J A Rodriguez-Manfredi

List of Publications by Year
in descending order

91 papers	9,959 citations	50170 46 h-index	58464 82 g-index
94 all docs	94 docs citations	94 times ranked	5565 citing authors

#	Article	IF	Citations
1	In situ recording of Mars soundscape. Nature, 2022, 605, 653-658.	13.7	30
2	Radiation and Dust Sensor for Mars Environmental Dynamic Analyzer Onboard M2020 Rover. Sensors, 2022, 22, 2907.	2.1	18
3	The dynamic atmospheric and aeolian environment of Jezero crater, Mars. Science Advances, 2022, 8, .	4.7	47
4	Denoising Atmospheric Temperature Measurements Taken by the Mars Science Laboratory on the Martian Surface. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-10.	2.4	4
5	Multi-model Meteorological and Aeolian Predictions for Mars 2020 and the Jezero Crater Region. Space Science Reviews, 2021, 217, 20.	3.7	35
6	The Mars Environmental Dynamics Analyzer, MEDA. A Suite of Environmental Sensors for the Mars 2020 Mission. Space Science Reviews, 2021, 217, 48.	3.7	57
7	Mars 2020 Mission Overview. Space Science Reviews, 2020, 216, 1.	3.7	239
8	A Miniaturized 3D Heat Flux Sensor to Characterize Heat Transfer in Regolith of Planets and Small Bodies. Sensors, 2020, 20, 4135.	2.1	4
9	The Complex Molecules Detector (CMOLD): A Fluidic-Based Instrument Suite to Search for (Bio)chemical Complexity on Mars and Icy Moons. Astrobiology, 2020, 20, 1076-1096.	1.5	16
10	Effects of a Large Dust Storm in the Nearâ€Surface Atmosphere as Measured by InSight in Elysium Planitia, Mars. Comparison With Contemporaneous Measurements by Mars Science Laboratory. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006493.	1.5	30
11	Radiometric and angular calibration tests for the MEDA-TIRS radiometer onboard NASAâ€™s Mars 2020 mission. Measurement: Journal of the International Measurement Confederation, 2020, 164, 107968.	2.5	15
12	The atmosphere of Mars as observed by InSight. Nature Geoscience, 2020, 13, 190-198.	5.4	161
13	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	5.4	207
14	The seismicity of Mars. Nature Geoscience, 2020, 13, 205-212.	5.4	194
15	Meteorological Predictions for Mars 2020 Perseverance Rover Landing Site at Jezero Crater. Space Science Reviews, 2020, 216, 1.	3.7	62
16	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	5.4	274
17	Effects of the MY34/2018 Global Dust Storm as Measured by MSL REMS in Gale Crater. Journal of Geophysical Research E: Planets, 2019, 124, 1899-1912.	1.5	40
18	SEIS: Insightâ€™s Seismic Experiment for Internal Structure of Mars. Space Science Reviews, 2019, 215, 12.	3.7	238

