

Kenneth H. Williford

List of Publications by Year in descending order

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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 | Mars methane detection and variability at Gale crater. <i>Science</i> , 2015, 347, 415-417. | 12.6 | 373 |
| 2 | Mars 2020 Mission Overview. <i>Space Science Reviews</i> , 2020, 216, 1. | 8.1 | 239 |
| 3 | In Situ Radiometric and Exposure Age Dating of the Martian Surface. <i>Science</i> , 2014, 343, 1247166. | 12.6 | 224 |
| 4 | New insights into the origin of perylene in geological samples. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 6531-6543. | 3.9 | 187 |
| 5 | The imprint of atmospheric evolution in the D/H of Hesperian clay minerals on Mars. <i>Science</i> , 2015, 347, 412-414. | 12.6 | 113 |
| 6 | Perseverance's Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. <i>Space Science Reviews</i> , 2021, 217, 1. | 8.1 | 94 |
| 7 | 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 |
| 8 | 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. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 5686-5705. | 3.9 | 89 |
| 9 | Texture-specific isotopic compositions in 3.4Gyr old organic matter support selective preservation in cell-like structures. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 112, 66-86. | 3.9 | 87 |
| 10 | A Field Guide to Finding Fossils on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1012-1040. | 3.6 | 86 |
| 11 | Perseverance rover reveals an ancient delta-lake system and flood deposits at Jezero crater, Mars. <i>Science</i> , 2021, 374, 711-717. | 12.6 | 86 |
| 12 | Episodic photic zone euxinia in the northeastern Panthalassic Ocean during the end-Triassic extinction. <i>Geology</i> , 2015, 43, 307-310. | 4.4 | 82 |
| 13 | Geochemistry of the end-Permian extinction event in Austria and Italy: No evidence for an extraterrestrial component. <i>Geology</i> , 2004, 32, 1053. | 4.4 | 78 |
| 14 | Diffusion kinetics of proton-induced ²¹ Ne, ³ He, and ⁴ He in quartz. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 2349-2359. | 3.9 | 78 |
| 15 | Preservation and detection of microstructural and taxonomic correlations in the carbon isotopic compositions of individual Precambrian microfossils. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 104, 165-182. | 3.9 | 72 |
| 16 | Photogeologic Map of the Perseverance Rover Field Site in Jezero Crater Constructed by the Mars 2020 Science Team. <i>Space Science Reviews</i> , 2020, 216, 1. | 8.1 | 67 |
| 17 | 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. <i>Chemical Geology</i> , 2014, 383, 86-99. | 3.3 | 64 |
| 18 | Biological regulation of atmospheric chemistry en route to planetary oxygenation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E2571-E2579. | 7.1 | 64 |

