Kenneth H. Williford

List of Publications by Year
in descending order

56 papers	3,089 citations	172457 29 h-index	155660 55 g-index
57 all docs	57 docs citations	57 times ranked	3503 citing authors

#	Article	IF	Citations
1	In situ recording of Mars soundscape. Nature, 2022, 605, 653-658.	27.8	30
2	Billion-year exposure ages in Gale crater (Mars) indicate Mount Sharp formed before the Amazonian period. Earth and Planetary Science Letters, 2021, 554, 116667.	4.4	4
3	Perseveranceâ€™s Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. Space Science Reviews, 2021, 217, 1.	8.1	94
4	A new model for silicification of cyanobacteria in Proterozoic tidal flats. Geobiology, 2021, 19, 438-449.	2.4	16
5	Carbon isotopes of Proterozoic filamentous microfossils: SIMS analyses of ancient cyanobacteria from two disparate shallow-marine cherts. Geomicrobiology Journal, 2021, 38, 719-731.	2.0	3
6	In Situ Geochronology for the Next Decade: Mission Designs for the Moon, Mars, and Vesta. Planetary Science Journal, 2021, 2, 145.	3.6	6
7	Perseverance rover reveals an ancient delta-lake system and flood deposits at Jezero crater, Mars. Science, 2021, 374, 711-717.	12.6	86
8	Mars 2020 Mission Overview. Space Science Reviews, 2020, 216, 1.	8.1	239
9	Photogeologic Map of the Perseverance Rover Field Site in Jezero Crater Constructed by the Mars 2020 Science Team. Space Science Reviews, 2020, 216, 1.	8.1	67
10	Discovery of novel structures at 10.7Âkm depth in the Mariana Trench may reveal chemolithoautotrophic microbial communities. Deep-Sea Research Part I: Oceanographic Research Papers, 2020, 160, 103238.	1.4	7
11	Reevaluation of Perchlorate in Gale Crater Rocks Suggests Geologically Recent Perchlorate Addition. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006156.	3.6	10
12	The CanMars Mars Sample Return analogue mission. Planetary and Space Science, 2019, 166, 110-130.	1.7	25
13	In Situ Geochronology on Mars and the Development of Future Instrumentation. Astrobiology, 2019, 19, 1303-1314.	3.0	15
14	Field and laboratory validation of remote rover operations Science Team findings: The CanMars Mars Sample Return analogue mission. Planetary and Space Science, 2019, 176, 104682.	1.7	7
15	Organo-mineral associations in chert of the 3.5 Ga Mount Ada Basalt raise questions about the origin of organic matter in Paleoarchean hydrothermally influenced sediments. Scientific Reports, 2019, 9, 16712.	3.3	13
16	The Taphonomy of Proterozoic Microbial Mats and Implications for Early Diagenetic Silicification. Geosciences (Switzerland), 2019, 9, 40.	2.2	20
17	From greenhouse to icehouse: Nitrogen biogeochemistry of an epeiric sea in the context of the oxygenation of the Late Devonian atmosphere/ocean system. Palaeogeography, Palaeoclimatology, Palaeoecology, 2019, 531, 109204.	2.3	5
18	A look back: The drilling campaign of the Curiosity rover during the Mars Science Laboratory's Prime Mission. Icarus, 2019, 319, 1-13.	2.5	19

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19	Microbially influenced formation of Neoarchean ooids. Geobiology, 2019, 17, 151-160.	2.4	12
20	Microbial community composition and dolomite formation in the hypersaline microbial mats of the Khor Al-Adaid sabkhas, Qatar. Extremophiles, 2019, 23, 201-218.	2.3	37
21	Extreme 13C-depletions and organic sulfur content argue for S-fueled anaerobic methane oxidation in 2.72â€¯Ga old stromatolites. Geochimica Et Cosmochimica Acta, 2019, 244, 522-547.	3.9	22
22	Exploring new models for improving planetary rover operations efficiency through the 2016 CanMars Mars Sample Return (MSR) analogue deployment. Planetary and Space Science, 2019, 165, 250-259.	1.7	10
23	Simultaneous In Situ Analysis of Carbon and Nitrogen Isotope Ratios in Organic Matter by Secondary Ion Mass Spectrometry. Geostandards and Geoanalytical Research, 2018, 42, 189-203.	3.1	11
24	Spatially-resolved isotopic study of carbon trapped in â¼3.43â€¯Ga Strelley Pool Formation stromatolites. Geochimica Et Cosmochimica Acta, 2018, 223, 21-35.	3.9	26
25	A Field Guide to Finding Fossils on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1012-1040.	3.6	86
26	A late Quaternary paleoenvironmental record in sand dunes of the northern Atacama Desert, Chile. Quaternary Research, 2018, 90, 127-138.	1.7	9
27	The science process for selecting the landing site for the 2020 Mars rover. Planetary and Space Science, 2018, 164, 106-126.	1.7	64
28	Biological regulation of atmospheric chemistry en route to planetary oxygenation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2571-E2579.	7.1	64
29	Deep UV Raman spectroscopy for planetary exploration: The search for in situ organics. Icarus, 2017, 290, 201-214.	2.5	64
30	An anaerobic â¼3400 Ma shallow-water microbial consortium: Presumptive evidence of Earthâ€™s Paleoarchean anoxic atmosphere. Precambrian Research, 2017, 299, 309-318.	2.7	28
31	Lipid biomarker stratigraphic records through the Late Devonian Frasnian/Famennian boundary: Comparison of high- and low-latitude epicontinental marine settings. Organic Geochemistry, 2016, 98, 38-53.	1.8	42
32	Testing the limits in a greenhouse ocean: Did low nitrogen availability limit marine productivity during the end-Triassic mass extinction?. Earth and Planetary Science Letters, 2016, 451, 138-148.	4.4	20
33	Carbon and sulfur isotopic signatures of ancient life and environment at the microbial scale: Neoarchean shales and carbonates. Geobiology, 2016, 14, 105-128.	2.4	52
34	Comparing orbiter and rover image-based mapping of an ancient sedimentary environment, Aeolis Palus, Gale crater, Mars. Icarus, 2016, 280, 3-21.	2.5	57
35	Microstructure-specific carbon isotopic signatures of organic matter from â¼3.5 Ga cherts of the Pilbara Craton support a biologic origin. Precambrian Research, 2016, 275, 429-449.	2.7	39
36	Organic geochemistry of a high-latitude Lower Cretaceous lacustrine sediment sample from the Koonwarra Fossil Beds, South Gippsland, Victoria, Australia. Memoirs of Museum Victoria, 2016, 74, 73-79.	0.6	6

