Ralph Milliken

List of Publications by Year
in descending order

66	10,613	47006 47	102487 66
papers	citations	h-index	g-index

68	68	68	5203
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
2	Hydrated silicate minerals on Mars observed by the Mars Reconnaissance Orbiter CRISM instrument. Nature, 2008, 454, 305-309.	27.8	630
3	Orbital Identification of Carbonate-Bearing Rocks on Mars. Science, 2008, 322, 1828-1832.	12.6	560
4	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
5	Identification of hydrated silicate minerals on Mars using MROâ€CRISM: Geologic context near Nili Fossae and implications for aqueous alteration. Journal of Geophysical Research, 2009, 114, .	3.3	483
6	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
7	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	12.6	471
8	Paleoclimate of Mars as captured by the stratigraphic record in Gale Crater. Geophysical Research Letters, 2010, 37, .	4.0	368
9	Temporal and Spatial Variability of Lunar Hydration As Observed by the Deep Impact Spacecraft. Science, 2009, 326, 565-568.	12.6	363
10	Phyllosilicate Diversity and Past Aqueous Activity Revealed at Mawrth Vallis, Mars. Science, 2008, 321, 830-833.	12.6	328
11	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
12	Direct evidence of surface exposed water ice in the lunar polar regions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8907-8912.	7.1	324
13	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
14	CRISM multispectral summary products: Parameterizing mineral diversity on Mars from reflectance. Journal of Geophysical Research, 2007, 112, .	3.3	304
15	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. Science, 2019, 364, 272-275.	12.6	262
16	Constraints on the origin and evolution of the layered mound in Gale Crater, Mars using Mars Reconnaissance Orbiter data. Icarus, 2011, 214, 413-432.	2.5	258
17	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
18	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224

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19	Redox stratification of an ancient lake in Gale crater, Mars. Science, 2017, 356, .	12.6	209
20	Silica deposits in the Nili Patera caldera on the Syrtis Major volcanic complex on Mars. Nature Geoscience, 2010, 3, 838-841.	12.9	173
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.	7.1	172
22	Evidence for the origin of layered deposits in Candor Chasma, Mars, from mineral composition and hydrologic modeling. Journal of Geophysical Research, 2009, 114, .	3.3	159
23	Mineralogy of Juventae Chasma: Sulfates in the lightâ€toned mounds, mafic minerals in the bedrock, and hydrated silica and hydroxylated ferric sulfate on the plateau. Journal of Geophysical Research, 2009, 114, .	3.3	156
24	Origin of acidic surface waters and the evolutionÂof atmospheric chemistry on early Mars. Nature Geoscience, 2010, 3, 323-326.	12.9	155
25	Columbus crater and other possible groundwater-fed paleolakes of Terra Sirenum, Mars. Journal of Geophysical Research, 2011, 116, .	3.3	148
26	Water on the surface of the Moon as seen by the Moon Mineralogy Mapper: Distribution, abundance, and origins. Science Advances, 2017, 3, e1701471.	10.3	138
27	Brucite and carbonate assemblages from altered olivine-rich materials on Ceres. Nature Geoscience, 2009, 2, 258-261.	12.9	128
28	Sedimentological evidence for a deltaic origin of the western fan deposit in Jezero crater, Mars and implications for future exploration. Earth and Planetary Science Letters, 2017, 458, 357-365.	4.4	128
29	The stratigraphy and evolution of lower Mount Sharp from spectral, morphological, and thermophysical orbital data sets. Journal of Geophysical Research E: Planets, 2016, 121, 1713-1736.	3.6	123
30	Hydrated mineral stratigraphy of Ius Chasma, Valles Marineris. Icarus, 2010, 206, 253-268.	2.5	119
31	HiRISE imaging of impact megabreccia and sub-meter aqueous strata in Holden Crater, Mars. Geology, 2008, 36, 195.	4.4	105
32	Sources and sinks of clay minerals on Mars. Philosophical Magazine, 2010, 90, 2293-2308.	1.6	104
33	Quantifying absolute water content of minerals using near-infrared reflectance spectroscopy. Journal of Geophysical Research, 2005, 110, .	3.3	103
34	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
35	A Field Guide to Finding Fossils on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1012-1040.	3.6	86
36	Remote detection of widespread indigenous water in lunar pyroclastic deposits. Nature Geoscience, 2017, 10, 561-565.	12.9	84

