1706	Formation pathways of Precambrian sedimentary pyrite: Insights from in situ Fe isotopes. <i>Earth and Planetary Science Letters</i> , 2023, 609, 118070.	1.8	5
1707	Coupled vanadium and thallium isotope constraints on Mesoproterozoic ocean oxygenation around 1.38-1.39 Ga. <i>Earth and Planetary Science Letters</i> , 2023, 610, 118127.	1.8	8
1708	Cadmium isotope evidence deciphers enhanced marine productivity during the middle Mesoproterozoic (the Xiamaling formation, North China). <i>Precambrian Research</i> , 2023, 389, 107021.	1.2	1
1709	Redox-stratified seawater during the GOE: Evidences from rare earth elemental and C-O isotopic compositions of Paleoproterozoic BIF and carbonate rocks from the Taihua Group, North China Craton. <i>Ore Geology Reviews</i> , 2023, 157, 105424.	1.1	1
1710	From cyanobacteria to kerogen: A model of organic carbon burial. <i>Precambrian Research</i> , 2023, 390, 107035.	1.2	3
1711	Dichotomous effects of oxidative metabolisms: A theoretical perspective on the dolomite problem. <i>Global and Planetary Change</i> , 2023, 222, 104041.	1.6	1
1712	Copper and Zinc isotopes trace the evolution of the Ediacara-Early Cambrian paleo-ocean redox condition in the Tarim Basin, China. <i>Applied Geochemistry</i> , 2023, 150, 105588.	1.4	0

#	ARTICLE	IF	CITATIONS
1713	Geology and Geochemistry of the Jianshan Banded Iron Formation in Shanxi Province, China: Constraints on the Genesis. <i>Journal of Geology</i> , 2022, 130, 499-518.	0.7	1
1714	Oxidized mitochondrial DNA: a protective signal gone awry. <i>Trends in Immunology</i> , 2023, 44, 188-200.	2.9	11
1715	Oxygenic photosynthetic responses of cyanobacteria exposed under an M-dwarf starlight simulator: Implications for exoplanet habitability. <i>Frontiers in Plant Science</i> , 0, 14, .	1.7	4
1716	Rhyacian intermittent large igneous provinces sustained Great Oxidation Event: Evidence from North China craton. <i>Earth-Science Reviews</i> , 2023, 238, 104352.	4.0	5
1717	Microbe-mediated, marine authigenic formation of ooidal chamosite: Insights from upper Ordovician carbonates of the South-Western Yangtze platform (China). <i>Sedimentology</i> , 2023, 70, 1655-1678.	1.6	0
1718	Position of Algae on the Tree of Life. <i>Doklady Biological Sciences</i> , 2022, 507, 312-326.	0.2	1
1719	Petrogenesis and Geodynamic Significance of Xenolithic Eclogites. <i>Annual Review of Earth and Planetary Sciences</i> , 2023, 51, 521-549.	4.6	7
1720	“çfè;â±,ç³»ç»Ÿâ¹æ±éƒˆˆâ±,æ—Œç©æ¼”âŕçš,,â½±â“; <i>Chinese Science Bulletin</i> , 2023, , .	0.4	0
1721	Co-Evolution of Life and Plate Tectonics: The Biogeodynamic Perspective on the Mesoproterozoic-Neoproterozoic Transitions. , 2023, , 295-319.		1
1722	Nitrogenase resurrection and the evolution of a singular enzymatic mechanism. <i>ELife</i> , 0, 12, .	2.8	8
1723	Manganese carbonate-bearing mudstone of the Witwatersrand-Mozaan succession in southern Africa as evidence for bacterial manganese respiration and availability of free molecular oxygen in Mesoarchaeal oceans. <i>South African Journal of Geology</i> , 2023, 126, 29-48.	0.6	3
1724	Ediacaran-Cambrian bioturbation did not extensively oxygenate sediments in shallow marine ecosystems. <i>Geobiology</i> , 2023, 21, 435-453.	1.1	5
1725	Organic matter sulfurization and organic carbon burial in the Mesoproterozoic. <i>Geochimica Et Cosmochimica Acta</i> , 2023, 347, 102-115.	1.6	4
