Doug W Ming

List of Publications by Year
in descending order

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110 papers	16,744 citations	17776 65 h-index	30277 107 g-index
111 all docs	111 docs citations	111 times ranked	6563 citing authors

#	Article	IF	Citations
1	Detection of Perchlorate and the Soluble Chemistry of Martian Soil at the Phoenix Lander Site. Science, 2009, 325, 64-67.	6.0	913
2	Jarosite and Hematite at Meridiani Planum from Opportunity's MÃ¶ssbauer Spectrometer. Science, 2004, 306, 1740-1745.	6.0	733
3	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	6.0	508
4	The Opportunity Rover's Athena Science Investigation at Meridiani Planum, Mars. Science, 2004, 306, 1698-1703.	6.0	507
5	H ₂ O at the Phoenix Landing Site. Science, 2009, 325, 58-61.	6.0	500
6	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	6.0	475
7	The Sample Analysis at Mars Investigation and Instrument Suite. Space Science Reviews, 2012, 170, 401-478.	3.7	435
8	Organic molecules in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 495-514.	1.5	375
9	Chemistry of Rocks and Soils at Meridiani Planum from the Alpha Particle X-ray Spectrometer. Science, 2004, 306, 1746-1749.	6.0	370
10	Organic matter preserved in 3-billion-year-old mudstones at Gale crater, Mars. Science, 2018, 360, 1096-1101.	6.0	369
11	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	6.0	367
12	Identification of Carbonate-Rich Outcrops on Mars by the Spirit Rover. Science, 2010, 329, 421-424.	6.0	358
13	An integrated view of the chemistry and mineralogy of martian soils. Nature, 2005, 436, 49-54.	13.7	348
14	Alpha Particle X-Ray Spectrometer (APXS): Results from Gusev crater and calibration report. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	342
15	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	6.0	327
16	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	6.0	326
17	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	6.0	323
18	MÃ¶ssbauer 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. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	314

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19	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the Rocknest aeolian deposit in Gale Crater. Journal of Geophysical Research E: Planets, 2013, 118, 1955-1973.	1.5	306
20	Evidence for Calcium Carbonate at the Mars Phoenix Landing Site. Science, 2009, 325, 61-64.	6.0	300
21	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. Journal of Geophysical Research, 2000, 105, 1757-1817.	3.3	294
22	Chemistry of Rocks and Soils in Gusev Crater from the Alpha Particle X-ray Spectrometer. Science, 2004, 305, 829-832.	6.0	291
23	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	6.0	280
24	Mineralogy at Gusev Crater from the Mossbauer Spectrometer on the Spirit Rover. Science, 2004, 305, 833-836.	6.0	279
25	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	6.0	246
26	Water alteration of rocks and soils on Mars at the Spirit rover site in Gusev crater. Nature, 2005, 436, 66-69.	13.7	240
27	Overview of the Spirit Mars Exploration Rover Mission to Gusev Crater: Landing site to Backstay Rock in the Columbia Hills. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	238
28	Geochemical and mineralogical indicators for aqueous processes in the Columbia Hills of Gusev crater, Mars. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	234
29	MÃ¶ssbauer 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. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	225
30	Characterization and Calibration of the CheMin Mineralogical Instrument on Mars Science Laboratory. Space Science Reviews, 2012, 170, 341-399.	3.7	220
31	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	6.0	215
32	Redox stratification of an ancient lake in Gale crater, Mars. Science, 2017, 356, .	6.0	209
33	Ancient Impact and Aqueous Processes at Endeavour Crater, Mars. Science, 2012, 336, 570-576.	6.0	176
34	Ancient Aqueous Environments at Endeavour Crater, Mars. Science, 2014, 343, 1248097.	6.0	176
35	Pyroclastic Activity at Home Plate in Gusev Crater, Mars. Science, 2007, 316, 738-742.	6.0	174
36	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