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37	Windâ€blown sandstones cemented by sulfate and clay minerals in Gale Crater, Mars. Geophysical Research Letters, 2014, 41, 1149-1154.	4.0	81
38	Most Mars minerals in a nutshell: Various alteration phases formed in a single environment in Noctis Labyrinthus. Journal of Geophysical Research, 2012, 117, .	3.3	74
39	The Surface Composition of Ceres. Space Science Reviews, 2011, 163, 95-116.	8.1	72
40	Estimating the water content of hydrated minerals using reflectance spectroscopyI. Effects of darkening agents and low-albedo materials. Icarus, 2007, 189, 550-573.	2.5	71
41	Ancient and recent clay formation on Mars as revealed from a global survey of hydrous minerals in crater central peaks. Journal of Geophysical Research E: Planets, 2015, 120, 2293-2332.	3.6	71
42	Terrestrial perspective on authigenic clay mineral production in ancient Martian lakes. Clays and Clay Minerals, 2011, 59, 339-358.	1.3	69
43	Sublacustrine depositional fans in southwest Melas Chasma. Journal of Geophysical Research, 2009, 114, .	3.3	68
44	Estimating the water content of hydrated minerals using reflectance spectroscopyII. Effects of particle size. Icarus, 2007, 189, 574-588.	2.5	54
45	Brine-driven destruction of clay minerals in Gale crater, Mars. Science, 2021, 373, 198-204.	12.6	52
46	Mars Odyssey neutron data: 2. Search for buried excess water ice deposits at nonpolar latitudes on Mars. Journal of Geophysical Research, 2011, 116, .	3.3	51
47	Discovery of alunite in Cross crater, Terra Sirenum, Mars: Evidence for acidic, sulfurous waters. American Mineralogist, 2016, 101, 1527-1542.	1.9	51
48	Lightâ€toned strata and inverted channels adjacent to Juventae and Ganges chasmata, Mars. Geophysical Research Letters, 2008, 35, .	4.0	49
49	An empirical thermal correction model for Moon Mineralogy Mapper data constrained by laboratory spectra and Diviner temperatures. Journal of Geophysical Research E: Planets, 2016, 121, 2081-2107.	3.6	47
50	Thermally altered subsurface material of asteroid (162173) Ryugu. Nature Astronomy, 2021, 5, 246-250.	10.1	47
51	New Constraints on the Abundance and Composition of Organic Matter on Ceres. Geophysical Research Letters, 2018, 45, 5274-5282.	4.0	37
52	Evidence for hydraulic fracturing at Gale crater, Mars: Implications for burial depth of the Yellowknife Bay formation. Earth and Planetary Science Letters, 2017, 468, 72-84.	4.4	36
53	Distinct Geologic Settings of Opalâ€A and More Crystalline Hydrated Silica on Mars. Geophysical Research Letters, 2018, 45, 10,221.	4.0	32
54	Phase Functions of Typical Lunar Surface Minerals Derived for the Hapke Model and Implications for Visible to Nearâ€Infrared Spectral Unmixing. Journal of Geophysical Research E: Planets, 2019, 124, 31-60.	3.6	22

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55	Reflectance spectroscopy of insoluble organic matter (IOM) and carbonaceous meteorites. Meteoritics and Planetary Science, 2019, 54, 1051-1068.	1.6	22
56	Updated Perspectives and Hypotheses on the Mineralogy of Lower Mt. Sharp, Mars, as Seen From Orbit. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006372.	3.6	21
57	Merging Perspectives on Secondary Minerals on Mars: A Review of Ancient Water-Rock Interactions in Gale Crater Inferred from Orbital and In-Situ Observations. Minerals (Basel, Switzerland), 2021, 11, 986.	2.0	12
58	Reflectance Spectroscopy of Organic Matter in Sedimentary Rocks at Mid-Infrared Wavelengths. Clays and Clay Minerals, 2018, 66, 173-189.	1.3	10
59	Characterization of Iron in Lake Towuti sediment. Chemical Geology, 2019, 512, 11-30.	3.3	10
60	Reflectance Spectroscopy for Organic Detection And Quantification in Clay-bearing Samples: Effects of Albedo, Clay Type, and Water Content. Clays and Clay Minerals, 2016, 64, 167-184.	1.3	9
61	Characterizing the Mineral Assemblages of Hot Spring Environments and Applications to Mars Orbital Data. Astrobiology, 2020, 20, 453-474.	3.0	8
62	Spectral characterization of the craters of Ryugu as observed by the NIRS3 instrument on-board Hayabusa2. Icarus, 2021, 357, 114253.	2.5	7
63	Testing the deltaic origin of fan deposits at Bradbury Crater, Mars. Icarus, 2019, 319, 363-366.	2.5	6
64	Clays Beyond Earth. Clays and Clay Minerals, 2011, 59, 337-338.	1.3	2
65	Modeling Lunar Pyroclasts to Probe the Volatile Content of the Lunar Interior. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006645.	3.6	2
66	Iron Mineralogy and Sediment Color in a 100Âm Drill Core From Lake Towuti, Indonesia Reflect Catchment and Diagenetic Conditions. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009582.	2.5	2