

# A Deanne Rogers

## List of Publications by Year in descending order

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72  
papers

2,916  
citations

172457

29  
h-index

168389

53  
g-index

75  
all docs

75  
docs citations

75  
times ranked

2191  
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral evidence for alkaline rocks and compositional diversity among feldspathic light-toned terrains on Mars. <i>Icarus</i> , 2022, 376, 114883.	2.5	8
2	Olivine and carbonate-rich bedrock in Gusev crater and the Nili Fossae region of Mars may be altered ignimbrite deposits. <i>Icarus</i> , 2022, 380, 114974.	2.5	8
3	In Recognition of Our 2021 Peer Reviewers. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	0
4	Spectral and geological analyses of domes in western Arcadia Planitia, Mars: Evidence for intrusive alkali-rich volcanism and ice-associated surface features. <i>Icarus</i> , 2021, 357, 114111.	2.5	5
5	Geologic and Thermal Characterization of Oxia Planum Using Mars Odyssey THEMIS Data. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006678.	3.6	10
6	Thank You to Our 2020 Peer Reviewers. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006865.	3.6	0
7	Thermophysical Properties and Surface Heterogeneity of Landing Sites on Mars From Overlapping Thermal Emission Imaging System (THEMIS) Observations. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006713.	3.6	13
8	Evidence for limited compositional and particle size variation on asteroid (101955) Bennu from thermal infrared spectroscopy. <i>Astronomy and Astrophysics</i> , 2021, 650, A120.	5.1	30
9	Evaluating Flat Crater Floor Fill Compositions and Morphologies: Insight into Formation Processes. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006919.	3.6	2
10	Machine Learning Mid-Infrared Spectral Models for Predicting Modal Mineralogy of CI/CM Chondritic Asteroids and Bennu. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE007035.	3.6	11
11	In Appreciation of Our 2019 Peer Reviewers. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006420.	3.6	0
12	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
13	Enhanced Formation of Solvent-Shared Ion Pairs in Aqueous Calcium Perchlorate Solution toward Saturated Concentration or Deep Supercooling Temperature and Its Effects on the Water Structure. <i>Journal of Physical Chemistry B</i> , 2019, 123, 9654-9667.	2.6	8
14	Mapping and Characterization of Martian Intercrater Bedrock Plains: Insights Into Resurfacing Processes in the Martian Cratered Highlands. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 3181-3204.	3.6	9
15	The Geology and Astrobiology of McLaughlin Crater, Mars: An Ancient Lacustrine Basin Containing Turbidites, Mudstones, and Serpentinites. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 910-940.	3.6	17
16	Vapor-deposited minerals contributed to the martian surface during magmatic degassing. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1592.	3.6	13
17	Thermal Infrared Spectral Modeling. , 2019, , 324-336.		1
18	Thermal Infrared Spectral Analyses of Mars from Orbit Using the Thermal Emission Spectrometer and Thermal Emission Imaging System. , 2019, , 484-498.		1