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37	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. Journal of Geophysical Research E: Planets, 2017, 122, 2574-2609.	1.5	168
38	Localization and Physical Properties Experiments Conducted by Spirit at Gusev Crater. Science, 2004, 305, 821-824.	6.0	166
39	Geochemical properties of rocks and soils in Gusev Crater, Mars: Results of the Alpha Particle Xâ€Ray Spectrometer from Cumberland Ridge to Home Plate. Journal of Geophysical Research, 2008, 113, .	3.3	162
40	Iron mineralogy and aqueous alteration from Husband Hill through Home Plate at Gusev Crater, Mars: Results from the MÃ¶ssbauer instrument on the Spirit Mars Exploration Rover. Journal of Geophysical Research, 2008, 113, .	3.3	162
41	Mineralogy, provenance, and diagenesis of a potassic basaltic sandstone on Mars: CheMin Xâ€ray diffraction of the Windjana sample (Kimberley area, Gale Crater). Journal of Geophysical Research E: Planets, 2016, 121, 75-106.	1.5	159
42	Silicic volcanism on Mars evidenced by tridymite in high-SiO ₂ sedimentary rock at Gale crater. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7071-7076.	3.3	158
43	Soils of Eagle Crater and Meridiani Planum at the Opportunity Rover Landing Site. Science, 2004, 306, 1723-1726.	6.0	153
44	Clay mineral diversity and abundance in sedimentary rocks of Gale crater, Mars. Science Advances, 2018, 4, eaar3330.	4.7	150
45	Overview of the Opportunity Mars Exploration Rover Mission to Meridiani Planum: Eagle Crater to Purgatory Ripple. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	149
46	Large wind ripples on Mars: A record of atmospheric evolution. Science, 2016, 353, 55-58.	6.0	144
47	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	6.0	134
48	Localization and Physical Property Experiments Conducted by Opportunity at Meridiani Planum. Science, 2004, 306, 1730-1733.	6.0	130
49	Indication of drier periods on Mars from the chemistry and mineralogy of atmospheric dust. Nature, 2005, 436, 62-65.	13.7	125
50	The origin and implications of clay minerals from Yellowknife Bay, Gale crater, Mars. American Mineralogist, 2015, 100, 824-836.	0.9	122
51	Geochemical diversity in first rocks examined by the Curiosity Rover in Gale Crater: Evidence for and significance of an alkali and volatileâ€rich igneous source. Journal of Geophysical Research E: Planets, 2014, 119, 64-81.	1.5	113
52	The imprint of atmospheric evolution in the D/H of Hesperian clay minerals on Mars. Science, 2015, 347, 412-414.	6.0	113
53	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. Geophysical Research Letters, 2016, 43, 7398-7407.	1.5	110
54	Mineralogy of an active eolian sediment from the Namib dune, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2017, 122, 2344-2361.	1.5	98

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55	Gypsum, bassanite, and anhydrite at Gale crater, Mars. American Mineralogist, 2018, 103, 1011-1020.	0.9	96
56	Phyllosilicate-poor palagonitic dust from Mauna Kea Volcano (Hawaii): A mineralogical analogue for magnetic Martian dust?. Journal of Geophysical Research, 2001, 106, 5057-5083.	3.3	95
57	A global Mars dust composition refined by the Alphaâ€Particle Xâ€ray Spectrometer in Gale Crater. Geophysical Research Letters, 2016, 43, 67-75.	1.5	95
58	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
59	Crystal chemistry of martian minerals from Bradbury Landing through Naukluft Plateau, Gale crater, Mars. American Mineralogist, 2018, 103, 857-871.	0.9	94
60	Concentrated perchlorate at the Mars Phoenix landing site: Evidence for thin film liquid water on Mars. Geophysical Research Letters, 2010, 37, .	1.5	92
61	Mineralogy of Vera Rubin Ridge From the Mars Science Laboratory CheMin Instrument. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006306.	1.5	86
62	Abundances and implications of volatileâ€bearing species from evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 237-254.	1.5	73
63	A Twoâ€Step Kâ€Ar Experiment on Mars: Dating the Diagenetic Formation of Jarosite from Amazonian Groundwaters. Journal of Geophysical Research E: Planets, 2017, 122, 2803-2818.	1.5	72
64	Hydrothermal origin of halogens at Home Plate, Gusev Crater. Journal of Geophysical Research, 2008, 113, .	3.3	71
65	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. American Mineralogist, 2014, 99, 2234-2250.	0.9	67
66	Nickel on Mars: Constraints on meteoritic material at the surface. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	65
67	Sulfur-bearing phases detected by evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 373-393.	1.5	65
68	Mineralogy of three slightly palagonitized basaltic tephra samples from the summit of Mauna Kea, Hawaii. Journal of Geophysical Research, 1993, 98, 3401-3411.	3.3	56
69	The MECA Wet Chemistry Laboratory on the 2007 Phoenix Mars Scout Lander. Journal of Geophysical Research, 2009, 114, .	3.3	56
70	Large sulfur isotope fractionations in Martian sediments at Gale crater. Nature Geoscience, 2017, 10, 658-662.	5.4	53
71	Sand Mineralogy Within the Bagnold Dunes, Gale Crater, as Observed In Situ and From Orbit. Geophysical Research Letters, 2018, 45, 9488-9497.	1.5	52
72	Brine-driven destruction of clay minerals in Gale crater, Mars. Science, 2021, 373, 198-204.	6.0	52

