M S Rice

List of Publications by Year
in descending order

66 papers	8,150 citations	61857 43 h-index	102304 66 g-index
69 all docs	69 docs citations	69 times ranked	4556 citing authors

#	Article	IF	Citations
1	Optimizing ExoMars Rover Remote Sensing Multispectral Science: Crossâ€Rover Comparison Using Laboratory and Orbital Data. Earth and Space Science, 2022, 9, .	1.1	1
2	Pre-Flight Calibration of the Mars 2020 Rover Mastcam Zoom (Mastcam-Z) Multispectral, Stereoscopic Imager. Space Science Reviews, 2021, 217, 29.	3.7	31
3	The Mars 2020 Perseverance Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation. Space Science Reviews, 2021, 217, 24.	3.7	76
4	Perseverance rover reveals an ancient delta-lake system and flood deposits at Jezero crater, Mars. Science, 2021, 374, 711-717.	6.0	86
5	The Case for Ancient Hot Springs in Gusev Crater, Mars. Astrobiology, 2020, 20, 475-499.	1.5	56
6	Scarp orientation in regions of active aeolian erosion on Mars. Icarus, 2020, 335, 113384.	1.1	7
7	The mineral diversity of Jezero crater: Evidence for possible lacustrine carbonates on Mars. Icarus, 2020, 339, 113526.	1.1	166
8	Synergistic Ground and Orbital Observations of Iron Oxides on Mt. Sharp and Vera Rubin Ridge. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006294.	1.5	27
9	Diagenesis of Vera Rubin Ridge, Gale Crater, Mars, From Mastcam Multispectral Images. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006322.	1.5	33
10	Radiometric Calibration Targets for the Mastcam-Z Camera on the Mars 2020 Rover Mission. Space Science Reviews, 2020, 216, 1.	3.7	27
11	Photogeologic Map of the Perseverance Rover Field Site in Jezero Crater Constructed by the Mars 2020 Science Team. Space Science Reviews, 2020, 216, 1.	3.7	67
12	Identification and Description of a Silicic Volcaniclastic Layer in Gale Crater, Mars, Using Active Neutron Interrogation. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006180.	1.5	16
13	Overview of Spirit Microscopic Imager Results. Journal of Geophysical Research E: Planets, 2019, 124, 528-584.	1.5	4
14	Compositional and Mineralogic Analyses of Mars Using Multispectral Imaging on the Mars Exploration Rover, Phoenix, and Mars Science Laboratory Missions. , 2019, , 513-537.		3
15	Photometric characterization of Lucideon and Avian Technologies color standards including application for calibration of the Mastcam-Z instrument on the Mars 2020 rover. Optical Engineering, 2019, 58, 1.	0.5	8
16	Shaler: inÂsitu analysis of a fluvial sedimentary deposit on Mars. Sedimentology, 2018, 65, 96-122.	1.6	59
17	The albedo of Mars: Six Mars years of observations from Pancam on the Mars Exploration Rovers and comparisons to MOC, CTX and HiRISE. Icarus, 2018, 314, 159-174.	1.1	10
18	Visible to near-infrared MSL/Mastcam multispectral imaging: Initial results from select high-interest science targets within Gale Crater, Mars. American Mineralogist, 2017, 102, 1202-1217.	0.9	43

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19	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	1.5	87
20	Geologic overview of the Mars Science Laboratory rover mission at the Kimberley, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2017, 122, 2-20.	1.5	60
21	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. Geophysical Research Letters, 2016, 43, 7398-7407.	1.5	110
22	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
23	VNIR multispectral observations of aqueous alteration materials by the Pancams on the Spirit and Opportunity Mars Exploration Rovers. American Mineralogist, 2016, 101, 2005-2019.	0.9	25
24	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.	1.5	123
25	The sustainability of habitability on terrestrial planets: Insights, questions, and needed measurements from Mars for understanding the evolution of Earthâ€like worlds. Journal of Geophysical Research E: Planets, 2016, 121, 1927-1961.	1.5	72
26	Discordant Kâ€Ar and young exposure dates for the Windjana sandstone, Kimberley, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2016, 121, 2176-2192.	1.5	19
27	The potassic sedimentary rocks in Gale Crater, Mars, as seen by ChemCam on board Curiosity. Journal of Geophysical Research E: Planets, 2016, 121, 784-804.	1.5	67
28	Comparing orbiter and rover image-based mapping of an ancient sedimentary environment, Aeolis Palus, Gale crater, Mars. Icarus, 2016, 280, 3-21.	1.1	57
29	Large wind ripples on Mars: A record of atmospheric evolution. Science, 2016, 353, 55-58.	6.0	144
30	Sedimentology, chemostratigraphy, and stromatolites of lower Paleoproterozoic carbonates, Turee Creek Group, Western Australia. Precambrian Research, 2015, 266, 194-211.	1.2	22
31	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
32	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	6.0	471
33	ChemCam passive reflectance spectroscopy of surface materials at the Curiosity landing site, Mars. Icarus, 2015, 249, 74-92.	1.1	70
34	The persistence of a chlorophyll spectral biosignature from Martian evaporite and spring analogues under Mars-like conditions. International Journal of Astrobiology, 2014, 13, 203-223.	0.9	18
35	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	6.0	323
36	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	6.0	687

