

Doug W Ming

List of Publications by Year in descending order

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110
papers

16,744
citations

15504

65
h-index

26613

107
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111
all docs

111
docs citations

111
times ranked

5962
citing authors

#	ARTICLE	IF	CITATIONS
1	Mineralogy and diagenesis of Mars-analog paleosols from eastern Oregon, USA. <i>Icarus</i> , 2022, 380, 114965.	2.5	4
2	Oxidized and Reduced Sulfur Observed by the Sample Analysis at Mars (SAM) Instrument Suite on the Curiosity Rover Within the Glen Torridon Region at Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	6
3	Evolved Gas Analyses of Sedimentary Rocks From the Glen Torridon Clay-Bearing Unit, Gale Crater, Mars: Results From the Mars Science Laboratory Sample Analysis at Mars Instrument Suite. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	12
4	Organic carbon concentrations in 3.5-billion-year-old lacustrine mudstones of Mars. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	14
5	Detection of Organic Carbon in Mars-Analog Paleosols With Thermal and Evolved Gas Analysis. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	4
6	Formation of Tridymite and Evidence for a Hydrothermal History at Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006569.	3.6	21
7	Reactive Transport Modeling of Aqueous Alteration in the Murray Formation, Gale Crater, Mars. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 424-435.	2.7	2
8	A Review of Sample Analysis at Mars-Evolved Gas Analysis Laboratory Analog Work Supporting the Presence of Perchlorates and Chlorates in Gale Crater, Mars. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 475.	2.0	14
9	Formation of Fe(III) (Hydr)oxides from Fe(II) Sulfides: Implications for Akaganeite Detection on Mars. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 1934-1947.	2.7	7
10	Brine-driven destruction of clay minerals in Gale crater, Mars. <i>Science</i> , 2021, 373, 198-204.	12.6	52
11	A Review of the Phyllosilicates in Gale Crater as Detected by the CheMin Instrument on the Mars Science Laboratory, Curiosity Rover. <i>Minerals (Basel, Switzerland)</i> , 2021, 11, 847.	2.0	23
12	High-Temperature HCl Evolutions From Mixtures of Perchlorates and Chlorides With Water-Bearing Phases: Implications for the SAM Instrument in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006173.	3.6	6
13	Constraints on the Mineralogy and Geochemistry of Vera Rubin Ridge, Gale Crater, Mars, From Mars Science Laboratory Sample Analysis at Mars Evolved Gas Analyses. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006309.	3.6	32
14	Mineralogy of Vera Rubin Ridge From the Mars Science Laboratory CheMin Instrument. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006306.	3.6	86
15	Hydrothermal Precipitation of Sanidine (Adularia) Having Full Al,Si Structural Disorder and Specular Hematite at Maunakea Volcano (Hawai'i) and at Gale Crater (Mars). <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006324.	3.6	14
16	Evidence for Multiple Diagenetic Episodes in Ancient Fluvial-Lacustrine Sedimentary Rocks in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006295.	3.6	45
17	Particle Induced X-ray Emission spectrometry (PIXE) of Hawaiian volcanics: An analogue study to evaluate the APXS field analysis of geologic materials on Mars. <i>Icarus</i> , 2020, 345, 113708.	2.5	9
18	Indigenous and exogenous organics and surface-atmosphere cycling inferred from carbon and oxygen isotopes at Gale crater. <i>Nature Astronomy</i> , 2020, 4, 526-532.	10.1	41

