

Roger Buick

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7247386/publications.pdf>

Version: 2024-02-01

81
papers

10,851
citations

41344

49
h-index

60623

81
g-index

85
all docs

85
docs citations

85
times ranked

6220
citing authors

#	ARTICLE	IF	CITATIONS
1	Mercury abundance and isotopic composition indicate subaerial volcanism prior to the end-Archean $\delta^{13}\text{C}$ of oxygen. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	32
2	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.	3.9	12
3	Exploring cycad foliage as an archive of the isotopic composition of atmospheric nitrogen. <i>Geobiology</i> , 2020, 18, 152-166.	2.4	9
4	Redox fluctuations, trace metal enrichment and phosphogenesis in the ~ 2.0 Ga Zaonega Formation. <i>Precambrian Research</i> , 2020, 343, 105716.	2.7	12
5	Vesicle paleobarometry in the Pongola Supergroup: A cautionary note and guidelines for future studies. <i>South African Journal of Geology</i> , 2020, 123, 95-104.	1.2	0
6	Atmospheric CO_2 levels from 2.7 billion years ago inferred from micrometeorite oxidation. <i>Science Advances</i> , 2020, 6, eaay4644.	10.3	22
7	Revisiting the depositional environment of the Neoproterozoic Callanna Group, South Australia. <i>Precambrian Research</i> , 2019, 334, 105474.	2.7	6
8	Nitrogen isotope evidence for anoxic deep marine environments from the Mesoarchean Mosquito Creek Formation, Australia. <i>Precambrian Research</i> , 2019, 320, 281-290.	2.7	13
9	Environmental control on microbial diversification and methane production in the Mesoarchean. <i>Precambrian Research</i> , 2018, 304, 64-72.	2.7	29
10	Eolianite Grain Size Distributions as a Proxy for Large Changes in Planetary Atmospheric Density. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2506-2526.	3.6	11
11	Bias in carbon concentration and $\delta^{13}\text{C}$ measurements of organic matter due to cleaning treatments with organic solvents. <i>Chemical Geology</i> , 2018, 493, 405-412.	3.3	6
12	Transient surface ocean oxygenation recorded in the ~ 2.66 -Ga Jeerinah Formation, Australia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7711-7716.	7.1	46
13	Pervasive aerobic nitrogen cycling in the surface ocean across the Paleoproterozoic Era. <i>Earth and Planetary Science Letters</i> , 2018, 500, 117-126.	4.4	70
14	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.	7.1	67
15	Differential metamorphic effects on nitrogen isotopes in kerogen extracts and bulk rocks. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 217, 80-94.	3.9	61
16	Environmental niches and metabolic diversity in Neoproterozoic lakes. <i>Geobiology</i> , 2017, 15, 767-783.	2.4	25
17	Spatial and temporal trends in Precambrian nitrogen cycling: A Mesoproterozoic offshore nitrate minimum. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 198, 315-337.	3.9	65
18	Modeling N_2 through Geological Time: Implications for Planetary Climates and Atmospheric Biosignatures. <i>Astrobiology</i> , 2016, 16, 949-963.	3.0	53

#	ARTICLE	IF	CITATIONS
19	Earth's air pressure 2.7 billion years ago constrained to less than half of modern levels. <i>Nature Geoscience</i> , 2016, 9, 448-451.	12.9	132
20	Ancient air caught by shooting stars. <i>Nature</i> , 2016, 533, 184-186.	27.8	10
21	The changing view of eukaryogenesis – fossils, cells, lineages and how they all come together. <i>Journal of Cell Science</i> , 2016, 129, 3695-3703.	2.0	77
22	The evolution of Earth's biogeochemical nitrogen cycle. <i>Earth-Science Reviews</i> , 2016, 160, 220-239.	9.1	269
23	The evolution of the global selenium cycle: Secular trends in Se isotopes and abundances. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 162, 109-125.	3.9	59
24	Selenium isotopes support free O ₂ in the latest Archean. <i>Geology</i> , 2015, 43, 259-262.	4.4	74
25	Isotopic evidence for biological nitrogen fixation by molybdenum-nitrogenase from 3.2 ÅGyr. <i>Nature</i> , 2015, 520, 666-669.	27.8	213
26	Selenium isotope ratios, redox changes and biological productivity across the end-Permian mass extinction. <i>Chemical Geology</i> , 2015, 410, 28-39.	3.3	30
27	A statistical analysis of the carbon isotope record from the Archean to Phanerozoic and implications for the rise of oxygen. <i>Numerische Mathematik</i> , 2015, 315, 275-316.	1.4	130
28	Reappraisal of hydrocarbon biomarkers in Archean rocks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 5915-5920.	7.1	230
29	Records of geomagnetism, climate, and tectonics across a Paleoproterozoic erosion surface. <i>Earth and Planetary Science Letters</i> , 2015, 419, 1-13.	4.4	9
30	Nitrogen isotope evidence for alkaline lakes on late Archean continents. <i>Earth and Planetary Science Letters</i> , 2015, 411, 1-10.	4.4	104
31	Modeling the signature of sulfur mass-independent fractionation produced in the Archean atmosphere. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 141, 365-380.	3.9	80
32	Selenium isotope analysis of organic-rich shales: advances in sample preparation and isobaric interference correction. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 1734.	3.0	34
33	Quantitative discrimination between geological materials with variable density contrast by high resolution X-ray computed tomography: An example using amygdale size-distribution in ancient lava flows. <i>Computers and Geosciences</i> , 2013, 54, 231-238.	4.2	6
34	Evidence for reactive reduced phosphorus species in the early Archean ocean. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 10089-10094.	7.1	156
35	Air density 2.7 billion years ago limited to less than twice modern levels by fossil raindrop imprints. <i>Nature</i> , 2012, 484, 359-362.	27.8	167
36	Contributions to late Archean sulphur cycling by life on land. <i>Nature Geoscience</i> , 2012, 5, 722-725.	12.9	118