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19	Thermal Infrared Remote Sensing of Mars from Rovers Using the Miniature Thermal Emission Spectrometer. , 2019, , 499-512.		1
20	Areally Extensive Surface Bedrock Exposures on Mars: Many Are Clastic Rocks, Not Lavas. Geophysical Research Letters, 2018, 45, 1767-1777.	4.0	68
21	Visible, near-infrared, and mid-infrared spectral characterization of Hawaiian fumarolic alteration near Kilauea's December 1974 flow: Implications for spectral discrimination of alteration environments on Mars. American Mineralogist, 2018, 103, 11-25.	1.9	7
22	Amorphous salts formed from rapid dehydration of multicomponent chloride and ferric sulfate brines: Implications for Mars. Icarus, 2018, 302, 285-295.	2.5	17
23	Incorporation of Portable Infrared Spectral Imaging Into Planetary Geological Field Work: Analog Studies at K�lauea Volcano, Hawaii, and Potrillo Volcanic Field, New Mexico. Earth and Space Science, 2018, 5, 676-696.	2.6	5
24	The Incorporation of Field Portable Instrumentation Into Human Planetary Surface Exploration. Earth and Space Science, 2018, 5, 697-720.	2.6	6
25	Investigation of submarine groundwater discharge to tidal rivers: Evidence for regional and local scale seepage. Hydrological Processes, 2017, 31, 716-730.	2.6	7
26	Occurrence and scale of compositional heterogeneity in Martian dune fields: Toward understanding the effects of aeolian sorting on Martian sediment compositions. Icarus, 2017, 282, 56-69.	2.5	12
27	Assessing the geologic evolution of Greater Thaumasia, Mars. Journal of Geophysical Research E: Planets, 2016, 121, 1753-1769.	3.6	9
28	Spectral characterization of acid weathering products on Martian basaltic glass. Journal of Geophysical Research E: Planets, 2016, 121, 516-541.	3.6	9
29	The association of hydrogen with sulfur on Mars across latitudes, longitudes, and compositional extremes. Journal of Geophysical Research E: Planets, 2016, 121, 1321-1341.	3.6	9
30	Thermal emission spectroscopy of microcrystalline sedimentary phases: Effects of natural surface roughness on spectral feature shape. Journal of Geophysical Research E: Planets, 2016, 121, 542-555.	3.6	14
31	Basaltic glass formed from hydrovolcanism and impact processes: Characterization and clues for detection of mode of origin from VNIR through MWIR reflectance and emission spectroscopy. Icarus, 2016, 275, 16-28.	2.5	16
32	Morphological, structural, and spectral characteristics of amorphous iron sulfates. Journal of Geophysical Research E: Planets, 2015, 120, 809-830.	3.6	28
33	Quantitative compositional analysis of sedimentary materials using thermal emission spectroscopy: 1. Application to sedimentary rocks. Journal of Geophysical Research E: Planets, 2015, 120, 1956-1983.	3.6	12
34	Quantitative compositional analysis of sedimentary materials using thermal emission spectroscopy: 2. Application to compacted fine-grained mineral mixtures and assessment of applicability of partial least squares methods. Journal of Geophysical Research E: Planets, 2015, 120, 1984-2001.	3.6	7
35	Thermal and near-infrared analyses of central peaks of Martian impact craters: Evidence for a heterogeneous Martian crust. Journal of Geophysical Research E: Planets, 2015, 120, 662-688.	3.6	14
36	Compositional provinces of Mars from statistical analyses of TES, GRS, OMEGA and CRISM data. Journal of Geophysical Research E: Planets, 2015, 120, 62-91.	3.6	32

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37	Identification and quantification of diffuse fresh submarine groundwater discharge via airborne thermal infrared remote sensing. <i>Remote Sensing of Environment</i> , 2015, 171, 202-217.	11.0	67
38	Mid-infrared emission spectroscopy and visible/near-infrared reflectance spectroscopy of Fe-sulfate minerals. <i>American Mineralogist</i> , 2015, 100, 66-82.	1.9	32
39	Feldspathic rocks on Mars: Compositional constraints from infrared spectroscopy and possible formation mechanisms. <i>Geophysical Research Letters</i> , 2015, 42, 2619-2626.	4.0	62
40	Sulfates hydrating bulk soil in the Martian low and middle latitudes. <i>Geophysical Research Letters</i> , 2014, 41, 7987-7996.	4.0	35
41	The formation of infilled craters on Mars: Evidence for widespread impact induced decompression of the early martian mantle?. <i>Icarus</i> , 2014, 228, 149-166.	2.5	32
42	The dominance of cold and dry alteration processes on recent Mars, as revealed through pan-spectral orbital analyses. <i>Earth and Planetary Science Letters</i> , 2014, 404, 261-272.	4.4	18
43	Hematite-bearing materials surrounding Candor Mensa in Candor Chasma, Mars: Implications for hematite origin and post-placement modification. <i>Icarus</i> , 2014, 237, 350-365.	2.5	2
44	Groundwater activity on Mars and implications for a deep biosphere. <i>Nature Geoscience</i> , 2013, 6, 133-138.	12.9	189
45	Thermal infrared and Raman microspectroscopy of moganite-bearing rocks. <i>American Mineralogist</i> , 2013, 98, 78-84.	1.9	8
46	Evidence for magma-carbonate interaction beneath Syrtis Major, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 126-137.	3.6	33
47	Evidence for Noachian flood volcanism in Noachis Terra, Mars, and the possible role of Hellas impact basin tectonics. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1094-1113.	3.6	39
48	Regional-scale stratigraphy of surface units in Tyrrhena and Iapygia Terrae, Mars: Insights into highland crustal evolution and alteration history. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	31
49	Crustal compositions exposed by impact craters in the Tyrrhena Terra region of Mars: Considerations for Noachian environments. <i>Earth and Planetary Science Letters</i> , 2011, 301, 353-364.	4.4	11
50	Evidence for episodic alluvial fan formation in far western Terra Tyrrhena, Mars. <i>Icarus</i> , 2011, 211, 222-237.	2.5	31
51	The role of aqueous alteration in the formation of martian soils. <i>Icarus</i> , 2011, 211, 157-171.	2.5	32
52	Mineralogical characterization of Mars Science Laboratory candidate landing sites from THEMIS and TES data. <i>Icarus</i> , 2009, 203, 437-453.	2.5	67
53	Geologic context of in situ rocky exposures in Mare Serpentis, Mars: Implications for crust and regolith evolution in the cratered highlands. <i>Icarus</i> , 2009, 200, 446-462.	2.5	25
54	Mineralogy of volcanic rocks in Gusev Crater, Mars: Reconciling Mössbauer, Alpha Particle X-Ray Spectrometer, and Miniature Thermal Emission Spectrometer spectra. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	96