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73	The nitrate/(per)chlorate relationship on Mars. Geophysical Research Letters, 2017, 44, 2643-2651.	1.5	49
74	Evidence for Multiple Diagenetic Episodes in Ancient Fluvialâ€Lacustrine Sedimentary Rocks in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006295.	1.5	45
75	Zinc and germanium in the sedimentary rocks of Gale Crater on Mars indicate hydrothermal enrichment followed by diagenetic fractionation. Journal of Geophysical Research E: Planets, 2017, 122, 1747-1772.	1.5	42
76	Indigenous and exogenous organics and surfaceâ€“atmosphere cycling inferred from carbon and oxygen isotopes at Gale crater. Nature Astronomy, 2020, 4, 526-532.	4.2	41
77	Relationships between unit-cell parameters and composition for rock-forming minerals on Earth, Mars, and other extraterrestrial bodies. American Mineralogist, 2018, 103, 848-856.	0.9	40
78	Perchlorate induced low temperature carbonate decomposition in the Mars Phoenix Thermal and Evolved Gas Analyzer (TEGA). Geophysical Research Letters, 2012, 39, .	1.5	33
79	Measurements of Oxychlorine species on Mars. International Journal of Astrobiology, 2017, 16, 203-217.	0.9	33
80	Constraints on the Mineralogy and Geochemistry of Vera Rubin Ridge, Gale Crater, Mars, From Mars Science Laboratory Sample Analysis at Mars Evolved Gas Analyses. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006309.	1.5	32
81	Diverse Lithologies and Alteration Events on the Rim of Noachianâ€Aged Endeavour Crater, Meridiani Planum, Mars: In Situ Compositional Evidence. Journal of Geophysical Research E: Planets, 2018, 123, 1255-1306.	1.5	28
82	Smectite formation in the presence of sulfuric acid: Implications for acidic smectite formation on early Mars. Geochimica Et Cosmochimica Acta, 2018, 220, 248-260.	1.6	26
83	Chlorate/Feâ€Bearing Phase Mixtures as a Possible Source of Oxygen and Chlorine Detected by the Sample Analysis at Mars Instrument in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2920-2938.	1.5	26
84	The effects of instrument parameters and sample properties on thermal decomposition: interpreting thermal analysis data from Mars. Planetary Science, 2013, 2, .	1.5	25
85	Recognizing sulfate and phosphate complexes chemisorbed onto nanophase weathering products on Mars using in-situ and remote observationsk. American Mineralogist, 2016, 101, 678-689.	0.9	23
86	Abiotic Input of Fixed Nitrogen by Bolide Impacts to Gale Crater During the Hesperian: Insights From the Mars Science Laboratory. Journal of Geophysical Research E: Planets, 2019, 124, 94-113.	1.5	23
87	A Review of the Phyllosilicates in Gale Crater as Detected by the CheMin Instrument on the Mars Science Laboratory, Curiosity Rover. Minerals (Basel, Switzerland), 2021, 11, 847.	0.8	23
88	Formation of Tridymite and Evidence for a Hydrothermal History at Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006569.	1.5	21
89	Effect of Solution pH and Chloride Concentration on Akaganeite Precipitation: Implications for Akaganeite Formation on Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2211-2222.	1.5	20
90	Esperance: Multiple episodes of aqueous alteration involving fracture fills and coatings at Matijevic Hill, Mars. American Mineralogist, 2016, 101, 1515-1526.	0.9	19