#	ARTICLE	IF	CITATIONS
37	Preservation of Martian Organic and Environmental Records: Final Report of the Mars Biosignature Working Group. <i>Astrobiology</i> , 2011, 11, 157-181.	3.0	255
38	Ancient acritarchs. <i>Nature</i> , 2010, 463, 885-886.	27.8	40
39	Isotopic Evidence for an Aerobic Nitrogen Cycle in the Latest Archean. <i>Science</i> , 2009, 323, 1045-1048.	12.6	214
40	Oil-bearing fluid inclusions from the Palaeoproterozoic: A review of biogeochemical results from time-capsules >2.0 Ga old. <i>Science in China Series D: Earth Sciences</i> , 2009, 52, 1-11.	0.9	15
41	Evaluating the role of microbial sulfate reduction in the early Archean using quadruple isotope systematics. <i>Earth and Planetary Science Letters</i> , 2009, 279, 383-391.	4.4	173
42	Preservation of hydrocarbons and biomarkers in oil trapped inside fluid inclusions for >2 billion years. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 844-870.	3.9	96
43	When did oxygenic photosynthesis evolve?. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2008, 363, 2731-2743.	4.0	278
44	An extended organic carbon-isotope record across the Triassic-Jurassic boundary in the Queen Charlotte Islands, British Columbia, Canada. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2007, 244, 290-296.	2.3	90
45	Late Archean Biospheric Oxygenation and Atmospheric Evolution. <i>Science</i> , 2007, 317, 1900-1903.	12.6	327
46	Did the Proterozoic 'Canfield Ocean' cause a laughing gas greenhouse?. <i>Geobiology</i> , 2007, 5, 97-100.	2.4	94
47	A Whiff of Oxygen Before the Great Oxidation Event?. <i>Science</i> , 2007, 317, 1903-1906.	12.6	822
48	Biomarkers from Huronian oil-bearing fluid inclusions: An uncontaminated record of life before the Great Oxidation Event. <i>Geology</i> , 2006, 34, 437.	4.4	97
49	Oxygen and life in the Precambrian. <i>Geobiology</i> , 2006, 4, 225-226.	2.4	4
50	Abrupt and Gradual Extinction Among Late Permian Land Vertebrates in the Karoo Basin, South Africa. <i>Science</i> , 2005, 307, 709-714.	12.6	281
51	The antiquity of microbial sulfate reduction. <i>Earth-Science Reviews</i> , 2004, 64, 243-272.	9.1	208
52	Geochronology of a Late Archaean flood basalt province in the Pilbara Craton, Australia: constraints on basin evolution, volcanic and sedimentary accumulation, and continental drift rates. <i>Precambrian Research</i> , 2004, 133, 143-173.	2.7	113
53	Release of bound aromatic hydrocarbons from late Archean and Mesoproterozoic kerogens via hydropyrolysis. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 1521-1530.	3.9	95
54	Composition and syngeneity of molecular fossils from the 2.78 to 2.45 billion-year-old Mount Bruce Supergroup, Pilbara Craton, Western Australia. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 4289-4319.	3.9	211