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55	Mineralogical composition of sands in Meridiani Planum determined from Mars Exploration Rover data and comparison to orbital measurements. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	87
56	Hematite spherules at Meridiani: Results from MI, Mini-TES, and Pancam. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	38
57	Olivine dissolution by acidic fluids in Argyre Planitia, Mars: Evidence for a widespread process. <i>Geology</i> , 2008, 36, 579.	4.4	21
58	Global mineralogy mapped from the Mars Global Surveyor Thermal Emission Spectrometer. , 2008, , 193-220.		7
59	The compositional diversity and physical properties mapped from the Mars Odyssey Thermal Emission Imaging System. , 2008, , 221-241.		6
60	Evidence for aqueous deposition of hematite- and sulfate-rich light-toned layered deposits in Aureum and Iani Chaos, Mars. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	73
61	Global spectral classification of Martian low-albedo regions with Mars Global Surveyor Thermal Emission Spectrometer (MGS-TES) data. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	66
62	Surface mineralogy of Martian low-albedo regions from MGS-TES data: Implications for upper crustal evolution and surface alteration. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	185
63	Coordinated analyses of orbital and Spirit Rover data to characterize surface materials on the cratered plains of Gusev Crater, Mars. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	29
64	Mineralogy of the light-toned outcrop at Meridiani Planum as seen by the Miniature Thermal Emission Spectrometer and implications for its formation. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	107
65	Mars Exploration Rover candidate landing sites as viewed by THEMIS. <i>Icarus</i> , 2005, 176, 12-43.	2.5	70
66	Evidence for magmatic evolution and diversity on Mars from infrared observations. <i>Nature</i> , 2005, 436, 504-509.	27.8	177
67	Compositional heterogeneity of the ancient Martian crust: Analysis of Ares Vallis bedrock with THEMIS and TES data. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	80
68	Initial Results from the Mini-TES Experiment in Gusev Crater from the Spirit Rover. <i>Science</i> , 2004, 305, 837-842.	12.6	168
69	Mineralogy at Meridiani Planum from the Mini-TES Experiment on the Opportunity Rover. <i>Science</i> , 2004, 306, 1733-1739.	12.6	370
70	Atmospheric correction and surface spectral unit mapping using Thermal Emission Imaging System data. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	91
71	Age relationship of basaltic and andesitic surface compositions on Mars: Analysis of high-resolution TES observations of the northern hemisphere. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	44
72	Investigating Sources of Spectral Olivine Enrichments in Martian Bedrock Plains Using Diurnal Emissivity Changes in THEMIS Multispectral Images. <i>Journal of Geophysical Research E: Planets</i> , 0, , .	3.6	4