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19	Evidence for Adsorption of Chlorine Species on Iron (III) (Hydr)oxides in the Sheepbed Mudstone, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006220.	3.6	6
20	Reaction of Akaganeite with Mars-Relevant Anions. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 314-323.	2.7	14
21	Abiotic Input of Fixed Nitrogen by Bolide Impacts to Gale Crater During the Hesperian: Insights From the Mars Science Laboratory. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 94-113.	3.6	23
22	Seasonal Atmospheric Argon Variability Measured in the Equatorial Region of Mars by the Mars Exploration Rover Alpha Particle X-Ray Spectrometers: Evidence for an Annual Argon-Enriched Front. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 544-558.	3.6	6
23	Diverse Lithologies and Alteration Events on the Rim of Noachian-Aged Endeavour Crater, Meridiani Planum, Mars: In Situ Compositional Evidence. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1255-1306.	3.6	28
24	Smectite formation in the presence of sulfuric acid: Implications for acidic smectite formation on early Mars. <i>Geochimica Et Cosmochimica Acta</i> , 2018, 220, 248-260.	3.9	26
25	Gypsum, bassanite, and anhydrite at Gale crater, Mars. <i>American Mineralogist</i> , 2018, 103, 1011-1020.	1.9	96
26	Crystal chemistry of martian minerals from Bradbury Landing through Naukluft Plateau, Gale crater, Mars. <i>American Mineralogist</i> , 2018, 103, 857-871.	1.9	94
27	Relationships between unit-cell parameters and composition for rock-forming minerals on Earth, Mars, and other extraterrestrial bodies. <i>American Mineralogist</i> , 2018, 103, 848-856.	1.9	40
28	Chlorate/Fe-Bearing Phase Mixtures as a Possible Source of Oxygen and Chlorine Detected by the Sample Analysis at Mars Instrument in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2920-2938.	3.6	26
29	Effect of Solution pH and Chloride Concentration on Akaganeite Precipitation: Implications for Akaganeite Formation on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2211-2222.	3.6	20
30	Major Volatiles Evolved From Eolian Materials in Gale Crater. <i>Geophysical Research Letters</i> , 2018, 45, 10,240.	4.0	19
31	Sand Mineralogy Within the Bagnold Dunes, Gale Crater, as Observed In Situ and From Orbit. <i>Geophysical Research Letters</i> , 2018, 45, 9488-9497.	4.0	52
32	The Effect of Mars-Relevant Soil Analogs on the Water Uptake of Magnesium Perchlorate and Implications for the Near-Surface of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2076-2088.	3.6	18
33	Clay mineral diversity and abundance in sedimentary rocks of Gale crater, Mars. <i>Science Advances</i> , 2018, 4, eaar3330.	10.3	150
34	Organic matter preserved in 3-billion-year-old mudstones at Gale crater, Mars. <i>Science</i> , 2018, 360, 1096-1101.	12.6	369
35	The nitrate/(per)chlorate relationship on Mars. <i>Geophysical Research Letters</i> , 2017, 44, 2643-2651.	4.0	49
36	Mineralogy of an active eolian sediment from the Namib dune, Gale crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2344-2361.	3.6	98

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37	Redox stratification of an ancient lake in Gale crater, Mars. <i>Science</i> , 2017, 356, .	12.6	209
38	Chemistry, mineralogy, and grain properties at Namib and High dunes, Bagnold dune field, Gale crater, Mars: A synthesis of Curiosity rover observations. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2510-2543.	3.6	95
39	Zinc and germanium in the sedimentary rocks of Gale Crater on Mars indicate hydrothermal enrichment followed by diagenetic fractionation. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1747-1772.	3.6	42
40	Large sulfur isotope fractionations in Martian sediments at Gale crater. <i>Nature Geoscience</i> , 2017, 10, 658-662.	12.9	53
41	Measurements of Oxychlorine species on Mars. <i>International Journal of Astrobiology</i> , 2017, 16, 203-217.	1.6	33
42	Evolved gas analyses of sedimentary rocks and eolian sediment in Gale Crater, Mars: Results of the Curiosity rover's sample analysis at Mars instrument from Yellowknife Bay to the Namib Dune. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2574-2609.	3.6	168
43	A Two-Step K ⁴⁰ Ar Experiment on Mars: Dating the Diagenetic Formation of Jarosite from Amazonian Groundwaters. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2803-2818.	3.6	72
44	THE AMORPHOUS COMPOSITION OF THREE MUDSTONE SAMPLES FROM GALE CRATER: IMPLICATIONS FOR WEATHERING AND DIAGENETIC PROCESSES ON MARS. , 2017, , .		2
45	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. <i>Geophysical Research Letters</i> , 2016, 43, 7398-7407.	4.0	110
46	Mineralogy, provenance, and diagenesis of a potassic basaltic sandstone on Mars: ChemMin X-ray diffraction of the Windjana sample (Kimberley area, Gale Crater). <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 75-106.	3.6	159
47	A global Mars dust composition refined by the Alpha-Particle X-ray Spectrometer in Gale Crater. <i>Geophysical Research Letters</i> , 2016, 43, 67-75.	4.0	95
48	Esperance: Multiple episodes of aqueous alteration involving fracture fills and coatings at Matijevic Hill, Mars. <i>American Mineralogist</i> , 2016, 101, 1515-1526.	1.9	19
49	Silicic volcanism on Mars evidenced by tridymite in high-SiO ₂ sedimentary rock at Gale crater. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 7071-7076.	7.1	158
50	Recognizing sulfate and phosphate complexes chemisorbed onto nanophase weathering products on Mars using in-situ and remote observations. <i>American Mineralogist</i> , 2016, 101, 678-689.	1.9	23
51	Large wind ripples on Mars: A record of atmospheric evolution. <i>Science</i> , 2016, 353, 55-58.	12.6	144
52	LOCALIZED AND AREALLY EXTENSIVE ALTERATIONS IN MARATHON VALLEY, ENDEAVOUR CRATER RIM, MARS. , 2016, , .		3
53	MINERALOGY OF MUDSTONE AT GALE CRATER, MARS: EVIDENCE FOR DYNAMIC LACUSTRINE ENVIRONMENTS. , 2016, , .		1
54	Organic molecules in the Sheepbed Mudstone, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 495-514.	3.6	375

