

James J Wray

List of Publications by Year in descending order

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85
papers

11,863
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47006

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56724

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86
times ranked

5872
citing authors

#	ARTICLE	IF	CITATIONS
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1242777.	12.6	687
2	Orbital Identification of Carbonate-Bearing Rocks on Mars. <i>Science</i> , 2008, 322, 1828-1832.	12.6	560
3	Spectral evidence for hydrated salts in recurring slope lineae on Mars. <i>Nature Geoscience</i> , 2015, 8, 829-832.	12.9	513
4	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1243480.	12.6	508
5	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
6	Mars's Surface Radiation Environment Measured with the Mars Science Laboratory's Curiosity Rover. <i>Science</i> , 2014, 343, 1244797.	12.6	475
7	Seasonal Flows on Warm Martian Slopes. <i>Science</i> , 2011, 333, 740-743.	12.6	451
8	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
9	The Sample Analysis at Mars Investigation and Instrument Suite. <i>Space Science Reviews</i> , 2012, 170, 401-478.	8.1	435
10	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	12.6	367
11	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. <i>Science</i> , 2013, 341, 1238932.	12.6	327
12	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. <i>Science</i> , 2013, 341, 263-266.	12.6	327
13	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326
14	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	12.6	323
15	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
16	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. <i>Science</i> , 2013, 341, 1239505.	12.6	280
17	Transient liquid water and water activity at Gale crater on Mars. <i>Nature Geoscience</i> , 2015, 8, 357-361.	12.9	277
18	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

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19	Recurring slope lineae in equatorial regions of Mars. <i>Nature Geoscience</i> , 2014, 7, 53-58.	12.9	248
20	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	12.6	246
21	In situ evidence for continental crust on early Mars. <i>Nature Geoscience</i> , 2015, 8, 605-609.	12.9	233
22	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	12.6	215
23	A Closer Look at Water-Related Geologic Activity on Mars. <i>Science</i> , 2007, 317, 1706-1709.	12.6	185
24	Exposed subsurface ice sheets in the Martian mid-latitudes. <i>Science</i> , 2018, 359, 199-201.	12.6	174
25	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
26	Compositional stratigraphy of clay-bearing layered deposits at Mawrth Vallis, Mars. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	165
27	The High Resolution Imaging Science Experiment (HiRISE) during MRO's Primary Science Phase (PSP). <i>Icarus</i> , 2010, 205, 2-37.	2.5	153
28	Columbus crater and other possible groundwater-fed paleolakes of Terra Sirenum, Mars. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	148
29	Diverse aqueous environments on ancient Mars revealed in the southern highlands. <i>Geology</i> , 2009, 37, 1043-1046.	4.4	142
30	The Petrochemistry of Jake_M: A Martian Mugearite. <i>Science</i> , 2013, 341, 1239463.	12.6	134
31	Prolonged magmatic activity on Mars inferred from the detection of felsic rocks. <i>Nature Geoscience</i> , 2013, 6, 1013-1017.	12.9	131
32	Identification of the Ca-sulfate bassanite in Mawrth Vallis, Mars. <i>Icarus</i> , 2010, 209, 416-421.	2.5	114
33	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
34	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
35	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
36	Low Upper Limit to Methane Abundance on Mars. <i>Science</i> , 2013, 342, 355-357.	12.6	103

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37	HiRISE observations of Recurring Slope Lineae (RSL) during southern summer on Mars. <i>Icarus</i> , 2014, 231, 365-376.	2.5	90
38	Phyllosilicates and sulfates at Endeavour Crater, Meridiani Planum, Mars. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	88
39	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
40	Gale crater: the Mars Science Laboratory/Curiosity Rover Landing Site. <i>International Journal of Astrobiology</i> , 2013, 12, 25-38.	1.6	76
41	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
42	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
43	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
44	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
45	OGLE small-amplitude variables in the Galactic bar. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 349, 1059-1068.	4.4	55
46	Mixtures of clays and sulfates within deposits in western Melas Chasma, Mars. <i>Icarus</i> , 2015, 251, 291-314.	2.5	53
47	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
48	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
49	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
50	Xeropreservation of functionalized lipid biomarkers in hyperarid soils in the Atacama Desert. <i>Organic Geochemistry</i> , 2017, 103, 97-104.	1.8	44
51	Chemically striking regions on Mars and Stealth revisited. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	43
52	Small edifice features in Chryse Planitia, Mars: Assessment of a mud volcano hypothesis. <i>Icarus</i> , 2016, 268, 56-75.	2.5	43
53	Electrification of sand on Titan and its influence on sediment transport. <i>Nature Geoscience</i> , 2017, 10, 260-265.	12.9	39
54	Valles Marineris dune sediment provenance and pathways. <i>Icarus</i> , 2014, 232, 187-219.	2.5	38