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91	Major Volatiles Evolved From Eolian Materials in Gale Crater. Geophysical Research Letters, 2018, 45, 10,240.	1.5	19
92	Hyperspectral reflectance mapping of cinder cones at the summit of Mauna Kea and implications for equivalent observations on Mars. Journal of Geophysical Research, 2007, 112, .	3.3	18
93	The Effect of Marsâ€Relevant Soil Analogs on the Water Uptake of Magnesium Perchlorate and Implications for the Nearâ€Surface of Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2076-2088.	1.5	18
94	Reaction of Akaganeite with Mars-Relevant Anions. ACS Earth and Space Chemistry, 2019, 3, 314-323.	1.2	14
95	Hydrothermal Precipitation of Sanidine (Adularia) Having Full Al,Si Structural Disorder and Specular Hematite at Maunakea Volcano (Hawai'i) and at Gale Crater (Mars). Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006324.	1.5	14
96	A Review of Sample Analysis at Mars-Evolved Gas Analysis Laboratory Analog Work Supporting the Presence of Perchlorates and Chlorates in Gale Crater, Mars. Minerals (Basel, Switzerland), 2021, 11, 475.	0.8	14
97	Organic carbon concentrations in 3.5-billion-year-old lacustrine mudstones of Mars. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	14
98	Evolved Gas Analyses of Sedimentary Rocks From the Glen Torridon Clayâ€Bearing Unit, Gale Crater, Mars: Results From the Mars Science Laboratory Sample Analysis at Mars Instrument Suite. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	12
99	Particle Induced X-ray Emission spectrometry (PIXE) of Hawaiian volcanics: An analogue study to evaluate the APXS field analysis of geologic materials on Mars. Icarus, 2020, 345, 113708.	1.1	9
100	Formation of Fe(III) (Hydr)oxides from Fe(II) Sulfides: Implications for Akaganeite Detection on Mars. ACS Earth and Space Chemistry, 2021, 5, 1934-1947.	1.2	7
101	Seasonal Atmospheric Argon Variability Measured in the Equatorial Region of Mars by the Mars Exploration Rover Alpha Particle Xâ€Ray Spectrometers: Evidence for an Annual Argonâ€Enriched Front. Journal of Geophysical Research E: Planets, 2018, 123, 544-558.	1.5	6
102	Highâ€Temperature HCl Evolutions From Mixtures of Perchlorates and Chlorides With Waterâ€Bearing Phases: Implications for the SAM Instrument in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006173.	1.5	6
103	Evidence for Adsorption of Chlorine Species on Iron (III) (Hydr)oxides in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006220.	1.5	6
104	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. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	6
105	Mineralogy and diagenesis of Mars-analog paleosols from eastern Oregon, USA. Icarus, 2022, 380, 114965.	1.1	4
106	Detection of Organic Carbon in Marsâ€Analog Paleosols With Thermal and Evolved Gas Analysis. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	4
107	LOCALIZED AND AREALLY EXTENSIVE ALTERATIONS IN MARATHON VALLEY, ENDEAVOUR CRATER RIM, MARS. , 2016, , .		3
108	Reactive Transport Modeling of Aqueous Alteration in the Murray Formation, Gale Crater, Mars. ACS Earth and Space Chemistry, 2021, 5, 424-435.	1.2	2

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109	THE AMORPHOUS COMPOSITION OF THREE MUDSTONE SAMPLES FROM GALE CRATER: IMPLICATIONS FOR WEATHERING AND DIAGENETIC PROCESSES ON MARS. , 2017, , .		2
110	MINERALOGY OF MUDSTONE AT GALE CRATER, MARS: EVIDENCE FOR DYNAMIC LACUSTRINE ENVIRONMENTS. , 2016, , .		1