#	ARTICLE	IF	CITATIONS
55	A reconstruction of Archean biological diversity based on molecular fossils from the 2.78 to 2.45 billion-year-old Mount Bruce Supergroup, Hamersley Basin, Western Australia. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 4321-4335.	3.9	262
56	Oil-bearing CO ₂ -CH ₄ -H ₂ O fluid inclusions: oil survival since the Palaeoproterozoic after high temperature entrapment. <i>Chemical Geology</i> , 2003, 194, 51-79.	3.3	39
57	Origin and significance of aromatic hydrocarbons in giant iron ore deposits of the late Archean Hamersley Basin, Western Australia. <i>Organic Geochemistry</i> , 2003, 34, 1161-1175.	1.8	33
58	Reply to the comment by Bolhar et al. on "Growth and recycling of early Archean continental crust: geochemical evidence from the Coonterunah and Warrawoona Groups, Pilbara Craton, Australia" by Green et al. [<i>Tectonophysics</i> 322 (2000) 69-88]. <i>Tectonophysics</i> , 2002, 344, 293-296.	2.2	0
59	Geochronology and stratigraphic relationships of the Sulphur Springs Group and Strelley Granite: a temporally distinct igneous province in the Archean Pilbara Craton, Australia. <i>Precambrian Research</i> , 2002, 114, 87-120.	2.7	59
60	Isotopic evidence for microbial sulphate reduction in the early Archean era. <i>Nature</i> , 2001, 410, 77-81.	27.8	599
61	Oily old ores: Evidence for hydrothermal petroleum generation in an Archean volcanogenic massive sulfide deposit. <i>Geology</i> , 2000, 28, 731.	4.4	39
62	Growth and recycling of early Archean continental crust: geochemical evidence from the Coonterunah and Warrawoona Groups, Pilbara Craton, Australia. <i>Tectonophysics</i> , 2000, 322, 69-88.	2.2	109
63	Oily old ores: Evidence for hydrothermal petroleum generation in an Archean volcanogenic massive sulfide deposit. <i>Geology</i> , 2000, 28, 731-734.	4.4	6
64	Acritarchs and microfossils from the Mesoproterozoic Bangemall Group, northwestern Australia. <i>Journal of Paleontology</i> , 1999, 73, 744-764.	0.8	43
65	Redox state of the Archean atmosphere: Evidence from detrital heavy minerals in ca. 3250-2750 Ma sandstones from the Pilbara Craton, Australia. <i>Geology</i> , 1999, 27, 115.	4.4	213
66	Archean Molecular Fossils and the Early Rise of Eukaryotes. <i>Science</i> , 1999, 285, 1033-1036.	12.6	1,153
67	Redox state of the Archean atmosphere: Evidence from detrital heavy minerals in ca. 3250-2750 Ma sandstones from the Pilbara Craton, Australia: Comment and Reply. <i>Geology</i> , 1999, 27, 1151.	4.4	47
68	Oil preserved in fluid inclusions in Archean sandstones. <i>Nature</i> , 1998, 395, 885-888.	27.8	105
69	Removal of oceanic REE by authigenic precipitation of phosphatic minerals. <i>Earth and Planetary Science Letters</i> , 1998, 164, 135-149.	4.4	100
70	Record of emergent continental crust ~4.35 billion years ago in the Pilbara craton of Australia. <i>Nature</i> , 1995, 375, 574-577.	27.8	260
71	Stable isotopic compositions of carbonates from the Mesoproterozoic Bangemall group, northwestern Australia. <i>Chemical Geology</i> , 1995, 123, 153-171.	3.3	169
72	The antiquity of oxygenic photosynthesis: evidence from stromatolites in sulphate-deficient Archean lakes. <i>Science</i> , 1992, 255, 74-77.	12.6	318

#	ARTICLE	IF	CITATIONS
73	Evaporitic sediments of Early Archaean age from the Warrawoona Group, North Pole, Western Australia. <i>Sedimentology</i> , 1990, 37, 247-277.	3.1	255
74	Microfossil Recognition in Archean Rocks: An Appraisal of Spheroids and Filaments from a 3500 M.Y. Old Chert-Barite Unit at North Pole, Western Australia. <i>Palaios</i> , 1990, 5, 441.	1.3	229
75	Carbonaceous filaments from North Pole, Western Australia: Are they fossil bacteria in archaean stromatolites? A reply. <i>Precambrian Research</i> , 1988, 39, 311-317.	2.7	42
76	Comments and Replies on "Early Archean silicate spherules of probable impact origin, South Africa and Western Australia". <i>Geology</i> , 1987, 15, 180.	4.4	11
77	Carbonaceous filaments from North Pole, Western Australia: Are they fossil bacteria in Archaean stromatolites?. <i>Precambrian Research</i> , 1984, 24, 157-172.	2.7	94
78	Stromatolite recognition in ancient rocks: an appraisal of irregularly laminated structures in an Early Archaean chert-barite unit from North Pole, Western Australia. <i>Alcheringa</i> , 1981, 5, 161-181.	1.2	243
79	An Early Habitat of Life. <i>Scientific American</i> , 1981, 245, 64-73.	1.0	86
80	Stromatolites 3,400-3,500 Myr old from the North Pole area, Western Australia. <i>Nature</i> , 1980, 284, 443-445.	27.8	446
81	Life in the Archaean. , 0, , 13-21.		20