

# Catherine M Weitz

## List of Publications by Year in descending order

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Version: 2024-02-01

63  
papers

4,677  
citations

136950

32  
h-index

144013

57  
g-index

67  
all docs

67  
docs citations

67  
times ranked

2561  
citing authors

#	ARTICLE	IF	CITATIONS
1	Mars Reconnaissance Orbiter's High Resolution Imaging Science Experiment (HiRISE). <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	1,253
2	Opaline silica in young deposits on Mars. <i>Geology</i> , 2008, 36, 847.	4.4	303
3	Aeolian processes at the Mars Exploration Rover Meridiani Planum landing site. <i>Nature</i> , 2005, 436, 58-61.	27.8	233
4	Erosion rates at the Mars Exploration Rover landing sites and long-term climate change on Mars. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	215
5	Mineralogy of Juventae Chasma: Sulfates in the light-toned mounds, mafic minerals in the bedrock, and hydrated silica and hydroxylated ferric sulfate on the plateau. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	156
6	Selection of the Mars Exploration Rover landing sites. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	155
7	Soils of Eagle Crater and Meridiani Planum at the Opportunity Rover Landing Site. <i>Science</i> , 2004, 306, 1723-1726.	12.6	153
8	The High Resolution Imaging Science Experiment (HiRISE) during MRO's Primary Science Phase (PSP). <i>Icarus</i> , 2010, 205, 2-37.	2.5	153
9	Evidence from Opportunity's Microscopic Imager for Water on Meridiani Planum. <i>Science</i> , 2004, 306, 1727-1730.	12.6	146
10	Pancam Multispectral Imaging Results from the Opportunity Rover at Meridiani Planum. <i>Science</i> , 2004, 306, 1703-1709.	12.6	135
11	Geology of the InSight landing site on Mars. <i>Nature Communications</i> , 2020, 11, 1014.	12.8	107
12	Lunar regional dark mantle deposits: Geologic, multispectral, and modeling studies. <i>Journal of Geophysical Research</i> , 1998, 103, 22725-22759.	3.3	98
13	Wind-Related Processes Detected by the Spirit Rover at Gusev Crater, Mars. <i>Science</i> , 2004, 305, 810-813.	12.6	94
14	Surficial Deposits at Gusev Crater Along Spirit Rover Traverses. <i>Science</i> , 2004, 305, 807-810.	12.6	82
15	Morphology, chemistry, and spectral properties of Hawaiian rock coatings and implications for Mars. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	76
16	Soil grain analyses at Meridiani Planum, Mars. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	75
17	Meteorites on Mars observed with the Mars Exploration Rovers. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	75
18	Most Mars minerals in a nutshell: Various alteration phases formed in a single environment in Noctis Labyrinthus. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	74

#	ARTICLE	IF	CITATIONS
19	Sand Grain Sizes and Shapes in Eolian Bedforms at Gale Crater, Mars. <i>Geophysical Research Letters</i> , 2018, 45, 9471-9479.	4.0	71
20	Sublacustrine depositional fans in southwest Melas Chasma. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	68
21	Diverse mineralogies in two troughs of Noctis Labyrinthus, Mars. <i>Geology</i> , 2011, 39, 899-902.	4.4	63
22	Morphologic Diversity of Martian Ripples: Implications for Large-Ripple Formation. <i>Geophysical Research Letters</i> , 2018, 45, 10,229.	4.0	59
23	Mixtures of clays and sulfates within deposits in western Melas Chasma, Mars. <i>Icarus</i> , 2015, 251, 291-314.	2.5	53
24	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
25	The Bagnold Dunes in Southern Summer: Active Sediment Transport on Mars Observed by the Curiosity Rover. <i>Geophysical Research Letters</i> , 2018, 45, 8853-8863.	4.0	50
26	Light-toned strata and inverted channels adjacent to Juventae and Ganges chasmata, Mars. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	49
27	Gypsum, opal, and fluvial channels within a trough of Noctis Labyrinthus, Mars: Implications for aqueous activity during the Late Hesperian to Amazonian. <i>Planetary and Space Science</i> , 2013, 87, 130-145.	1.7	42
28	Surface processes recorded by rocks and soils on Meridiani Planum, Mars: Microscopic Imager observations during Opportunity's first three extended missions. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	39
29	Hematite spherules at Meridiani: Results from MI, Mini-TES, and Pancam. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	38
30	Reconstructing the aqueous history within the southwestern Melas basin, Mars: Clues from stratigraphic and morphometric analyses of fans. <i>Icarus</i> , 2014, 242, 19-37.	2.5	38
31	Geology of the Melas Chasma landing site for the Mars Exploration Rover mission. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	35
32	Formation of a terraced fan deposit in Coprates Catena, Mars. <i>Icarus</i> , 2006, 184, 436-451.	2.5	33
33	Geologic relationships between gray hematite, sulfates, and clays in Capri Chasma. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	31
34	Gray hematite distribution and formation in Ophir and Candor chasmata. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	24
35	An Impact Crater Origin for the InSight Landing Site at Homestead Hollow, Mars: Implications for Near Surface Stratigraphy, Surface Processes, and Erosion Rates. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006333.	3.6	24
36	Mineralogy, morphology and stratigraphy of the light-toned interior layered deposits at Juventae Chasma. <i>Icarus</i> , 2015, 251, 315-331.	2.5	23

