

# James J Wray

## List of Publications by Year in descending order

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85  
papers

11,863  
citations

47006

47  
h-index

56724

83  
g-index

86  
all docs

86  
docs citations

86  
times ranked

5872  
citing authors

#	ARTICLE	IF	CITATIONS
1	Contemporary Liquid Water on Mars?. Annual Review of Earth and Planetary Sciences, 2021, 49, 141-171.	11.0	10
2	Igneous or Mud Volcanism on Mars? The Case Study of Hephaestus Fossae. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006390.	3.6	14
3	Compositional Mapping of the Nili Patera Feldspathic Unit: Extent and Implications for Formation. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006383.	3.6	2
4	Modeling transmission windows in Titan's lower troposphere: Implications for infrared spectrometers aboard future aerial and surface missions. Icarus, 2021, 357, 114228.	2.5	3
5	Widespread Exposures of Extensive Clean Shallow Ice in the Midlatitudes of Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006617.	3.6	29
6	Insights into Mars mud volcanism using visible and near-infrared spectroscopy. Icarus, 2021, 359, 114299.	2.5	3
7	Multiple mineral horizons in layered outcrops at Mawrth Vallis, Mars, signify changing geochemical environments on early Mars. Icarus, 2020, 341, 113634.	2.5	24
8	Deposition of >3.7 Ga clay-rich strata of the Mawrth Vallis Group, Mars, in lacustrine, alluvial, and aeolian environments. Bulletin of the Geological Society of America, 2020, 132, 17-30.	3.3	20
9	Landslides on Ceres: Inferences Into Ice Content and Layering in the Upper Crust. Journal of Geophysical Research E: Planets, 2019, 124, 1512-1524.	3.6	16
10	The mid-IR spectral effects of darkening agents and porosity on the silicate surface features of airless bodies. Icarus, 2019, 321, 71-81.	2.5	3
11	Wind-Eroded Crater Floors and Intercrater Plains, Terra Sabaea, Mars. Journal of Geophysical Research E: Planets, 2018, 123, 445-467.	3.6	21
12	Image Simulation and Assessment of the Colour and Spatial Capabilities of the Colour and Stereo Surface Imaging System (CaSSIS) on the ExoMars Trace Gas Orbiter. Space Science Reviews, 2018, 214, 1.	8.1	24
13	Exposed subsurface ice sheets in the Martian mid-latitudes. Science, 2018, 359, 199-201.	12.6	174
14	Mineralogic evidence for subglacial volcanism in the Sisyphi Montes region of Mars. Icarus, 2018, 311, 357-370.	2.5	21
15	Constraints on the Metabolic Activity of Microorganisms in Atacama Surface Soils Inferred from Refractory Biomarkers: Implications for Martian Habitability and Biomarker Detection. Astrobiology, 2018, 18, 955-966.	3.0	20
16	A record of igneous evolution in Elysium, a major martian volcanic province. Scientific Reports, 2017, 7, 43177.	3.3	12
17	Electrification of sand on Titan and its influence on sediment transport. Nature Geoscience, 2017, 10, 260-265.	12.9	39
18	Seasonal Slumps in Juventae Chasma, Mars. Journal of Geophysical Research E: Planets, 2017, 122, 2193-2214.	3.6	14

