Kenneth Edgett

List of Publications by Year
in descending order

104 papers	15,278 citations	25034 57 h-index	37204 96 g-index
109 all docs	109 docs citations	109 times ranked	5794 citing authors

#	Article	IF	Citations
1	Evidence for Recent Groundwater Seepage and Surface Runoff on Mars. Science, 2000, 288, 2330-2335.	12.6	998
2	Context Camera Investigation on board the Mars Reconnaissance Orbiter. Journal of Geophysical Research, 2007, 112, .	3.3	953
3	Sedimentary Rocks of Early Mars. Science, 2000, 290, 1927-1937.	12.6	766
4	Mars Global Surveyor Mars Orbiter Camera: Interplanetary cruise through primary mission. Journal of Geophysical Research, 2001, 106, 23429-23570.	3.3	747
5	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
6	Mars Science Laboratory Mission and Science Investigation. Space Science Reviews, 2012, 170, 5-56.	8.1	650
7	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
8	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
9	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	12.6	471
10	Present-Day Impact Cratering Rate and Contemporary Gully Activity on Mars. Science, 2006, 314, 1573-1577.	12.6	461
11	Evidence for Persistent Flow and Aqueous Sedimentation on Early Mars. Science, 2003, 302, 1931-1934.	12.6	453
12	Detection of crystalline hematite mineralization on Mars by the Thermal Emission Spectrometer: Evidence for near-surface water. Journal of Geophysical Research, 2000, 105, 9623-9642.	3.3	427
13	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
14	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	12.6	327
15	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	12.6	327
16	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
17	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
18	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	12.6	280

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19	Distribution of Mid-Latitude Ground Ice on Mars from New Impact Craters. Science, 2009, 325, 1674-1676.	12.6	279
20	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
21	Isotope Ratios of H, C, and O in CO ₂ and H ₂ O of the Martian Atmosphere. Science, 2013, 341, 260-263.	12.6	241
22	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
23	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
24	Curiosityâ€™s Mars Hand Lens Imager (MAHLI) Investigation. Space Science Reviews, 2012, 170, 259-317.	8.1	185
25	Mass movement slope streaks imaged by the Mars Orbiter Camera. Journal of Geophysical Research, 2001, 106, 23607-23633.	3.3	174
26	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the Curiosity rover investigations at Gale crater, Mars. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4245-4250.	7.1	172
27	Evolved gas analyses of sedimentary rocks and eolian sediment in Gale Crater, Mars: Results of the Curiosity rover's sample analysis at Mars instrument from Yellowknife Bay to the Namib Dune. Journal of Geophysical Research E: Planets, 2017, 122, 2574-2609.	3.6	168
28	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
29	The particle size of Martian aeolian dunes. Journal of Geophysical Research, 1991, 96, 22765-22776.	3.3	150
30	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
31	New views of Mars eolian activity, materials, and surface properties: Three vignettes from the Mars Global Surveyor Mars Orbiter Camera. Journal of Geophysical Research, 2000, 105, 1623-1650.	3.3	136
32	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
33	Mars Orbiter Camera observations of Martian dust devils and their tracks (September 1997 to January) Tj ETQq1 1 0.784314 rgBT /Ov	3.3	132
34	Oceans or seas in the Martian northern lowlands: High resolution imaging tests of proposed coastlines. Geophysical Research Letters, 1999, 26, 3049-3052.	4.0	128
35	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
36	Northâ€“south geological differences between the residual polar caps on Mars. Nature, 2000, 404, 161-164.	27.8	112

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37	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. Geophysical Research Letters, 2016, 43, 7398-7407.	4.0	110
38	Water on early Mars: Possible subaqueous sedimentary deposits covering ancient cratered terrain in western Arabia and Sinus Meridiani. Geophysical Research Letters, 1997, 24, 2897-2900.	4.0	97
39	Multiyear Mars Orbiter Camera (MOC) observations of repeated Martian weather phenomena during the northern summer season. Journal of Geophysical Research, 2002, 107, 3-1.	3.3	97
40	Chemistry, mineralogy, and grain properties at Namib and High dunes, Bagnold dune field, Gale crater, Mars: A synthesis of Curiosity rover observations. Journal of Geophysical Research E: Planets, 2017, 122, 2510-2543.	3.6	95
41	Perseveranceâ€™s Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. Space Science Reviews, 2021, 217, 1.	8.1	94
42	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
43	The sedimentary rocks of Sinus Meridiani: Five key observations from data acquired by the Mars Global Surveyor and Mars Odyssey orbiters. Mars the International Journal of Mars Science and Exploration, 2005, , 5-58.	0.8	86
44	Evidence for indurated sand dunes in the Martian north polar region. Journal of Geophysical Research, 2006, 111, .	3.3	82
45	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
46	Mars Reconnaissance Orbiter Mars Color Imager (MARCI): Instrument description, calibration, and performance. Journal of Geophysical Research, 2009, 114, .	3.3	79
47	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. Space Science Reviews, 2021, 217, 24.	8.1	76
48	Martian sedimentary rock stratigraphy: Outcrops and interbedded craters of northwest Sinus Meridiani and southwest Arabia Terra. Geophysical Research Letters, 2002, 29, 32-1-32-4.	4.0	74
49	Seasonal surface frost at low latitudes on Mars. Icarus, 2006, 180, 321-334.	2.5	73
50	Mars aeolian sand: Regional variations among dark-hued crater floor features. Journal of Geophysical Research, 1994, 99, 1997.	3.3	70
51	A Lacustrine Paleoenvironment Recorded at Vera RubinRidge, Gale Crater: Overview of the Sedimentology and Stratigraphy Observed by the Mars ScienceLaboratory Curiosity Rover. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006307.	3.6	69
52	Star and Linear Dunes on Mars. Icarus, 1994, 112, 448-464.	2.5	68
53	MAHLI at the Rocknest sand shadow: Science and scienceâ€enabling activities. Journal of Geophysical Research E: Planets, 2013, 118, 2338-2360.	3.6	67
54	SHERLOC: Scanning habitable environments with Raman & luminescence for organics & chemicals. , 2015, , .		67

