Dawn Y Sumner

List of Publications by Year
in descending order

112	10,387	38742 50	32842 100
papers	citations	h-index	g-index

118	118	118	5882
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
2	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
3	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
4	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	12.6	471
5	Organic molecules in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 495-514.	3.6	375
6	Organic matter preserved in 3-billion-year-old mudstones at Gale crater, Mars. Science, 2018, 360, 1096-1101.	12.6	369
7	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
8	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	12.6	327
9	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
10	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
11	Preservation of Martian Organic and Environmental Records: Final Report of the Mars Biosignature Working Group. Astrobiology, 2011, 11, 157-181.	3.0	255
12	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
13	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
14	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
15	Calcium sulfate veins characterized by ChemCam/Curiosity at Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1991-2016.	3.6	214
16	Redox stratification of an ancient lake in Gale crater, Mars. Science, 2017, 356, .	12.6	209
17	Curiosityâ€™s Mars Hand Lens Imager (MAHLI) Investigation. Space Science Reviews, 2012, 170, 259-317.	8.1	185
18	Mineralogy, provenance, and diagenesis of a potassic basaltic sandstone on Mars: CheMin Xâ€ray diffraction of the Windjana sample (Kimberley area, Gale Crater). Journal of Geophysical Research E: Planets, 2016, 121, 75-106.	3.6	159

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19	Late Archean molecular fossils from the Transvaal Supergroup record the antiquity of microbial diversity and aerobiosis. Precambrian Research, 2009, 169, 28-47.	2.7	151
20	Large wind ripples on Mars: A record of atmospheric evolution. Science, 2016, 353, 55-58.	12.6	144
21	Ancient Martian aeolian processes and palaeomorphology reconstructed from the Stimson formation on the lower slope of Aeolis Mons, Gale crater, Mars. Sedimentology, 2018, 65, 993-1042.	3.1	143
22	Were kinetics of Archean calcium carbonate precipitation related to oxygen concentration?. Geology, 1996, 24, 119.	4.4	136
23	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
24	The origin and implications of clay minerals from Yellowknife Bay, Gale crater, Mars. American Mineralogist, 2015, 100, 824-836.	1.9	122
25	The Mars Science Laboratory (MSL) Mast cameras and Descent imager: Investigation and instrument descriptions. Earth and Space Science, 2017, 4, 506-539.	2.6	117
26	Uî—¸Pb geochronologic constraints on deposition of the Campbellrand Subgroup, Transvaal Supergroup, South Africa. Precambrian Research, 1996, 79, 25-35.	2.7	115
27	Isotopic fingerprints of microbial respiration in aragonite from Bahamian stromatolites. Geology, 2006, 34, 973.	4.4	112
28	The origin and evolution of the Peace Vallis fan system that drains to the Curiosity landing area, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 705-728.	3.6	112
29	Undirected motility of filamentous cyanobacteria produces reticulate mats. Geobiology, 2010, 8, 179-190.	2.4	107
30	Implications for Neoarchaean ocean chemistry from primary carbonate mineralogy of the Campbellrand-Malmani Platform, South Africa. Sedimentology, 2004, 51, 1273-1299.	3.1	101
31	Late Archean Calcite-Microbe Interactions: Two Morphologically Distinct Microbial Communities That Affected Calcite Nucleation Differently. Palaios, 1997, 12, 302.	1.3	100
32	Discovery of large conical stromatolites in Lake Untersee, Antarctica. Geobiology, 2011, 9, 280-293.	2.4	97
33	A geoscience perspective on immersive 3D gridded data visualization. Computers and Geosciences, 2008, 34, 1056-1072.	4.2	96
34	Gypsum, bassanite, and anhydrite at Gale crater, Mars. American Mineralogist, 2018, 103, 1011-1020.	1.9	96
35	Mars Sedimentary Geology: Key Concepts and Outstanding Questions. Astrobiology, 2011, 11, 77-87.	3.0	93
36	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87