1726	Pyrite chemistry records a multistage ore forming system at the Proterozoic George Fisher massive sulfide Zn-Pb-Ag deposit, Mount Isa, Australia. <i>Frontiers in Earth Science</i> , 0, 11, .	0.8	2
1727	Toward the Origins of Quadruple Sulfur Isotope Anomalies in Modern Sulfate: A Multitracer Approach and Implications for Paleo- and Planetary Atmospheres. <i>ACS Earth and Space Chemistry</i> , 2023, 7, 800-811.	1.2	4
1728	Huge Variation in H <sub>2</sub> Generation During Seawater Alteration of Ultramafic Rocks. <i>Geochemistry, Geophysics, Geosystems</i> , 2023, 24, .	1.0	2
1729	Resolving the fate of trace metals during microbial remineralization of phytoplankton biomass in precursor banded iron formation sediments. <i>Earth and Planetary Science Letters</i> , 2023, 607, 118068.	1.8	1
1730	Systematic paleontology of macroalgal fossils from the Tonian Mackenzie Mountains Supergroup. <i>Journal of Paleontology</i> , 2023, 97, 499-515.	0.5	2



#	ARTICLE	IF	CITATIONS
1731	Chronic Ionizing Radiation of Plants: An Evolutionary Factor from Direct Damage to Non-Target Effects. <i>Plants</i> , 2023, 12, 1178.	1.6	11
1732	Oxygenation of the Earth aided by mineral-organic carbon preservation. <i>Nature Geoscience</i> , 2023, 16, 262-267.	5.4	11
1733	Oxygen toxicity causes cyclic damage by destabilizing specific Fe-S cluster-containing protein complexes. <i>Molecular Cell</i> , 2023, 83, 942-960.e9.	4.5	8
1734	Did nutrient-rich oceans fuel Earth's oxygenation?. <i>Geology</i> , 2023, 51, 444-448.	2.0	4
1735	Venus, phosphine and the possibility of life. <i>Contemporary Physics</i> , 2022, 63, 180-199.	0.8	2
1736	The Paleoproterozoic and Neoproterozoic Carbon Cycle Promoted the Evolution of a Habitable Earth. <i>Acta Geologica Sinica</i> , 2023, 97, 316-326.	0.8	1
1737	A mineral-based origin of Earth's initial hydrogen peroxide and molecular oxygen. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2023, 120, .	3.3	14
1738	Four billion years of microbial terpenome evolution. <i>FEMS Microbiology Reviews</i> , 2023, 47, .	3.9	7
1739	Biogeochemical transformations after the emergence of oxygenic photosynthesis and conditions for the first rise of atmospheric oxygen. <i>Geobiology</i> , 2023, 21, 537-555.	1.1	2
1740	Cold Plasma Based Wound Healing Application. <i>Topics in Applied Physics</i> , 2023, , 93-109.	0.4	0
1741	Structure, function, and evolution of the metal-binding domain in the nucleosome. <i>BioEssays</i> , 2023, 45, .	1.2	0
1742	Mitochondria-associated cellular senescence mechanisms: Biochemical and pharmacological perspectives. <i>Advances in Protein Chemistry and Structural Biology</i> , 2023, , .	1.0	2
1743	Mid-latitude habitable environment for marine eukaryotes during the waning stage of the Marinoan snowball glaciation. <i>Nature Communications</i> , 2023, 14, .	5.8	10
1744	Technical comment on "Reexamination of 2.5-Ga oxygen interval points to anoxic ocean before GOE". <i>Science Advances</i> , 2023, 9, .	4.7	2
1745	<scp>Cyanoseq</scp>: A <scp>database of cyanobacterial 16S rRNA gene sequences with curated taxonomy</scp>. <i>Journal of Phycology</i> , 2023, 59, 470-480.	1.0	11
1746	Redox-sensitive elements of Ediacaran black shales in South China with implications for a widespread anoxic ocean. <i>Journal of Asian Earth Sciences</i> , 2023, 251, 105670.	1.0	1