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55	Hellas Planitia, Mars: Site of net dust erosion and implications for the nature of basin floor deposits. Geophysical Research Letters, 1993, 20, 1599-1602.	4.0	66
56	Mineralâ€Filled Fractures as Indicators of Multigenerational Fluid Flow in the Pahrump Hills Member of the Murray Formation, Gale Crater, Mars. Earth and Space Science, 2019, 6, 238-265.	2.6	66
57	Low-albedo surfaces and eolian sediment: Mars Orbiter Camera views of western Arabia Terra craters and wind streaks. Journal of Geophysical Research, 2002, 107, 5-1.	3.3	63
58	Shaler: inÂsitu analysis of a fluvial sedimentary deposit on Mars. Sedimentology, 2018, 65, 96-122.	3.1	59
59	Catastrophic flood sediments in Chryse Basin, Mars, and Quincy Basin, Washington: Application of sandar facies model. Journal of Geophysical Research, 1997, 102, 4185-4200.	3.3	53
60	Composition of conglomerates analyzed by the Curiosity rover: Implications for Gale Crater crust and sediment sources. Journal of Geophysical Research E: Planets, 2016, 121, 353-387.	3.6	53
61	Mars landscape evolution: influence of stratigraphy on geomorphology in the north polar region. Geomorphology, 2003, 52, 289-297.	2.6	50
62	Geologic context of the Mars radar â€œStealthâ€•region in southwestern Tharsis. Journal of Geophysical Research, 1997, 102, 21545-21567.	3.3	48
63	Encounters with an unearthly mudstone: Understanding the first mudstone found on Mars. Sedimentology, 2017, 64, 311-358.	3.1	48
64	AVIATRâ€”Aerial Vehicle for In-situ and Airborne Titan Reconnaissance. Experimental Astronomy, 2012, 33, 55-127.	3.7	45
65	Deconvolution of distinct lithology chemistry through oversampling with the Mars Science Laboratory Alpha Particle Xâ€Ray Spectrometer. X-Ray Spectrometry, 2016, 45, 155-161.	1.4	44
66	Science Goals and Mission Architecture of the Europa Lander Mission Concept. Planetary Science Journal, 2022, 3, 22.	3.6	42
67	Aeolian Dunes as Evidence for Explosive Volcanism in the Tharsis Region of Mars. Icarus, 1997, 130, 96-114.	2.5	39
68	Spectroscopic study of the Moses Lake dune field, Washington: Determination of compositional distributions and source lithologies. Journal of Geophysical Research, 2002, 107, 2-1-2-15.	3.3	39
69	Syndepositional precipitation of calcium sulfate in Gale Crater, Mars. Terra Nova, 2018, 30, 431-439.	2.1	35
70	A Rock Record of Complex Aeolian Bedforms in a Hesperian Desert Landscape: The Stimson Formation as Exposed in the Murray Buttes, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006554.	3.6	34
71	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
72	Modeling and mitigation of sample relief effects applied to chemistry measurements by the Mars Science Laboratory Alpha Particle X-ray Spectrometer. X-Ray Spectrometry, 2017, 46, 229-236.	1.4	28