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37	Lithofacies control on multiple-sulfur isotope records and Neoarchean sulfur cycles. Precambrian Research, 2009, 169, 58-67.	2.7	81
38	Diagenetic origin of nodules in the Sheepbed member, Yellowknife Bay formation, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1637-1664.	3.6	80
39	Evidence for plunging river plume deposits in the Pahrump Hills member of the Murray formation, Gale crater, Mars. Sedimentology, 2019, 66, 1768-1802.	3.1	80
40	Sequence Stratigraphic Development of the Neoarchean Transvaal carbonate platform, Kaapvaal Craton, South Africa. South African Journal of Geology, 2006, 109, 11-22.	1.2	79
41	Sequence and relative timing of large lakes in Gale crater (Mars) after the formation of Mount Sharp. Journal of Geophysical Research E: Planets, 2016, 121, 472-496.	3.6	72
42	Microbial Mat Communities along an Oxygen Gradient in a Perennially Ice-Covered Antarctic Lake. Applied and Environmental Microbiology, 2016, 82, 620-630.	3.1	69
43	MAHLI at the Rocknest sand shadow: Science and scienceâ€enabling activities. Journal of Geophysical Research E: Planets, 2013, 118, 2338-2360.	3.6	67
44	Sulfur-bearing phases detected by evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 373-393.	3.6	65
45	Shaler: inÂsitu analysis of a fluvial sedimentary deposit on Mars. Sedimentology, 2018, 65, 96-122.	3.1	59
46	Late Devonian carbon isotope stratigraphy and sea level fluctuations, Canning Basin, Western Australia. Palaeogeography, Palaeoclimatology, Palaeoecology, 2003, 191, 203-219.	2.3	58
47	Antarctic microbial mats: A modern analog for Archean lacustrine oxygen oases. Geology, 2015, 43, 887-890.	4.4	55
48	Cyanobacterial diversity in benthic mats of the McMurdo Dry Valley lakes, Antarctica. Polar Biology, 2015, 38, 1097-1110.	1.2	52
49	Poor preservation potential of organics in Meridiani Planum hematite-bearing sedimentary rocks. Journal of Geophysical Research, 2004, 109, .	3.3	51
50	Chemical variations in Yellowknife Bay formation sedimentary rocks analyzed by ChemCam on board the Curiosity rover on Mars. Journal of Geophysical Research E: Planets, 2015, 120, 452-482.	3.6	51
51	Subaqueous shrinkage cracks in the Sheepbed mudstone: Implications for early fluid diagenesis, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1597-1613.	3.6	50
52	First Detections of Dichlorobenzene Isomers and Trichloromethylpropane from Organic Matter Indigenous to Mars Mudstone in Gale Crater, Mars: Results from the Sample Analysis at Mars Instrument Onboard the Curiosity Rover. Astrobiology, 2020, 20, 292-306.	3.0	50
53	Renalcids as Fossilized Biofilm Clusters. Palaios, 2002, 17, 225-236.	1.3	49
54	Microbialites of the Neoproterozoic Beck Spring Dolomite, Southern California. Sedimentology, 2011, 58, 1648-1673.	3.1	46