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55	The origin and implications of clay minerals from Yellowknife Bay, Gale crater, Mars. <i>American Mineralogist</i> , 2015, 100, 824-836.	1.9	122
56	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
57	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
58	Ferrian saponite from the Santa Monica Mountains (California, U.S.A., Earth): Characterization as an analog for clay minerals on Mars with application to Yellowknife Bay in Gale Crater. <i>American Mineralogist</i> , 2014, 99, 2234-2250.	1.9	67
59	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	12.6	323
60	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1243480.	12.6	508
61	Mars's Surface Radiation Environment Measured with the Mars Science Laboratory's Curiosity Rover. <i>Science</i> , 2014, 343, 1244797.	12.6	475
62	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	12.6	246
63	Ancient Aqueous Environments at Endeavour Crater, Mars. <i>Science</i> , 2014, 343, 1248097.	12.6	176
64	Geochemical diversity in first rocks examined by the Curiosity Rover in Gale Crater: Evidence for and significance of an alkali and volatile-rich igneous source. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 64-81.	3.6	113
65	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
66	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
67	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. <i>Science</i> , 2013, 341, 1238932.	12.6	327
68	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. <i>Science</i> , 2013, 341, 1239505.	12.6	280
69	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	12.6	367
70	The effects of instrument parameters and sample properties on thermal decomposition: interpreting thermal analysis data from Mars. <i>Planetary Science</i> , 2013, 2, .	1.5	25
71	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326
72	The Petrochemistry of Jake_M: A Martian Mugarite. <i>Science</i> , 2013, 341, 1239463.	12.6	134

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73	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	12.6	215
74	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the Rocknest aeolian deposit in Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1955-1973.	3.6	306
75	Characterization and Calibration of the CheMin Mineralogical Instrument on Mars Science Laboratory. <i>Space Science Reviews</i> , 2012, 170, 341-399.	8.1	220
76	The Sample Analysis at Mars Investigation and Instrument Suite. <i>Space Science Reviews</i> , 2012, 170, 401-478.	8.1	435
77	Ancient Impact and Aqueous Processes at Endeavour Crater, Mars. <i>Science</i> , 2012, 336, 570-576.	12.6	176
78	Perchlorate induced low temperature carbonate decomposition in the Mars Phoenix Thermal and Evolved Gas Analyzer (TEGA). <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	33
79	Identification of Carbonate-Rich Outcrops on Mars by the Spirit Rover. <i>Science</i> , 2010, 329, 421-424.	12.6	358
80	Concentrated perchlorate at the Mars Phoenix landing site: Evidence for thin film liquid water on Mars. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	92
81	H ₂ O at the Phoenix Landing Site. <i>Science</i> , 2009, 325, 58-61.	12.6	500
82	Evidence for Calcium Carbonate at the Mars Phoenix Landing Site. <i>Science</i> , 2009, 325, 61-64.	12.6	300
83	Detection of Perchlorate and the Soluble Chemistry of Martian Soil at the Phoenix Lander Site. <i>Science</i> , 2009, 325, 64-67.	12.6	913
84	The MECA Wet Chemistry Laboratory on the 2007 Phoenix Mars Scout Lander. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	56
85	Hydrothermal origin of halogens at Home Plate, Gusev Crater. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	71
86	Geochemical properties of rocks and soils in Gusev Crater, Mars: Results of the Alpha Particle X-Ray Spectrometer from Cumberland Ridge to Home Plate. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	162
87	Iron mineralogy and aqueous alteration from Husband Hill through Home Plate at Gusev Crater, Mars: Results from the Mössbauer instrument on the Spirit Mars Exploration Rover. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	162
88	Hyperspectral reflectance mapping of cinder cones at the summit of Mauna Kea and implications for equivalent observations on Mars. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	18
89	Pyroclastic Activity at Home Plate in Gusev Crater, Mars. <i>Science</i> , 2007, 316, 738-742.	12.6	174
90	Overview of the Opportunity Mars Exploration Rover Mission to Meridiani Planum: Eagle Crater to Purgatory Ripple. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	149