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55	Sulfates hydrating bulk soil in the Martian low and middle latitudes. <i>Geophysical Research Letters</i> , 2014, 41, 7987-7996.	4.0	35
56	Spectral constraints on the formation mechanism of recurring slope lineae. <i>Geophysical Research Letters</i> , 2013, 40, 5621-5626.	4.0	33
57	Amazonian volcanism inside Valles Marineris on Mars. <i>Earth and Planetary Science Letters</i> , 2017, 473, 122-130.	4.4	33
58	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
59	Widespread Exposures of Extensive Clean Shallow Ice in the Midlatitudes of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006617.	3.6	29
60	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
61	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
62	The Shape, Multiplicity, and Evolution of Superclusters in Λ CDM Cosmology. <i>Astrophysical Journal</i> , 2006, 652, 907-916.	4.5	24
63	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. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	24
64	Multiple mineral horizons in layered outcrops at Mawrth Vallis, Mars, signify changing geochemical environments on early Mars. <i>Icarus</i> , 2020, 341, 113634.	2.5	24
65	Occurrences of possible hydrated sulfates in the southern high latitudes of Mars. <i>Icarus</i> , 2014, 243, 311-324.	2.5	22
66	Wind-eroded Crater Floors and Intercrater Plains, Terra Sabaea, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 445-467.	3.6	21
67	Mineralogic evidence for subglacial volcanism in the Sisyphi Montes region of Mars. <i>Icarus</i> , 2018, 311, 357-370.	2.5	21
68	Geology of possible Martian methane source regions. <i>Planetary and Space Science</i> , 2011, 59, 196-202.	1.7	20
69	Constraints on the Metabolic Activity of Microorganisms in Atacama Surface Soils Inferred from Refractory Biomarkers: Implications for Martian Habitability and Biomarker Detection. <i>Astrobiology</i> , 2018, 18, 955-966.	3.0	20
70	Deposition of \sim 3.7 Ga clay-rich strata of the Mawrth Vallis Group, Mars, in lacustrine, alluvial, and aeolian environments. <i>Bulletin of the Geological Society of America</i> , 2020, 132, 17-30.	3.3	20
71	Temporal observations of bright soil exposures at Gusev crater, Mars. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	19
72	A New Technique for Galaxy Photometric Redshifts in the Sloan Digital Sky Survey. <i>Astrophysical Journal</i> , 2008, 678, 144-153.	4.5	18

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73	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
74	Seasonal Slumps in Juventae Chasma, Mars. Journal of Geophysical Research E: Planets, 2017, 122, 2193-2214.	3.6	14
75	Igneous or Mud Volcanism on Mars? The Case Study of Hephaestus Fossae. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006390.	3.6	14
76	A record of igneous evolution in Elysium, a major martian volcanic province. Scientific Reports, 2017, 7, 43177.	3.3	12
77	Contemporary Liquid Water on Mars?. Annual Review of Earth and Planetary Sciences, 2021, 49, 141-171.	11.0	10
78	The association of hydrogen with sulfur on Mars across latitudes, longitudes, and compositional extremes. Journal of Geophysical Research E: Planets, 2016, 121, 1321-1341.	3.6	9
79	The Sample Analysis at Mars Investigation and Instrument Suite. , 2012, , 401-478.		5
80	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
81	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
82	Insights into Mars mud volcanism using visible and near-infrared spectroscopy. Icarus, 2021, 359, 114299.	2.5	3
83	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
84	Transient liquid water and water activity at Gale crater on Mars. , 0, .		2
85	SILICATES ON IAPETUS FROM CASSINI'S COMPOSITE INFRARED SPECTROMETER. Astrophysical Journal Letters, 2015, 811, L27.	8.3	1