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19	The Colour and Stereo Surface Imaging System (CaSSIS) for the ExoMars Trace Gas Orbiter. <i>Space Science Reviews</i> , 2017, 212, 1897-1944.	8.1	111
20	Amazonian volcanism inside Valles Marineris on Mars. <i>Earth and Planetary Science Letters</i> , 2017, 473, 122-130.	4.4	33
21	Xeropreservation of functionalized lipid biomarkers in hyperarid soils in the Atacama Desert. <i>Organic Geochemistry</i> , 2017, 103, 97-104.	1.8	44
22	Discovery of alunite in Cross crater, Terra Sirenum, Mars: Evidence for acidic, sulfurous waters. <i>American Mineralogist</i> , 2016, 101, 1527-1542.	1.9	51
23	Magmatic complexity on early Mars as seen through a combination of orbital, in-situ and meteorite data. <i>Lithos</i> , 2016, 254-255, 36-52.	1.4	66
24	Small edifice features in Chryse Planitia, Mars: Assessment of a mud volcano hypothesis. <i>Icarus</i> , 2016, 268, 56-75.	2.5	43
25	The sustainability of habitability on terrestrial planets: Insights, questions, and needed measurements from Mars for understanding the evolution of Earth-like worlds. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1927-1961.	3.6	72
26	The association of hydrogen with sulfur on Mars across latitudes, longitudes, and compositional extremes. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1321-1341.	3.6	9
27	Orbital evidence for more widespread carbonate-bearing rocks on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 652-677.	3.6	109
28	SILICATES ON IAPETUS FROM CASSINI'S COMPOSITE INFRARED SPECTROMETER. <i>Astrophysical Journal Letters</i> , 2015, 811, L27.	8.3	1
29	Mars Reconnaissance Orbiter and Opportunity observations of the Burns formation: Crater hopping at Meridiani Planum. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 429-451.	3.6	30
30	In situ evidence for continental crust on early Mars. <i>Nature Geoscience</i> , 2015, 8, 605-609.	12.9	233
31	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the <i>Curiosity</i> rover investigations at Gale crater, Mars. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4245-4250.	7.1	172
32	Transient liquid water and water activity at Gale crater on Mars. <i>Nature Geoscience</i> , 2015, 8, 357-361.	12.9	277
33	Spectral evidence for hydrated salts in recurring slope lineae on Mars. <i>Nature Geoscience</i> , 2015, 8, 829-832.	12.9	513
34	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
35	Mixtures of clays and sulfates within deposits in western Melas Chasma, Mars. <i>Icarus</i> , 2015, 251, 291-314.	2.5	53
36	Sulfates hydrating bulk soil in the Martian low and middle latitudes. <i>Geophysical Research Letters</i> , 2014, 41, 7987-7996.	4.0	35

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37	Recurring slope lineae in equatorial regions of Mars. <i>Nature Geoscience</i> , 2014, 7, 53-58.	12.9	248
38	HiRISE observations of Recurring Slope Lineae (RSL) during southern summer on Mars. <i>Icarus</i> , 2014, 231, 365-376.	2.5	90
39	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	12.6	323
40	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1242777.	12.6	687
41	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1243480.	12.6	508
42	Mars's Surface Radiation Environment Measured with the Mars Science Laboratory's Curiosity Rover. <i>Science</i> , 2014, 343, 1244797.	12.6	475
43	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	12.6	246
44	A New Analysis of Mars's Special Regions: Findings of the Second MEPAG Special Regions Science Analysis Group (SR-SAG2). <i>Astrobiology</i> , 2014, 14, 887-968.	3.0	317
45	Occurrences of possible hydrated sulfates in the southern high latitudes of Mars. <i>Icarus</i> , 2014, 243, 311-324.	2.5	22
46	Valles Marineris dune sediment provenance and pathways. <i>Icarus</i> , 2014, 232, 187-219.	2.5	38
47	Sulfur-bearing phases detected by evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 373-393.	3.6	65
48	Abundances and implications of volatile-bearing species from evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 237-254.	3.6	73
49	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. <i>Science</i> , 2013, 341, 1238932.	12.6	327
50	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. <i>Science</i> , 2013, 341, 1239505.	12.6	280
51	Prolonged magmatic activity on Mars inferred from the detection of felsic rocks. <i>Nature Geoscience</i> , 2013, 6, 1013-1017.	12.9	131
52	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. <i>Science</i> , 2013, 341, 263-266.	12.6	327
53	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	12.6	367
54	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326