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37	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	6.0	508
38	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	6.0	475
39	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	6.0	246
40	Calcium sulfate veins characterized by ChemCam/Curiosity at Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1991-2016.	1.5	214
41	The rock abrasion record at Gale Crater: Mars Science Laboratory results from Bradbury Landing to Rocknest. Journal of Geophysical Research E: Planets, 2014, 119, 1374-1389.	1.5	46
42	Diagenetic origin of nodules in the Sheepbed member, Yellowknife Bay formation, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1637-1664.	1.5	80
43	Observations of rock spectral classes by the Opportunity rover's Pancam on northern Cape York and on Matijevic Hill, Endeavour Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 2349-2369.	1.5	19
44	A hypersaline spring analogue in Manitoba, Canada for potential ancient spring deposits on Mars. Icarus, 2013, 224, 399-412.	1.1	9
45	Hydrated silica on Mars: Combined analysis with near-infrared and thermal-infrared spectroscopy. Icarus, 2013, 223, 633-648.	1.1	61
46	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	6.0	327
47	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	6.0	280
48	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	6.0	327
49	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	6.0	367
50	Reflectance spectra diversity of silica-rich materials: Sensitivity to environment and implications for detections on Mars. Icarus, 2013, 223, 499-533.	1.1	79
51	VNIR multispectral observations of rocks at Cape York, Endeavour crater, Mars by the Opportunity roverâ€™s Pancam. Icarus, 2013, 225, 709-725.	1.1	23
52	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	6.0	326
53	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	6.0	134
54	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	6.0	215

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55	Ancient Impact and Aqueous Processes at Endeavour Crater, Mars. Science, 2012, 336, 570-576.	6.0	176
56	Temporal observations of bright soil exposures at Gusev crater, Mars. Journal of Geophysical Research, 2011, 116, .	3.3	19
57	Opportunity Mars Rover mission: Overview and selected results from Purgatory ripple to traverses to Endeavour crater. Journal of Geophysical Research, 2011, 116, .	3.3	106
58	Field reconnaissance geologic mapping of the Columbia Hills, Mars, based on Mars Exploration Rover Spirit and MRO HiRISE observations. Journal of Geophysical Research, 2011, 116, .	3.3	24
59	Characteristics, distribution, origin, and significance of opaline silica observed by the Spirit rover in Gusev crater, Mars. Journal of Geophysical Research, 2011, 116, .	3.3	155
60	Influence of fault-controlled topography on fluvio-deltaic sedimentary systems in Eberswalde crater, Mars. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	18
61	Radar imagery of Mercuryâ€™s putative polar ice: 1999â€“2005 Arecibo results. Icarus, 2011, 211, 37-50.	1.1	89
62	Silica-rich deposits and hydrated minerals at Gusev Crater, Mars: Vis-NIR spectral characterization and regional mapping. Icarus, 2010, 205, 375-395.	1.1	93
63	Spirit Mars Rover Mission: Overview and selected results from the northern Home Plate Winter Haven to the side of Scamander crater. Journal of Geophysical Research, 2010, 115, .	3.3	127
64	Surface albedo observations at Gusev Crater and Meridiani Planum, Mars. Journal of Geophysical Research, 2008, 113, .	3.3	37
65	Mineralogic constraints on sulfurâ€rich soils from Pancam spectra at Gusev crater, Mars. Geophysical Research Letters, 2007, 34, .	1.5	89
66	Mercury: Radar images of the equatorial and midlatitude zones. Icarus, 2007, 187, 374-405.	1.1	70