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55	A phylogenetically novel cyanobacterium most closely related to Gloeobacter. ISME Journal, 2020, 14, 2142-2152.	9.8	45
56	Meteoric diagenesis and fluid-rock interaction in the Middle Permian Capitan backreef: Yates Formation, Slaughter Canyon, New Mexico. AAPG Bulletin, 2014, 98, 1495-1519.	1.5	43
57	LATE ARCHEAN ARAGONITE PRECIPITATION: PETROGRAPHY, FACIES ASSOCIATIONS, AND ENVIRONMENTAL SIGNIFICANCE. , 2000, , 123-144.		43
58	Famennian microbial reef facies, Napier and Oscar Ranges, Canning Basin, western Australia. Sedimentology, 2003, 50, 1283-1302.	3.1	41
59	Microbial Influences on Local Carbon Isotopic Ratios and Their Preservation in Carbonate. Astrobiology, 2001, 1, 57-70.	3.0	39
60	Using ChemCam LIBS data to constrain grain size in rocks on Mars: Proof of concept and application to rocks at Yellowknife Bay and Pahrump Hills, Gale crater. Icarus, 2019, 321, 82-98.	2.5	37
61	Molar tooth structures of the Neoarchean Monteville Formation, Transvaal Supergroup, South Africa. I: Constraints on microcrystalline CaCO₃ precipitation. Sedimentology, 2006, 53, 1049-1068.	3.1	34
62	Molar tooth structures of the Neoarchean Monteville Formation, Transvaal Supergroup, South Africa. II: A waveâ€induced fluid flow model. Sedimentology, 2006, 53, 1069-1082.	3.1	34
63	Paraburdoo spherule layer (Hamersley Basin, Western Australia): Distal ejecta from a fourth large impact near the Archean-Proterozoic boundary. Geology, 2011, 39, 307-310.	4.4	34
64	Growth of elaborate microbial pinnacles in Lake Vanda, Antarctica. Geobiology, 2016, 14, 556-574.	2.4	33
65	Numerical Modeling of Ooid Size and the Problem of Neoproterozoic Giant Ooids. Journal of Sedimentary Research, 1993, Vol. 63, 974-82.	1.6	32
66	Correlating multiple Neoarcheanâ€“Paleoproterozoic impact spherule layers between South Africa and Western Australia. Precambrian Research, 2009, 169, 100-111.	2.7	32
67	Timescales of Growth Response of Microbial Mats to Environmental Change in an Ice-Covered Antarctic Lake. Biology, 2013, 2, 151-176.	2.8	32
68	Observation of >â€‰5â€‰wt % zinc at the Kimberley outcrop, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2016, 121, 338-352.	3.6	32
69	Cracks and fins in sulfate sand: Evidence for recent mineral-atmospheric water cycling in Meridiani Planum outcrops?. Geology, 2006, 34, 229.	4.4	31
70	Legacies of recent environmental change in the benthic communities of Lake Joyce, a perennially ice-covered Antarctic lake. Geobiology, 2011, 9, 394-410.	2.4	31
71	Stromatolite records of environmental change in perennially ice-covered Lake Joyce, McMurdo Dry Valleys, Antarctica. Biogeochemistry, 2018, 137, 73-92.	3.5	31
72	Origins of Microbial Microstructures In the Neoproterozoic Beck Spring Dolomite: Variations In Microbial Community and Timing of Lithification. Journal of Sedimentary Research, 2012, 82, 709-722.	1.6	30

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73	Growth of modern branched columnar stromatolites in Lake Joyce, Antarctica. Geobiology, 2015, 13, 373-390.	2.4	29
74	Grain Size Variations in the Murray Formation: Stratigraphic Evidence for Changing Depositional Environments in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006230.	3.6	29
75	Neoarchaean impact spherule layers in the Fortescue and Hamersley Groups, Western Australia: stratigraphic and depositional implications of re-correlation. Australian Journal of Earth Sciences, 2005, 52, 759-771.	1.0	25
76	Preserved Filamentous Microbial Biosignatures in the Brick Flat Gossan, Iron Mountain, California. Astrobiology, 2015, 15, 637-668.	3.0	25
77	Thrombolite fabrics and origins: Influences of diverse microbial and metazoan processes on Cambrian thrombolite variability in the Great Basin, California and Nevada. Sedimentology, 2016, 63, 2217-2252.	3.1	25
78	Herringbone Calcite: Petrography and Environmental Significance. Journal of Sedimentary Research, 1996, Vol. 66, .	1.6	22
79	Microbial Processes Forming Marine Stromatolites. , 2003, , 103-118.		22
80	Microbial vs Environmental Influences on the Morphology of Late Archean Fenestrate Microbialites. , 2000, , 307-314.		22
81	Variations in Neoarchean microbialite morphologies: clues to controls on microbialite morphologies through time. Sedimentology, 2008, 55, 1189-1202.	3.1	21
82	Late <scp>M</scp>iocene to <scp>P</scp>liocene stratigraphy of the <scp>K</scp>ura <scp>B</scp>asin, a subbasin of the <scp>S</scp>outh <scp>C</scp>aspian <scp>B</scp>asin: implications for the diachroneity of stage boundaries. Basin Research, 2015, 27, 247-271.	2.7	20
83	Carbonate fabrics in the modern microbialites of Pavilion Lake: two suites of microfabrics that reflect variation in microbial community morphology, growth habit, and lithification. Geobiology, 2015, 13, 357-372.	2.4	18
84	Decimetre-Thick Encrustations of Calcite and Aragonite on the Sea-Floor and Implications for Neoarchaean and Neoproterozoic Ocean Chemistry. , 0, , 107-120.		15
85	Origin and evolution of polygonal cracks in hydrous sulphate sands, White Sands National Monument, New Mexico. Sedimentology, 2011, 58, 407-423.	3.1	15
86	Filamentous Hydrous Ferric Oxide Biosignatures in a Pipeline Carrying Acid Mine Drainage at Iron Mountain Mine, California. Geomicrobiology Journal, 2017, 34, 193-206.	2.0	13
87	Increased mud deposition reduces stromatolite complexity. Geology, 2017, 45, 663-666.	4.4	13
88	Morphological signatures of microbial activity across sediment and light microenvironments of Lake Vanda, Antarctica. Sedimentary Geology, 2017, 361, 82-92.	2.1	13
89	Energetic and Environmental Constraints on the Community Structure of Benthic Microbial Mats in Lake Fryxell, Antarctica. FEMS Microbiology Ecology, 2020, 96, .	2.7	13
90	Environmental control on the distribution of metabolic strategies of benthic microbial mats in Lake Fryxell, Antarctica. PLoS ONE, 2020, 15, e0231053.	2.5	13