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37	Vortex-Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multi-Instrument Observations, Analysis, and Implications. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006757.	3.6	23
38	Soil sedimentology at Gusev Crater from Columbia Memorial Station to Winter Haven. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	21
39	Fresh exposures of hydrous Fe-bearing amorphous silicates on Mars. <i>Geophysical Research Letters</i> , 2014, 41, 8744-8751.	4.0	21
40	Degradation of Homestead Hollow at the InSight Landing Site Based on the Distribution and Properties of Local Deposits. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006350.	3.6	20
41	Vortex-Dominated Aeolian Activity at InSight's Landing Site, Part 2: Local Meteorology, Transport Dynamics, and Model Analysis. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006514.	3.6	19
42	Groundwater flow induced collapse and flooding in Noctis Labyrinthus, Mars. <i>Planetary and Space Science</i> , 2016, 124, 1-14.	1.7	18
43	Theoretical modeling of eruption plumes on Mars under current and past climates. <i>Journal of Geophysical Research</i> , 2001, 106, 20547-20562.	3.3	17
44	In Situ and Orbital Stratigraphic Characterization of the InSight Landing Site—A Type Example of a Regolith-Covered Lava Plain on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	17
45	Stratigraphy and formation of clays, sulfates, and hydrated silica within a depression in Coprates Catena, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 805-835.	3.6	16
46	Mineralogy and chemistry of cobbles at Meridiani Planum, Mars, investigated by the Mars Exploration Rover Opportunity. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	14
47	The Aeolian Environment in Glen Torridon, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	14
48	Mars Exploration Rover Pancam multispectral imaging of rocks, soils, and dust at Gusev crater and Meridiani Planum. , 0, , 281-314.		11
49	Investigation of Lunar Spinel at Sinus Aestuum. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2013-2033.	3.6	11
50	Crater Morphometry on the Mafic Floor Unit at Jezero Crater, Mars: Comparisons to a Known Basaltic Lava Plain at the InSight Landing Site. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089607.	4.0	11
51	CRISM-Based High Spatial Resolution Thermal Inertia Mapping Along Curiosity's Traverses in Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	11
52	Comparison of InSight Homestead Hollow to Hollows at the Spirit Landing Site. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006435.	3.6	10
53	The Physical Properties and Geochemistry of Grains on Aeolian Bedforms at Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	9
54	Formation of clays, ferrihydrite, and possible salts in Hydrae Chasma, Mars. <i>Icarus</i> , 2019, 319, 392-406.	2.5	8

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55	Visible and near-infrared multispectral analysis of geochemically measured rock fragments at the Opportunity landing site in Meridiani Planum. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	7
56	SURFACE ALTERATION FROM LANDING INSIGHT ON MARS AND ITS IMPLICATIONS FOR SHALLOW REGOLITH STRUCTURE. , 2019, , .		5
57	Orbital Observations of a Marker Horizon at Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	5
58	AN IMPACT ORIGIN FOR HOMESTEAD HOLLOW, THE LANDING LOCATION OF THE INSIGHT LANDER ON MARS. , 2019, , .		4
59	Evidence for impact melt sheets in lunar highland smooth plains and implications for polar landing sites. <i>Icarus</i> , 2018, 314, 294-298.	2.5	3
60	Degradation at the <i>InSight</i> Landing Site, <i>Homestead Hollow</i> , Mars: Constraints From Rock Heights and Shapes. <i>Earth and Space Science</i> , 2022, 9, .	2.6	3
61	GEOLOGY OF THE INSIGHT LANDING SITE, MARS. , 2019, , .		2
62	MODIFICATION OF HOMESTEAD HOLLOW AT THE INSIGHT LANDING SITE. , 2019, , .		1
63	Implementing New Feature Extraction Techniques for Characterization of Complex Mineral Signatures of Salty Regions on Mars. , 2020, , .		0