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55	The Petrochemistry of Jake_M: A Martian Mugearite. <i>Science</i> , 2013, 341, 1239463.	12.6	134
56	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	12.6	215
57	Low Upper Limit to Methane Abundance on Mars. <i>Science</i> , 2013, 342, 355-357.	12.6	103
58	Gale crater: the Mars Science Laboratory/Curiosity Rover Landing Site. <i>International Journal of Astrobiology</i> , 2013, 12, 25-38.	1.6	76
59	Spectral constraints on the formation mechanism of recurring slope lineae. <i>Geophysical Research Letters</i> , 2013, 40, 5621-5626.	4.0	33
60	An impact origin for hydrated silicates on Mars: A synthesis. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 994-1012.	3.6	46
61	Hydrated minerals on Endeavour Crater's rim and interior, and surrounding plains: New insights from CRISM data. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	27
62	The Sample Analysis at Mars Investigation and Instrument Suite. <i>Space Science Reviews</i> , 2012, 170, 401-478.	8.1	435
63	The Sample Analysis at Mars Investigation and Instrument Suite. , 2012, , 401-478.		5
64	Temporal observations of bright soil exposures at Gusev crater, Mars. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	19
65	Columbus crater and other possible groundwater-fed paleolakes of Terra Sirenum, Mars. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	148
66	Seasonal Flows on Warm Martian Slopes. <i>Science</i> , 2011, 333, 740-743.	12.6	451
67	Geology of possible Martian methane source regions. <i>Planetary and Space Science</i> , 2011, 59, 196-202.	1.7	20
68	The High Resolution Imaging Science Experiment (HiRISE) during MRO's Primary Science Phase (PSP). <i>Icarus</i> , 2010, 205, 2-37.	2.5	153
69	Geomorphic knobs of Candor Chasma, Mars: New Mars Reconnaissance Orbiter data and comparisons to terrestrial analogs. <i>Icarus</i> , 2010, 205, 138-153.	2.5	26
70	Aeolian bedforms, yardangs, and indurated surfaces in the Tharsis Montes as seen by the HiRISE Camera: Evidence for dust aggregates. <i>Icarus</i> , 2010, 205, 165-182.	2.5	80
71	Identification of the Ca-sulfate bassanite in Mawrth Vallis, Mars. <i>Icarus</i> , 2010, 209, 416-421.	2.5	114
72	The Mawrth Vallis Region of Mars: A Potential Landing Site for the Mars Science Laboratory (MSL) Mission. <i>Astrobiology</i> , 2010, 10, 687-703.	3.0	48

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73	Diverse aqueous environments on ancient Mars revealed in the southern highlands. <i>Geology</i> , 2009, 37, 1043-1046.	4.4	142
74	Phyllosilicates and sulfates at Endeavour Crater, Meridiani Planum, Mars. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	88
75	Identification of hydrated silicate minerals on Mars using MRO's CRISM: Geologic context near Nili Fossae and implications for aqueous alteration. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	483
76	A synthesis of Martian aqueous mineralogy after 1 Mars year of observations from the Mars Reconnaissance Orbiter. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	445
77	Chemically striking regions on Mars and Stealth revisited. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	43
78	Compositional stratigraphy of clay-bearing layered deposits at Mawrth Vallis, Mars. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	165
79	Wind-driven particle mobility on Mars: Insights from Mars Exploration Rover observations at 'El Dorado' and surroundings at Gusev Crater. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	255
80	Orbital Identification of Carbonate-Bearing Rocks on Mars. <i>Science</i> , 2008, 322, 1828-1832.	12.6	560
81	A New Technique for Galaxy Photometric Redshifts in the Sloan Digital Sky Survey. <i>Astrophysical Journal</i> , 2008, 678, 144-153.	4.5	18
82	A Closer Look at Water-Related Geologic Activity on Mars. <i>Science</i> , 2007, 317, 1706-1709.	12.6	185
83	The Shape, Multiplicity, and Evolution of Superclusters in $\Lambda$ CDM Cosmology. <i>Astrophysical Journal</i> , 2006, 652, 907-916.	4.5	24
84	OGLE small-amplitude variables in the Galactic bar. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 349, 1059-1068.	4.4	55
85	Transient liquid water and water activity at Gale crater on Mars. , 0, .		2