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73	MAHLI on Mars: lessons learned operating a geoscience camera on a landed payload robotic arm. Geoscientific Instrumentation, Methods and Data Systems, 2016, 5, 205-217.	1.6	26
74	Inverted stream channels in the Western Desert of Egypt: Synergistic remote, field observations and laboratory analysis on Earth with applications to Mars. Icarus, 2018, 309, 105-124.	2.5	24
75	Mars Science Laboratory Mission and Science Investigation. , 2012, , 5-56.		23
76	Impactâ€induced overland fluid flow and channelized erosion at Lyot Crater, Mars. Geophysical Research Letters, 2010, 37, .	4.0	22
77	Extraformational sediment recycling on Mars. , 2020, 16, 1508-1537.		20
78	Global inventory of fluvial ridges on Earth and lessons applicable to Mars. Earth-Science Reviews, 2021, 216, 103561.	9.1	20
79	Ancient Stratigraphy Preserving a Wetâ€toâ€Dry, Fluvioâ€Lacustrine to Aeolian Transition Near Barth Crater, Arabia Terra, Mars. Journal of Geophysical Research E: Planets, 2019, 124, 3402-3421.	3.6	17
80	Extensive Polygonal Fracture Network in Siccar Point group Strata: Fracture Mechanisms and Implications for Fluid Circulation in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2019, 124, 2613-2634.	3.6	16
81	Rocks and aeolian features in the Mars Pathfinder landing site region: Viking infrared thermal mapper observations. Journal of Geophysical Research, 1997, 102, 4107-4116.	3.3	14
82	MSL-APXS titanium observation tray measurements: Laboratory experiments and results for the Rocknest fines at theCuriosityfield site in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1046-1060.	3.6	13
83	Deucalionis Regio, Mars: Evidence for a New Type of Immobile Weathered Soil Unit. Icarus, 1996, 124, 296-307.	2.5	12
84	Tectonic evolution of Juventae Chasma, Mars, and the deformational and depositional structural attributes of the four major light-toned rock exposures therein. Icarus, 2019, 333, 199-233.	2.5	12
85	Origin and composition of three heterolithic boulder- and cobble-bearing deposits overlying the Murray and Stimson formations, Gale Crater, Mars. Icarus, 2020, 350, 113897.	2.5	11
86	Engraved on the rocksâ€”Aeolian abrasion of Martian mudstone exposures and their relationship to modern wind patterns in Gale Crater, Mars. Depositional Record, 2020, 6, 625-647.	1.7	9
87	Recognition of Sedimentary Rock Occurrences in Satellite and Aerial Images of Other Worldsâ€”Insights from Mars. Remote Sensing, 2021, 13, 4296.	4.0	9
88	Diurnal Variability in Aeolian Sediment Transport at Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	9
89	Diagenesis Revealed by Fineâ€Scale Features at Vera Rubin Ridge, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2019JE006311.	3.6	7
90	Challenges in crater chronology on Mars as reflected in Jezero crater. , 2021, , 97-122.		5

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91	The lithified aeolian dune field adjacent to the Apollinaris Sulci, Mars: Geological history and paleo-wind record. Icarus, 2022, 373, 114788.	2.5	5
92	Quantitative Relief Models of Rock Surfaces on Mars at Sub-millimeter Scales from Mars Curiosity Rover Mars Hand Lens Imager (MAHLI) Observations: Geologic Implications. Microscopy and Microanalysis, 2017, 23, 2146-2147.	0.4	4
93	The light-toned stratified sedimentary rock exposures in western Juventae Chasma, Mars, in context. Icarus, 2018, 312, 7-35.	2.5	4
94	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
95	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
96	Ripples, Transverse Aeolian Ridges, and Darkâ€Toned Sand Dunes on Mars: A Case Study in Terra Sabaea. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006953.	3.6	2
97	Fluvial Depositional Systems of the African Humid Period: An Analog for an Early, Wet Mars in the Eastern Sahara. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	2
98	Scientists, educators prepare for Mars Pathfinder mission. Eos, 1996, 77, 9.	0.1	1
99	Curiosity Rover Mars Hand Lens Imager (MAHLI) Views of the Sediments and Sedimentary Rocks of Gale Crater, Mars. Microscopy and Microanalysis, 2017, 23, 2142-2143.	0.4	1
100	A ROCK RECORD OF COMPLEX AEOLIAN BEDFORMS IN A HESPERIAN DESERT LANDSCAPE:THE STIMSON FORMATION AS EXPOSED IN THE MURRAY BUTTES, GALE CRATER, MARS. , 2020, , .		1
101	K-12 Education Outreach Program Initiated by a University Research Team for the Mars Global Surveyor Thermal Emission Spectrometer Project. Journal of Geoscience Education, 1996, 44, 183-188.	1.4	1
102	Sharing your science in a one-day K-12 teacher workshop. Eos, 2001, 82, 655-655.	0.1	0
103	K-12 Educator Involvement in the Mars Pathfinder Field Trips in the Channeled Scabland of Washington and Idaho. Journal of Geoscience Education, 2000, 48, 150-160.	1.4	0
104	Curiosityâ€™s Mars Hand Lens Imager (MAHLI) Investigation. , 2012, , 259-317.		0