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	Spectral characterization of the craters of Ryugu as observed by the NIRS3 instrument on-board Hayabusa2. Icarus, 2021, 357, 114253.	2.5	7
2	Thermally altered subsurface material of asteroid (162173) Ryugu. Nature Astronomy, 2021, 5, 246-250.	10.1	47
3	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
4	Modeling Lunar Pyroclasts to Probe the Volatile Content of the Lunar Interior. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006645.	3.6	2
5	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
6	Brine-driven destruction of clay minerals in Gale crater, Mars. Science, 2021, 373, 198-204.	12.6	52
7	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
8	Characterizing the Mineral Assemblages of Hot Spring Environments and Applications to Mars Orbital Data. Astrobiology, 2020, 20, 453-474.	3.0	8
9	Phase Functions of Typical Lunar Surface Minerals Derived for the Hapke Model and Implications for Visible to Neará€Infrared Spectral Unmixing. Journal of Geophysical Research E: Planets, 2019, 124, 31-60.	3.6	22
10	The surface composition of asteroid 162173 Ryugu from Hayabusa2 near-infrared spectroscopy. Science, 2019, 364, 272-275.	12.6	262
11	Reflectance spectroscopy of insoluble organic matter (IOM) and carbonaceous meteorites. Meteoritics and Planetary Science, 2019, 54, 1051-1068.	1.6	22
12	Characterization of Iron in Lake Towuti sediment. Chemical Geology, 2019, 512, 11-30.	3.3	10
13	Testing the deltaic origin of fan deposits at Bradbury Crater, Mars. Icarus, 2019, 319, 363-366.	2.5	6
14	A Field Guide to Finding Fossils on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1012-1040.	3.6	86
15	Reflectance Spectroscopy of Organic Matter in Sedimentary Rocks at Mid-Infrared Wavelengths. Clays and Clay Minerals, 2018, 66, 173-189.	1.3	10
16	New Constraints on the Abundance and Composition of Organic Matter on Ceres. Geophysical Research Letters, 2018, 45, 5274-5282.	4.0	37
17	Distinct Geologic Settings of Opalâ€A and More Crystalline Hydrated Silica on Mars. Geophysical Research Letters, 2018, 45, 10,221.	4.0	32
18	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

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19	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
20	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
21	Redox stratification of an ancient lake in Gale crater, Mars. Science, 2017, 356, .	12.6	209
22	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
23	Remote detection of widespread indigenous water in lunar pyroclastic deposits. Nature Geoscience, 2017, 10, 561-565.	12.9	84
24	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
25	Discovery of alunite in Cross crater, Terra Sirenum, Mars: Evidence for acidic, sulfurous waters. American Mineralogist, 2016, 101, 1527-1542.	1.9	51
26	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
27	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
28	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
29	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
30	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
31	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	12.6	471
32	Windâ€blown sandstones cemented by sulfate and clay minerals in Gale Crater, Mars. Geophysical Research Letters, 2014, 41, 1149-1154.	4.0	81
33	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
34	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
35	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
36	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475

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37	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
38	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
39	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
40	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
41	Columbus crater and other possible groundwater-fed paleolakes of Terra Sirenum, Mars. Journal of Geophysical Research, 2011, 116, .	3.3	148
42	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
43	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
44	The Surface Composition of Ceres. Space Science Reviews, 2011, 163, 95-116.	8.1	72
45	Clays Beyond Earth. Clays and Clay Minerals, 2011, 59, 337-338.	1.3	2
46	Terrestrial perspective on authigenic clay mineral production in ancient Martian lakes. Clays and Clay Minerals, 2011, 59, 339-358.	1.3	69
47	Hydrated mineral stratigraphy of Ius Chasma, Valles Marineris. Icarus, 2010, 206, 253-268.	2.5	119
48	Silica deposits in the Nili Patera caldera on the Syrtis Major volcanic complex on Mars. Nature Geoscience, 2010, 3, 838-841.	12.9	173
49	Sources and sinks of clay minerals on Mars. Philosophical Magazine, 2010, 90, 2293-2308.	1.6	104
50	Paleoclimate of Mars as captured by the stratigraphic record in Gale Crater. Geophysical Research Letters, 2010, 37, .	4.0	368
51	Origin of acidic surface waters and the evolutionÂof atmospheric chemistry on early Mars. Nature Geoscience, 2010, 3, 323-326.	12.9	155
52	Brucite and carbonate assemblages from altered olivine-rich materials on Ceres. Nature Geoscience, 2009, 2, 258-261.	12.9	128
53	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
54	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

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55	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
56	Sublacustrine depositional fans in southwest Melas Chasma. Journal of Geophysical Research, 2009, 114, .	3.3	68
57	Temporal and Spatial Variability of Lunar Hydration As Observed by the Deep Impact Spacecraft. Science, 2009, 326, 565-568.	12.6	363
58	Hydrated silicate minerals on Mars observed by the Mars Reconnaissance Orbiter CRISM instrument. Nature, 2008, 454, 305-309.	27.8	630
59	Lightâ€toned strata and inverted channels adjacent to Juventae and Ganges chasmata, Mars. Geophysical Research Letters, 2008, 35, .	4.0	49
60	HiRISE imaging of impact megabreccia and sub-meter aqueous strata in Holden Crater, Mars. Geology, 2008, 36, 195.	4.4	105
61	Orbital Identification of Carbonate-Bearing Rocks on Mars. Science, 2008, 322, 1828-1832.	12.6	560
62	Phyllosilicate Diversity and Past Aqueous Activity Revealed at Mawrth Vallis, Mars. Science, 2008, 321, 830-833.	12.6	328
63	CRISM multispectral summary products: Parameterizing mineral diversity on Mars from reflectance. Journal of Geophysical Research, 2007, 112, .	3.3	304
64	Estimating the water content of hydrated minerals using reflectance spectroscopyII. Effects of particle size. Icarus, 2007, 189, 574-588.	2.5	54
65	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
66	Quantifying absolute water content of minerals using near-infrared reflectance spectroscopy. Journal of Geophysical Research, 2005, 110, .	3.3	103