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91	Importance of environmental factors over habitat connectivity in shaping bacterial communities in microbial mats and bacterioplankton in an Antarctic freshwater system. FEMS Microbiology Ecology, 2021, 97, .	2.7	13
92	Unraveling the three-dimensional morphology of Archean microbialites. Journal of Paleontology, 2014, 88, 719-726.	0.8	12
93	Structure and distribution of chalky deposits in the Pacific oyster using x-ray computed tomography (CT). Scientific Reports, 2020, 10, 12118.	3.3	12
94	Metabolic Capacity of the Antarctic Cyanobacterium Phormidium pseudopriestleyi That Sustains Oxygenic Photosynthesis in the Presence of Hydrogen Sulfide. Genes, 2021, 12, 426.	2.4	12
95	The Sedimentary Record of Mars. The Sedimentary Record, 2011, 9, 4-8.	0.6	10
96	Tube structures of probable microbial origin in the Neoarchean Carawine Dolomite, Hamersley Basin, Western Australia. Geobiology, 2007, 6, 070627140740001-???.	2.4	9
97	Interactive Visualization to Advance Earthquake Simulation. Pure and Applied Geophysics, 2008, 165, 621-633.	1.9	8
98	Bacteriohopanepolyols across environmental gradients in Lake Vanda, Antarctica. Geobiology, 2019, 17, 308-319.	2.4	8
99	Characterisation of a deep-water moss from the perennially ice-covered Lake Vanda, Antarctica. Polar Biology, 2017, 40, 2063-2076.	1.2	7
100	In a PICL: The sedimentary deposits and facies of perennially iceâ€covered lakes. Sedimentology, 2019, 66, 917-939.	3.1	7
101	Environmental controls on bacteriohopanepolyol profiles of benthic microbial mats from Lake Fryxell, Antarctica. Geobiology, 2019, 17, 551-563.	2.4	7
102	Blending Art and Science: Collapse (suddenly falling down). Leonardo, 2010, 43, 274-281.	0.3	5
103	Understanding Microbialite Morphology Using a Comprehensive Suite of Three-Dimensional Analysis Tools. Astrobiology, 2011, 11, 509-518.	3.0	5
104	Burial and Exhumation of Sedimentary Rocks Revealed by the Base Stimson Erosional Unconformity, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	3
105	Secular variations in Precambrian seawater chemistry and the timing of Precambrian aragonite seas and calcite seas: Comment and Reply. Geology, 2004, 32, e1-e1.	4.4	2
106	Blending Art and Science to Create Collapse (suddenly falling down). Leonardo, 2010, 43, 204-204.	0.3	2
107	Phylogeny and Evolutionary History of Respiratory Complex I Proteins in Melainabacteria. Genes, 2021, 12, 929.	2.4	1
108	FACIES ANALYSIS AND STRATIGRAPHIC CONTEXT OF THE PAHRUMP HILLS OUTCROP, TYPE LOCALITY OF THE BASAL MURRAY FORMATION, GALE CRATER, MARS. , 2016, , .		1

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109	Biology and Geology: A Necessary Symbiosis. Palaios, 2002, 17, 307-308.	1.3	0
110	Scientific Delirium Madness Gallery. Leonardo, 2015, 48, 220-225.	0.3	0
111	Curiosityâ€™s Mars Hand Lens Imager (MAHLI) Investigation. , 2012, , 259-317.		0
112	Constructing Point Clouds from Underwater Stereo Movies. Lecture Notes in Computer Science, 2014, , 423-434.	1.3	0