C J Hardgrove

List of Publications by Year
in descending order

55 papers	6,488 citations	126708 33 h-index	161609 54 g-index
55 all docs	55 docs citations	55 times ranked	4306 citing authors

#	Article	IF	Citations
1	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. Space Science Reviews, 2021, 217, 24.	3.7	76
2	Compact readout of large CLYC scintillators with silicon photomultipler arrays. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 951, 162928.	0.7	12
3	The Lunar Polar Hydrogen Mapper CubeSat Mission. IEEE Aerospace and Electronic Systems Magazine, 2020, 35, 54-69.	2.3	15
4	Evidence for a Diagenetic Origin of Vera Rubin Ridge, Gale Crater, Mars: Summary and Synthesis of Curiosity's Exploration Campaign. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006527.	1.5	69
5	Identification and Description of a Silicic Volcaniclastic Layer in Gale Crater, Mars, Using Active Neutron Interrogation. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006180.	1.5	16
6	Analysis of Active Neutron Measurements From the Mars Science Laboratory Dynamic Albedo of Neutrons Instrument: Intrinsic Variability, Outliers, and Implications for Future Investigations. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006264.	1.5	4
7	An interval of high salinity in ancient Gale crater lake on Mars. Nature Geoscience, 2019, 12, 889-895.	5.4	105
8	Mars Science Laboratory Dynamic Albedo of Neutrons passive mode data and results from sols 753 to 1292: Pahrump Hills to Naukluft Plateau. Icarus, 2019, 330, 75-90.	1.1	4
9	Shaler: inÂsitu analysis of a fluvial sedimentary deposit on Mars. Sedimentology, 2018, 65, 96-122.	1.6	59
10	Results from the dynamic albedo of neutrons (DAN) passive mode experiment: Yellowknife Bay to Amargosa Valley (Sols 201â€“753). Icarus, 2018, 299, 513-537.	1.1	7
11	Water Abundance of Dunes in Gale Crater, Mars From Active Neutron Experiments and Implications for Amorphous Phases. Geophysical Research Letters, 2018, 45, 12,766.	1.5	22
12	Observed diurnal variations in Mars Science Laboratory Dynamic Albedo of Neutrons passive mode data. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 892, 70-83.	0.7	0
13	In Situ Analysis of Opal in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1955-1972.	1.5	36
14	Visible to near-infrared MSL/Mastcam multispectral imaging: Initial results from select high-interest science targets within Gale Crater, Mars. American Mineralogist, 2017, 102, 1202-1217.	0.9	43
15	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.	1.5	95
16	The Mars Science Laboratory Curiosity rover Mastcam instruments: Preflight and inâ€flight calibration, validation, and data archiving. Earth and Space Science, 2017, 4, 396-452.	1.1	113
17	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. Geophysical Research Letters, 2016, 43, 7398-7407.	1.5	110
18	Hydrogen and chlorine abundances in the Kimberley formation of Gale crater measured by the DAN instrument on board the Mars Science Laboratory Curiosity rover. Journal of Geophysical Research E: Planets, 2016, 121, 836-845.	1.5	23

#	Article	IF	Citations
19	Thermal emission spectroscopy of microcrystalline sedimentary phases: Effects of natural surface roughness on spectral feature shape. Journal of Geophysical Research E: Planets, 2016, 121, 542-555.	1.5	14
20	Data processing of the active neutron experiment DAN for a Martian regolith investigation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 789, 114-127.	0.7	24
21	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.	3.3	172
22	Transient liquid water and water activity at Gale crater on Mars. Nature Geoscience, 2015, 8, 357-361.	5.4	277
23	Water equivalent hydrogen estimates from the first 200 sols of Curiosityâ€™s traverse (Bradbury) Tj ETQq1 1 0.784314 rgBT /Overlo experiment. Icarus, 2015, 262, 102-123.	1.1	16
24	Understanding the signature of rock coatings in laser-induced breakdown spectroscopy data. Icarus, 2015, 249, 62-73.	1.1	49
25	High manganese concentrations in rocks at Gale crater, Mars. Geophysical Research Letters, 2014, 41, 5755-5763.	1.5	81
26	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.	1.5	112
27	A martian case study of segmenting images automatically for granulometry and sedimentology, Part 2: Assessment. Icarus, 2014, 229, 408-417.	1.1	3
28	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	6.0	323
29	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	6.0	687
30	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	6.0	508
31	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	6.0	475
32	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	6.0	246
33	Water and chlorine content in the Martian soil along the first 1900 m of the Curiosity rover traverse as estimated by the DAN instrument. Journal of Geophysical Research E: Planets, 2014, 119, 1579-1596.	1.5	52
34	Local variations of bulk hydrogen and chlorineâ€equivalent neutron absorption content measured at the contact between the Sheepbed and Gillespie Lake units in Yellowknife Bay, Gale Crater, using the DAN instrument onboard Curiosity. Journal of Geophysical Research E: Planets, 2014, 119, 1259-1275.	1.5	33
35	Studying of water consent in Marsâ€™ gale crater: The first results of the DAN experiment on the NASA curiosity rover. Doklady Physics, 2014, 59, 126-128.	0.2	3
36	A martian case study of segmenting images automatically for granulometry and sedimentology, Part 1: Algorithm. Icarus, 2014, 229, 400-407.	1.1	9

#	Article	IF	Citations
37	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	6.0	327
38	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	6.0	280
39	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	6.0	327
40	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	6.0	367
41	Isotope Ratios of H, C, and O in CO ₂ and H ₂ O of the Martian Atmosphere. Science, 2013, 341, 260-263.	6.0	241
42	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	6.0	326
43	Thermal infrared and Raman microspectroscopy of moganite-bearing rocks. American Mineralogist, 2013, 98, 78-84.	0.9	8
44	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	6.0	134
45	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	6.0	215
46	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	6.0	103
47	MAHLI at the Rocknest sand shadow: Science and scienceâ€enabling activities. Journal of Geophysical Research E: Planets, 2013, 118, 2338-2360.	1.5	67
48	Neutron background environment measured by the Mars Science Laboratory's Dynamic Albedo of Neutrons instrument during the first 100 sols. Journal of Geophysical Research E: Planets, 2013, 118, 2400-2412.	1.5	28
49	Effects of geochemical composition on neutron die-away measurements: Implications for Mars Science Laboratory's Dynamic Albedo of Neutrons experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 659, 442-455.	0.7	26
50	Evidence for episodic alluvial fan formation in far western Terra Tyrrhena, Mars. Icarus, 2011, 211, 222-237.	1.1	31
51	Thermal imaging of sedimentary features on alluvial fans. Planetary and Space Science, 2010, 58, 482-508.	0.9	16
52	Thermal imaging of alluvial fans: A new technique for remote classification of sedimentary features. Earth and Planetary Science Letters, 2009, 285, 124-130.	1.8	36
53	Life in the Atacama: Searching for life with rovers (science overview). Journal of Geophysical Research, 2007, 112, .	3.3	42
54	Surface and subsurface composition of the Life in the Atacama field sites from rover data and orbital image analysis. Journal of Geophysical Research, 2007, 112, .	3.3	9

#	Article	IF	Citations
55	Life in the Atacama: A scoring system for habitability and the robotic exploration for life. Journal of Geophysical Research, 2007, 112, .	3.3	12