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37	Sulfur-cycling fossil bacteria from the 1.8-Ga Duck Creek Formation provide promising evidence of evolution's null hypothesis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2087-2092.	7.1	51
38	Reply to DvoÅ™Ã¡k et al.: Apparent evolutionary stasis of ancient subseafloor sulfur cycling biocoenoses. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E2560-E2560.	7.1	0
39	Episodic photic zone euxinia in the northeastern Panthalassic Ocean during the end-Triassic extinction. Geology, 2015, 43, 307-310.	4.4	82
40	Mars methane detection and variability at Gale crater. Science, 2015, 347, 415-417.	12.6	373
41	The imprint of atmospheric evolution in the D/H of Hesperian clay minerals on Mars. Science, 2015, 347, 412-414.	12.6	113
42	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
43	Development of in situ sulfur four-isotope analysis with multiple Faraday cup detectors by SIMS and application to pyrite grains in a Paleoproterozoic glaciogenic sandstone. Chemical Geology, 2014, 383, 86-99.	3.3	64
44	An organic record of terrestrial ecosystem collapse and recovery at the Triassicâ€“Jurassic boundary in East Greenland. Geochimica Et Cosmochimica Acta, 2014, 127, 251-263.	3.9	38
45	Preservation and detection of microstructural and taxonomic correlations in the carbon isotopic compositions of individual Precambrian microfossils. Geochimica Et Cosmochimica Acta, 2013, 104, 165-182.	3.9	72
46	Texture-specific isotopic compositions in 3.4Gyr old organic matter support selective preservation in cell-like structures. Geochimica Et Cosmochimica Acta, 2013, 112, 66-86.	3.9	87
47	The significance of 24-norcholestanes, 4-methylsteranes and dinosteranes in oils and source-rocks from East Sirte Basin (Libya). Applied Geochemistry, 2011, 26, 1694-1705.	3.0	16
48	Constraining atmospheric oxygen and seawater sulfate concentrations during Paleoproterozoic glaciation: In situ sulfur three-isotope microanalysis of pyrite from the Turee Creek Group, Western Australia. Geochimica Et Cosmochimica Acta, 2011, 75, 5686-5705.	3.9	89
49	The molecular and isotopic effects of hydrothermal alteration of organic matter in the Paleoproterozoic McArthur River Pb/Zn/Ag ore deposit. Earth and Planetary Science Letters, 2011, 301, 382-392.	4.4	56
50	Use of biomarker distributions and compound specific isotopes of carbon and hydrogen to delineate hydrocarbon characteristics in the East Sirte Basin (Libya). Organic Geochemistry, 2010, 41, 1249-1258.	1.8	27
51	Major perturbation in sulfur cycling at the Triassic-Jurassic boundary. Geology, 2009, 37, 835-838.	4.4	40
52	New insights into the origin of perylene in geological samples. Geochimica Et Cosmochimica Acta, 2009, 73, 6531-6543.	3.9	187
53	Reply to comment on: â€œThe organic carbon isotopic and paleontological record across the Triassicâ€“Jurassic boundary at the candidate GSSP section at Ferguson Hill, Muller Canyon, Nevada, USAâ€• by Ward et al. (2007). Palaeogeography, Palaeoclimatology, Palaeoecology, 2009, 273, 205-206.	2.3	7
54	An extended organic carbon-isotope record across the Triassicâ€“Jurassic boundary in the Queen Charlotte Islands, British Columbia, Canada. Palaeogeography, Palaeoclimatology, Palaeoecology, 2007, 244, 290-296.	2.3	90

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55	Diffusion kinetics of proton-induced 21Ne, 3He, and 4He in quartz. Geochimica Et Cosmochimica Acta, 2005, 69, 2349-2359.	3.9	78
56	Geochemistry of the end-Permian extinction event in Austria and Italy: No evidence for an extraterrestrial component. Geology, 2004, 32, 1053.	4.4	78