1747	Structural and tectonic analyses of the Chhotanagpur Gneiss Complex of the Eastern Satpura Orogen, India: Significance for a global model. <i>Geosystems and Geoenvironment</i> , 2023, 2, 100202.	1.7	1
1748	Origin of Banded Iron Formations: Links with Paleoclimate, Paleoenvironment, and Major Geological Processes. <i>Minerals (Basel, Switzerland)</i> , 2023, 13, 547.	0.8	1

#	ARTICLE	IF	CITATIONS
1749	Rational ignorance in the search for extra-terrestrial life. <i>New Astronomy Reviews</i> , 2023, 96, 101675.	5.2	0
1750	Phosphorus availability on the early Earth and the impacts of life. <i>Nature Geoscience</i> , 2023, 16, 399-409.	5.4	11
1751	Metal-rich stars are less suitable for the evolution of life on their planets. <i>Nature Communications</i> , 2023, 14, .	5.8	1
1752	Evolutionary stasis during the Mesoproterozoic Columbia-Rodinia supercontinent transition. <i>Precambrian Research</i> , 2023, 391, 107057.	1.2	2
1753	A re-classification of Precambrian cherts: implication on diagenetic origin of chert concretion, nodule and geode. <i>Journal of Sedimentary Environments</i> , 0, , .	0.7	0
1779	Oxygenated Wound Dressings for Hypoxia Mitigation and Enhanced Wound Healing. <i>Molecular Pharmaceutics</i> , 2023, 20, 3338-3355.	2.3	10
1783	Why algae?. , 2023, , 29-65.		0
1805	Functions in Chemistry. <i>History, Philosophy and Theory of the Life Sciences</i> , 2023, , 233-256.	0.4	0
1807	Biogeochemical Cycles. , 2023, , 364-372.		0
1808	Trace Metals. , 2023, , 3084-3088.		0
1809	Copper Isotopes. , 2023, , 668-671.		0
1834	Pre-Cryogenian stratigraphy, palaeontology, and paleogeography of the Tibetan Plateau and environs. <i>Science China Earth Sciences</i> , 0, , .	2.3	0
1838	The effect of iron on the preservation of organic carbon in marine sediments and its implications for carbon sequestration. <i>Science China Earth Sciences</i> , 2023, 66, 1946-1959.	2.3	0
1839	Function of the Avian Respiratory System. <i>Zoological Monographs</i> , 2023, , 269-374.	1.1	0
1854	Evolution of continental crust and sedimentary rock chemistry through time. , 2023, , .		0
1856	The metamorphic rock record through Earth's history. , 2023, , .		1
1863	Biogeochemical Cycles. , 2024, , 393-407.		1
1876	Hydrogen sulphide. , 0, , .		0

#	ARTICLE	IF	CITATIONS
1878	Prebiotic chemical origin of biomolecular complementarity. <i>Communications Chemistry</i> , 2023, 6, .	2.0	0
1917	The oxygen bottleneck for technospheres. <i>Nature Astronomy</i> , 0, , .	4.2	0
1921	Cyanobacterial interactions and symbiosis. , 2024, , 425-489.		2
1922	Nitric oxide synthases in cyanobacteria: an overview on their occurrence, structure, and function. , 2024, , 233-254.		0
1927	Cyanobacteriaâ€”the pioneering photoautotrophs. , 2024, , 1-18.		0
1929	Mechanistic view of plant adaptation under iron deficiency stress. , 2024, , 49-72.		0
1932	Characteristics, origins, and significance of pyrites in deep-water shales. <i>Science China Earth Sciences</i> , 2024, 67, 313-342.	2.3	0
1934	Ocean redox evolution past and present. , 2024, , .		0
1942	Cryogenian and Ediacaran integrative stratigraphy, biotas, and paleogeographical evolution of the Qinghai-Tibetan Plateau and its surrounding areas. <i>Science China Earth Sciences</i> , 2024, 67, 919-949.	2.3	0
1949	Past and present dynamics of the iron biogeochemical cycle. , 2024, , .		0
1950	Oxygenation of the Proterozoic Earth's surface: An evolving story. , 2024, , .		0