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	The lithified aeolian dune field adjacent to the Apollinaris Sulci, Mars: Geological history and paleo-wind record. Icarus, 2022, 373, 114788.	2.5	5
2	Science Goals and Mission Architecture of the Europa Lander Mission Concept. Planetary Science Journal, 2022, 3, 22.	3.6	42
3	Diurnal Variability in Aeolian Sediment Transport at Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	9
4	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
5	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
6	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
7	Challenges in crater chronology on Mars as reflected in Jezero crater. , 2021, , 97-122.		5
8	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. Space Science Reviews, 2021, 217, 24.	8.1	76
9	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
10	Perseveranceâ€™s Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. Space Science Reviews, 2021, 217, 1.	8.1	94
11	Global inventory of fluvial ridges on Earth and lessons applicable to Mars. Earth-Science Reviews, 2021, 216, 103561.	9.1	20
12	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
13	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
14	Recognition of Sedimentary Rock Occurrences in Satellite and Aerial Images of Other Worldsâ€”Insights from Mars. Remote Sensing, 2021, 13, 4296.	4.0	9
15	Extraformational sediment recycling on Mars. , 2020, 16, 1508-1537.		20
16	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
17	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
18	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

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19	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
20	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
21	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
22	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
23	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
24	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
25	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
26	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
27	The light-toned stratified sedimentary rock exposures in western Juventae Chasma, Mars, in context. Icarus, 2018, 312, 7-35.	2.5	4
28	Shaler: inÂsitu analysis of a fluvial sedimentary deposit on Mars. Sedimentology, 2018, 65, 96-122.	3.1	59
29	Syndepositional precipitation of calcium sulfate in Gale Crater, Mars. Terra Nova, 2018, 30, 431-439.	2.1	35
30	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
31	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
32	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
33	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
34	Encounters with an unearthly mudstone: Understanding the first mudstone found on Mars. Sedimentology, 2017, 64, 311-358.	3.1	48
35	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
36	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

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37	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
38	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
39	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. Geophysical Research Letters, 2016, 43, 7398-7407.	4.0	110
40	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
41	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
42	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
43	SHERLOC: Scanning habitable environments with Raman & luminescence for organics & chemicals. , 2015, , .		67
44	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
45	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	12.6	471
46	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
47	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
48	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
49	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
50	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
51	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
52	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
53	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
54	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	12.6	327

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55	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	12.6	280
56	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	12.6	327
57	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
58	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
59	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
60	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
61	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
62	MAHLI at the Rocknest sand shadow: Science and scienceâ€enabling activities. Journal of Geophysical Research E: Planets, 2013, 118, 2338-2360.	3.6	67
63	Mars Science Laboratory Mission and Science Investigation. Space Science Reviews, 2012, 170, 5-56.	8.1	650
64	Curiosityâ€™s Mars Hand Lens Imager (MAHLI) Investigation. Space Science Reviews, 2012, 170, 259-317.	8.1	185
65	AVIATRâ€”Aerial Vehicle for In-situ and Airborne Titan Reconnaissance. Experimental Astronomy, 2012, 33, 55-127.	3.7	45
66	Mars Science Laboratory Mission and Science Investigation. , 2012, , 5-56.		23
67	Curiosityâ€™s Mars Hand Lens Imager (MAHLI) Investigation. , 2012, , 259-317.		0
68	Impactâ€induced overland fluid flow and channelized erosion at Lyot Crater, Mars. Geophysical Research Letters, 2010, 37, .	4.0	22
69	Distribution of Mid-Latitude Ground Ice on Mars from New Impact Craters. Science, 2009, 325, 1674-1676.	12.6	279
70	Mars Reconnaissance Orbiter Mars Color Imager (MARCI): Instrument description, calibration, and performance. Journal of Geophysical Research, 2009, 114, .	3.3	79
71	Context Camera Investigation on board the Mars Reconnaissance Orbiter. Journal of Geophysical Research, 2007, 112, .	3.3	953
72	Evidence for indurated sand dunes in the Martian north polar region. Journal of Geophysical Research, 2006, 111, .	3.3	82

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73	Mars Orbiter Camera observations of Martian dust devils and their tracks (September 1997 to January) Tj ETQq1 1 0.784314 rgBT /Over	3.3	182
74	Seasonal surface frost at low latitudes on Mars. Icarus, 2006, 180, 321-334.	2.5	73
75	Present-Day Impact Cratering Rate and Contemporary Gully Activity on Mars. Science, 2006, 314, 1573-1577.	12.6	461
76	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
77	Mars landscape evolution: influence of stratigraphy on geomorphology in the north polar region. Geomorphology, 2003, 52, 289-297.	2.6	50
78	Evidence for Persistent Flow and Aqueous Sedimentation on Early Mars. Science, 2003, 302, 1931-1934.	12.6	453
79	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
80	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
81	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
82	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
83	Sharing your science in a one-day K-12 teacher workshop. Eos, 2001, 82, 655-655.	0.1	0
84	Mass movement slope streaks imaged by the Mars Orbiter Camera. Journal of Geophysical Research, 2001, 106, 23607-23633.	3.3	174
85	Mars Global Surveyor Mars Orbiter Camera: Interplanetary cruise through primary mission. Journal of Geophysical Research, 2001, 106, 23429-23570.	3.3	747
86	Northâ€“south geological differences between the residual polar caps on Mars. Nature, 2000, 404, 161-164.	27.8	112
87	Evidence for Recent Groundwater Seepage and Surface Runoff on Mars. Science, 2000, 288, 2330-2335.	12.6	998
88	Sedimentary Rocks of Early Mars. Science, 2000, 290, 1927-1937.	12.6	766
89	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
90	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

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91	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
92	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
93	Geologic context of the Mars radar â€œStealthâ€•region in southwestern Tharsis. Journal of Geophysical Research, 1997, 102, 21545-21567.	3.3	48
94	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
95	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
96	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
97	Aeolian Dunes as Evidence for Explosive Volcanism in the Tharsis Region of Mars. Icarus, 1997, 130, 96-114.	2.5	39
98	Scientists, educators prepare for Mars Pathfinder mission. Eos, 1996, 77, 9.	0.1	1
99	Deucalionis Regio, Mars: Evidence for a New Type of Immobile Weathered Soil Unit. Icarus, 1996, 124, 296-307.	2.5	12
100	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
101	Star and Linear Dunes on Mars. Icarus, 1994, 112, 448-464.	2.5	68
102	Mars aeolian sand: Regional variations among dark-hued crater floor features. Journal of Geophysical Research, 1994, 99, 1997.	3.3	70
103	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
104	The particle size of Martian aeolian dunes. Journal of Geophysical Research, 1991, 96, 22765-22776.	3.3	150