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19	InSight Auxiliary Payload Sensor Suite (APSS). Space Science Reviews, 2019, 215, 1.	3.7	104
20	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
21	The Thermal Infrared Sensor (TIRS) of the Mars Environmental Dynamics Analyzer (MEDA) instrument onboard Mars 2020, a general description and performance analysis. Measurement: Journal of the International Measurement Confederation, 2018, 122, 432-442.	2.5	17
22	Atmospheric Science with InSight. Space Science Reviews, 2018, 214, 1.	3.7	88
23	Effects of Gamma and Electron Radiation on the Structural Integrity of Organic Molecules and Macromolecular Biomarkers Measured by Microarray Immunoassays and Their Astrobiological Implications. Astrobiology, 2018, 18, 1497-1516.	1.5	23
24	The NASA Mars 2020 Rover Mission and the Search for Extraterrestrial Life. , 2018, , 275-308.		95
25	The Thermal Infrared Sensor (TIRS) of the Mars Environmental Dynamics Analyzer (MEDA) instrument onboard Mars 2020. , 2017, , .		2
26	Performance analysis of the MEDA's Thermal InfraRed Sensor (TIRS) on board the Mars 2020. , 2017, , .		1
27	MEDA Instrument Processing and Data Management for the Mars2020 Mission. , 2017, , .		0
28	Atmospheric tides in Gale Crater, Mars. Icarus, 2016, 268, 37-49.	1.1	45
29	A full martian year of line-of-sight extinction within Gale Crater, Mars as acquired by the MSL Navcam through sol 900. Icarus, 2016, 264, 102-108.	1.1	29
30	Organic molecules in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 495-514.	1.5	375
31	ChemCam: Chemostratigraphy by the First Mars Microprobe. Elements, 2015, 11, 33-38.	0.5	54
32	Images from Curiosity: A New Look at Mars. Elements, 2015, 11, 27-32.	0.5	13
33	Curiosity's Mission of Exploration at Gale Crater, Mars. Elements, 2015, 11, 19-26.	0.5	55
34	Determining Mineralogy on Mars with the CheMin X-Ray Diffractometer. Elements, 2015, 11, 45-50.	0.5	39
35	Volatile and Isotopic Imprints of Ancient Mars. Elements, 2015, 11, 51-56.	0.5	12
36	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the <i>Curiosity</i> 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	Mars methane detection and variability at Gale crater. Science, 2015, 347, 415-417.	6.0	373
38	The imprint of atmospheric evolution in the D/H of Hesperian clay minerals on Mars. Science, 2015, 347, 412-414.	6.0	113
39	Gale crater and impact processes â€" Curiosityâ€™s first 364 Sols on Mars. Icarus, 2015, 249, 108-128.	1.1	37
40	Compositions of coarse and fine particles in martian soils at gale: A window into the production of soils. Icarus, 2015, 249, 22-42.	1.1	64
41	ChemCam passive reflectance spectroscopy of surface materials at the Curiosity landing site, Mars. Icarus, 2015, 249, 74-92.	1.1	70
42	Mars Science Laboratory relative humidity observations: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 2132-2147.	1.5	75
43	RÃo Tinto: A Geochemical and Mineralogical Terrestrial Analogue of Mars. Life, 2014, 4, 511-534.	1.1	68
44	Comparison of Martian surface ionizing radiation measurements from MSLâ€RAD with Badhwarâ€O'Neill 2011/HZETRN model calculations. Journal of Geophysical Research E: Planets, 2014, 119, 1311-1321.	1.5	42
45	Trace element geochemistry (Li, Ba, Sr, and Rb) using <i>Curiosity</i>'s ChemCam: Early results for Gale crater from Bradbury Landing Site to Rocknest. Journal of Geophysical Research E: Planets, 2014, 119, 255-285.	1.5	86
46	Diurnal variations of energetic particle radiation at the surface of Mars as observed by the Mars Science Laboratory Radiation Assessment Detector. Journal of Geophysical Research E: Planets, 2014, 119, 1345-1358.	1.5	44
47	Correcting for variable laser-target distances of laser-induced breakdown spectroscopy measurements with ChemCam using emission lines of Martian dust spectra. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 96, 51-60.	1.5	45
48	Curiosity's rover environmental monitoring station: Overview of the first 100 sols. Journal of Geophysical Research E: Planets, 2014, 119, 1680-1688.	1.5	112
49	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	6.0	323
50	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	6.0	687
51	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	6.0	508
52	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	6.0	475
53	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	6.0	224
54	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	6.0	246