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|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 19 | Deep UV Raman spectroscopy for planetary exploration: The search for in situ organics. <i>Icarus</i> , 2017, 290, 201-214. | 2.5 | 64 |
| 20 | The science process for selecting the landing site for the 2020 Mars rover. <i>Planetary and Space Science</i> , 2018, 164, 106-126. | 1.7 | 64 |
| 21 | Comparing orbiter and rover image-based mapping of an ancient sedimentary environment, Aeolis Palus, Gale crater, Mars. <i>Icarus</i> , 2016, 280, 3-21. | 2.5 | 57 |
| 22 | The molecular and isotopic effects of hydrothermal alteration of organic matter in the Paleoproterozoic McArthur River Pb/Zn/Ag ore deposit. <i>Earth and Planetary Science Letters</i> , 2011, 301, 382-392. | 4.4 | 56 |
| 23 | Carbon and sulfur isotopic signatures of ancient life and environment at the microbial scale: Neoproterozoic shales and carbonates. <i>Geobiology</i> , 2016, 14, 105-128. | 2.4 | 52 |
| 24 | 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. | 7.1 | 51 |
| 25 | Lipid biomarker stratigraphic records through the Late Devonian Frasnian/Famennian boundary: Comparison of high- and low-latitude epicontinental marine settings. <i>Organic Geochemistry</i> , 2016, 98, 38-53. | 1.8 | 42 |
| 26 | Major perturbation in sulfur cycling at the Triassic-Jurassic boundary. <i>Geology</i> , 2009, 37, 835-838. | 4.4 | 40 |
| 27 | Microstructure-specific carbon isotopic signatures of organic matter from ~ 4.35 Ga cherts of the Pilbara Craton support a biogenic origin. <i>Precambrian Research</i> , 2016, 275, 429-449. | 2.7 | 39 |
| 28 | An organic record of terrestrial ecosystem collapse and recovery at the Triassic-Jurassic boundary in East Greenland. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 127, 251-263. | 3.9 | 38 |
| 29 | Microbial community composition and dolomite formation in the hypersaline microbial mats of the Khor Al-Adaid sabkhas, Qatar. <i>Extremophiles</i> , 2019, 23, 201-218. | 2.3 | 37 |
| 30 | In situ recording of Mars soundscape. <i>Nature</i> , 2022, 605, 653-658. | 27.8 | 30 |
| 31 | An anaerobic ~ 3400 Ma shallow-water microbial consortium: Presumptive evidence of Earth's Paleoproterozoic anoxic atmosphere. <i>Precambrian Research</i> , 2017, 299, 309-318. | 2.7 | 28 |
| 32 | Use of biomarker distributions and compound specific isotopes of carbon and hydrogen to delineate hydrocarbon characteristics in the East Sirte Basin (Libya). <i>Organic Geochemistry</i> , 2010, 41, 1249-1258. | 1.8 | 27 |
| 33 | Spatially-resolved isotopic study of carbon trapped in ~ 3.43 Ga Strelley Pool Formation stromatolites. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 223, 21-35. | 3.9 | 26 |
| 34 | The CanMars Mars Sample Return analogue mission. <i>Planetary and Space Science</i> , 2019, 166, 110-130. | 1.7 | 25 |
| 35 | Extreme ^{13}C -depletions and organic sulfur content argue for S-fueled anaerobic methane oxidation in 2.72 Ga old stromatolites. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 244, 522-547. | 3.9 | 22 |
| 36 | Testing the limits in a greenhouse ocean: Did low nitrogen availability limit marine productivity during the end-Triassic mass extinction?. <i>Earth and Planetary Science Letters</i> , 2016, 451, 138-148. | 4.4 | 20 |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | The Taphonomy of Proterozoic Microbial Mats and Implications for Early Diagenetic Silicification. <i>Geosciences (Switzerland)</i> , 2019, 9, 40. | 2.2 | 20 |
| 38 | A look back: The drilling campaign of the Curiosity rover during the Mars Science Laboratory's Prime Mission. <i>Icarus</i> , 2019, 319, 1-13. | 2.5 | 19 |
| 39 | The significance of 24-norcholestanes, 4-methylsteranes and dinosteranes in oils and source-rocks from East Sirte Basin (Libya). <i>Applied Geochemistry</i> , 2011, 26, 1694-1705. | 3.0 | 16 |
| 40 | A new model for silicification of cyanobacteria in Proterozoic tidal flats. <i>Geobiology</i> , 2021, 19, 438-449. | 2.4 | 16 |
| 41 | <i>In Situ</i> Geochronology on Mars and the Development of Future Instrumentation. <i>Astrobiology</i> , 2019, 19, 1303-1314. | 3.0 | 15 |
| 42 | Organo-mineral associations in chert of the 3.5 Ga Mount Ada Basalt raise questions about the origin of organic matter in Paleoproterozoic hydrothermally influenced sediments. <i>Scientific Reports</i> , 2019, 9, 16712. | 3.3 | 13 |
| 43 | Microbially influenced formation of Neoproterozoic ooids. <i>Geobiology</i> , 2019, 17, 151-160. | 2.4 | 12 |
| 44 | Simultaneous <i>In Situ</i> Analysis of Carbon and Nitrogen Isotope Ratios in Organic Matter by Secondary Ion Mass Spectrometry. <i>Geostandards and Geoanalytical Research</i> , 2018, 42, 189-203. | 3.1 | 11 |
| 45 | Exploring new models for improving planetary rover operations efficiency through the 2016 CanMars Mars Sample Return (MSR) analogue deployment. <i>Planetary and Space Science</i> , 2019, 165, 250-259. | 1.7 | 10 |
| 46 | Reevaluation of Perchlorate in Gale Crater Rocks Suggests Geologically Recent Perchlorate Addition. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006156. | 3.6 | 10 |
| 47 | A late Quaternary paleoenvironmental record in sand dunes of the northern Atacama Desert, Chile. <i>Quaternary Research</i> , 2018, 90, 127-138. | 1.7 | 9 |
| 48 | Reply to comment on: "The organic carbon isotopic and paleontological record across the Triassic-Jurassic boundary at the candidate GSSP section at Ferguson Hill, Muller Canyon, Nevada, USA" by Ward et al. (2007). <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2009, 273, 205-206. | 2.3 | 7 |
| 49 | Field and laboratory validation of remote rover operations Science Team findings: The CanMars Mars Sample Return analogue mission. <i>Planetary and Space Science</i> , 2019, 176, 104682. | 1.7 | 7 |
| 50 | Discovery of novel structures at 10.7 km depth in the Mariana Trench may reveal chemolithoautotrophic microbial communities. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2020, 160, 103238. | 1.4 | 7 |
| 51 | <i>In Situ</i> Geochronology for the Next Decade: Mission Designs for the Moon, Mars, and Vesta. <i>Planetary Science Journal</i> , 2021, 2, 145. | 3.6 | 6 |
| 52 | Organic geochemistry of a high-latitude Lower Cretaceous lacustrine sediment sample from the Koonwarra Fossil Beds, South Gippsland, Victoria, Australia. <i>Memoirs of Museum Victoria</i> , 2016, 74, 73-79. | 0.6 | 6 |
| 53 | From greenhouse to icehouse: Nitrogen biogeochemistry of an epeiric sea in the context of the oxygenation of the Late Devonian atmosphere/ocean system. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 531, 109204. | 2.3 | 5 |
| 54 | Billion-year exposure ages in Gale crater (Mars) indicate Mount Sharp formed before the Amazonian period. <i>Earth and Planetary Science Letters</i> , 2021, 554, 116667. | 4.4 | 4 |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Carbon isotopes of Proterozoic filamentous microfossils: SIMS analyses of ancient cyanobacteria from two disparate shallow-marine cherts. <i>Geomicrobiology Journal</i> , 2021, 38, 719-731. | 2.0 | 3 |
| 56 | Reply to Dvořák et al.: Apparent evolutionary stasis of ancient subseafloor sulfur cycling biocoenoses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E2560-E2560. | 7.1 | 0 |