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91	Overview of the Spirit Mars Exploration Rover Mission to Gusev Crater: Landing site to Backstay Rock in the Columbia Hills. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	238
92	Alpha Particle X-Ray Spectrometer (APXS): Results from Gusev crater and calibration report. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	342
93	Geochemical and mineralogical indicators for aqueous processes in the Columbia Hills of Gusev crater, Mars. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	234
94	Mössbauer mineralogy of rock, soil, and dust at Gusev crater, Mars: Spirit's journey through weakly altered olivine basalt on the plains and pervasively altered basalt in the Columbia Hills. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	314
95	Nickel on Mars: Constraints on meteoritic material at the surface. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	65
96	Mössbauer mineralogy of rock, soil, and dust at Meridiani Planum, Mars: Opportunity's journey across sulfate-rich outcrop, basaltic sand and dust, and hematite lag deposits. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	225
97	An integrated view of the chemistry and mineralogy of martian soils. <i>Nature</i> , 2005, 436, 49-54.	27.8	348
98	Water alteration of rocks and soils on Mars at the Spirit rover site in Gusev crater. <i>Nature</i> , 2005, 436, 66-69.	27.8	240
99	Indication of drier periods on Mars from the chemistry and mineralogy of atmospheric dust. <i>Nature</i> , 2005, 436, 62-65.	27.8	125
100	Soils of Eagle Crater and Meridiani Planum at the Opportunity Rover Landing Site. <i>Science</i> , 2004, 306, 1723-1726.	12.6	153
101	Jarosite and Hematite at Meridiani Planum from Opportunity's Mössbauer Spectrometer. <i>Science</i> , 2004, 306, 1740-1745.	12.6	733
102	Mineralogy at Gusev Crater from the Mossbauer Spectrometer on the Spirit Rover. <i>Science</i> , 2004, 305, 833-836.	12.6	279
103	Localization and Physical Property Experiments Conducted by Opportunity at Meridiani Planum. <i>Science</i> , 2004, 306, 1730-1733.	12.6	130
104	Localization and Physical Properties Experiments Conducted by Spirit at Gusev Crater. <i>Science</i> , 2004, 305, 821-824.	12.6	166
105	The Opportunity Rover's Athena Science Investigation at Meridiani Planum, Mars. <i>Science</i> , 2004, 306, 1698-1703.	12.6	507
106	Chemistry of Rocks and Soils in Gusev Crater from the Alpha Particle X-ray Spectrometer. <i>Science</i> , 2004, 305, 829-832.	12.6	291
107	Chemistry of Rocks and Soils at Meridiani Planum from the Alpha Particle X-ray Spectrometer. <i>Science</i> , 2004, 306, 1746-1749.	12.6	370
108	Phyllosilicate-poor palagonitic dust from Mauna Kea Volcano (Hawaii): A mineralogical analogue for magnetic Martian dust?. <i>Journal of Geophysical Research</i> , 2001, 106, 5057-5083.	3.3	95

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109	Mineralogy, composition, and alteration of Mars Pathfinder rocks and soils: Evidence from multispectral, elemental, and magnetic data on terrestrial analogue, SNC meteorite, and Pathfinder samples. <i>Journal of Geophysical Research</i> , 2000, 105, 1757-1817.	3.3	294
110	Mineralogy of three slightly palagonitized basaltic tephra samples from the summit of Mauna Kea, Hawaii. <i>Journal of Geophysical Research</i> , 1993, 98, 3401-3411.	3.3	56