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55	Local variations of bulk hydrogen and chlorineâ€equivalent neutron absorption content measured at the contact between the Sheepbed and Gillespie Lake units in Yellowknife Bay, Gale Crater, using the DAN instrument onboard Curiosity. Journal of Geophysical Research E: Planets, 2014, 119, 1259-1275.	1.5	33
56	Preliminary interpretation of the REMS pressure data from the first 100 sols of the MSL mission. Journal of Geophysical Research E: Planets, 2014, 119, 440-453.	1.5	80
57	Pressure observations by the Curiosity rover: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 82-92.	1.5	84
58	FRISER-IRMIX Database: A Web-Based Support System with Implications in Planetary Mineralogical Studies, Ground Temperature Measurements and Astrobiology. Lecture Notes in Earth System Sciences, 2014, , 783-786.	0.5	0
59	Molecular preservation in haliteâ€•and perchlorateâ€rich hypersaline subsurface deposits in the Salar Grande basin (Atacama Desert, Chile): Implications for the search for molecular biomarkers on Mars. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 922-939.	1.3	30
60	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	6.0	327
61	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	6.0	280
62	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	6.0	327
63	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	6.0	367
64	Isotope Ratios of H, C, and O in CO ₂ and H ₂ O of the Martian Atmosphere. Science, 2013, 341, 260-263.	6.0	241
65	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	6.0	326
66	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	6.0	134
67	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	6.0	215
68	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	6.0	103
69	REMS: The Environmental Sensor Suite for the Mars Science Laboratory Rover. Space Science Reviews, 2012, 170, 583-640.	3.7	247
70	Habitability: Where to look for life? Halophilic habitats: Earth analogs to study Mars habitability. Planetary and Space Science, 2012, 68, 48-55.	0.9	8
71	Prokaryotic communities and operating metabolisms in the surface and the permafrost of Deception Island (Antarctica). Environmental Microbiology, 2012, 14, 2495-2510.	1.8	44
72	A Microbial Oasis in the Hypersaline Atacama Subsurface Discovered by a Life Detector Chip: Implications for the Search for Life on Mars. Astrobiology, 2011, 11, 969-996.	1.5	140

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73	ExoMars Raman laser spectrometer for Exomars. Proceedings of SPIE, 2011, , .	0.8	23
74	Classification of Modern and Old RÃo Tinto Sedimentary Deposits Through the Biomolecular Record Using a Life Marker Biochip: Implications for Detecting Life on Mars. Astrobiology, 2011, 11, 29-44.	1.5	24
75	A new spectrometer concept for Mars exploration. , 2011, , .		1
76	ExoMars Raman laser spectrometer breadboard overview. Proceedings of SPIE, 2011, , .	0.8	1
77	Astrobiological Field Campaign to a Volcanosedimentary Mars Analogue Methane Producing Subsurface Protected Ecosystem: Imuruk Lake (Alaska). Advances in Astronomy, 2011, 2011, 1-8.	0.5	0
78	Strategies for detection of putative life on Europa. Advances in Space Research, 2011, 48, 678-688.	1.2	17
79	SOLID3: A Multiplex Antibody Microarray-Based Optical Sensor Instrument for<i>In Situ</i>Life Detection in Planetary Exploration. Astrobiology, 2011, 11, 15-28.	1.5	104
80	ExoMars Raman laser spectrometer overview. Proceedings of SPIE, 2010, , .	0.8	6
81	The 2005 MARTE Robotic Drilling Experiment in RÃo Tinto, Spain: Objectives, Approach, and Results of a Simulated Mission to Search for Life in the Martian Subsurface. Astrobiology, 2008, 8, 921-945.	1.5	52
82	SOLID2: An Antibody Array-Based Life-Detector Instrument in a Mars Drilling Simulation Experiment (MARTE). Astrobiology, 2008, 8, 987-999.	1.5	63
83	The Cyborg Astrobiologist: porting from a wearable computer to the Astrobiology Phone-cam. International Journal of Astrobiology, 2007, 6, 255-261.	0.9	3
84	MARTE: Technology development and lessons learned from a Mars drilling mission simulation. Journal of Field Robotics, 2007, 24, 877-905.	3.2	33
85	Spiders: Water-Driven Erosive Structures in the Southern Hemisphere of Mars. Astrobiology, 2006, 6, 651-667.	1.5	11
86	Instrument development to search for biomarkers on mars: Terrestrial acidophile, iron-powered chemolithoautotrophic communities as model systems. Planetary and Space Science, 2005, 53, 729-737.	0.9	77
87	The Cyborg Astrobiologist: scouting red beds for uncommon features with geological significance. International Journal of Astrobiology, 2005, 4, 101.	0.9	9
88	The Cyborg Astrobiologist: first field experience. International Journal of Astrobiology, 2004, 3, 189-207.	0.9	10
89	The Tinto River, an extreme acidic environment under control of iron, as an analog of the Terra Meridiani hematite site of Mars. Planetary and Space Science, 2004, 52, 239-248.	0.9	110
90	<title>Robotic telescope network of Centro de Astrobiologia</title>. , 2002, 4848, 434.		0

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91	Iberian Pyrite Belt Subsurface Life (IPBSL), a Drilling Project of Biohydrometallurgical Interest. Advanced Materials Research, 0, 825, 15-18.	0.3	18