Roger C Wiens

List of Publications by Year
in descending order

218 papers	15,945 citations	14655 66 h-index	19749 117 g-index
234 all docs	234 docs citations	234 times ranked	6303 citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
2	Mars Science Laboratory Mission and Science Investigation. Space Science Reviews, 2012, 170, 5-56.	8.1	650
3	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. Science, 2015, 350, aac7575.	12.6	471
4	The ChemCam Instrument Suite on the Mars Science Laboratory (MSL) Rover: Body Unit and Combined System Tests. Space Science Reviews, 2012, 170, 167-227.	8.1	429
5	The ChemCam Instrument Suite on the Mars Science Laboratory (MSL) Rover: Science Objectives and Mast Unit Description. Space Science Reviews, 2012, 170, 95-166.	8.1	372
6	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
7	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	12.6	327
8	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
9	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
10	The Oxygen Isotopic Composition of the Sun Inferred from Captured Solar Wind. Science, 2011, 332, 1528-1532.	12.6	321
11	Multivariate analysis of remote laser-induced breakdown spectroscopy spectra using partial least squares, principal component analysis, and related techniques. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2009, 64, 79-88.	2.9	266
12	Pre-flight calibration and initial data processing for the ChemCam laser-induced breakdown spectroscopy instrument on the Mars Science Laboratory rover. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2013, 82, 1-27.	2.9	258
13	A ¹⁵ N-Poor Isotopic Composition for the Solar System As Shown by Genesis Solar Wind Samples. Science, 2011, 332, 1533-1536.	12.6	255
14	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
15	Mars 2020 Mission Overview. Space Science Reviews, 2020, 216, 1.	8.1	239
16	In situ evidence for continental crust on early Mars. Nature Geoscience, 2015, 8, 605-609.	12.9	233
17	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
18	Calcium sulfate veins characterized by ChemCam/Curiosity at Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1991-2016.	3.6	214

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19	Redox stratification of an ancient lake in Gale crater, Mars. Science, 2017, 356, .	12.6	209
20	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.	7.1	172
21	Laser-Induced Breakdown Spectroscopy for Mars surface analysis: capabilities at stand-off distances and detection of chlorine and sulfur elements. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1413-1422.	2.9	163
22	The SuperCam Instrument Suite on the NASA Mars 2020 Rover: Body Unit and Combined System Tests. Space Science Reviews, 2021, 217, 4.	8.1	160
23	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.	3.6	159
24	Recalibration of the Mars Science Laboratory ChemCam instrument with an expanded geochemical database. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 129, 64-85.	2.9	137
25	Mineralogy and geochemistry of sedimentary rocks and eolian sediments in Gale crater, Mars: A review after six Earth years of exploration with Curiosity. Chemie Der Erde, 2020, 80, 125605.	2.0	137
26	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
27	ChemCam activities and discoveries during the nominal mission of the Mars Science Laboratory in Gale crater, Mars. Journal of Analytical Atomic Spectrometry, 2016, 31, 863-889.	3.0	134
28	The SuperCam Instrument Suite on the Mars 2020 Rover: Science Objectives and Mast-Unit Description. Space Science Reviews, 2021, 217, 1.	8.1	131
29	Joint analyses by laser-induced breakdown spectroscopy (LIBS) and Raman spectroscopy at stand-off distances. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2005, 61, 2324-2334.	3.9	128
30	Evaluation of a compact spectrograph for in-situ and stand-off Laser-Induced Breakdown Spectroscopy analyses of geological samples on Mars missions. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2005, 60, 805-815.	2.9	121
31	Igneous mineralogy at Bradbury Rise: The first ChemCam campaign at Gale crater. Journal of Geophysical Research E: Planets, 2014, 119, 30-46.	3.6	114
32	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.	3.6	113
33	Combined remote LIBS and Raman spectroscopy at 8.6m of sulfur-containing minerals, and minerals coated with hematite or covered with basaltic dust. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2007, 68, 1036-1045.	3.9	111
34	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. Geophysical Research Letters, 2016, 43, 7398-7407.	4.0	110
35	The case for a martian origin of the shergottites, II. Trapped and indigenous gas components in EETA 79001 glass. Earth and Planetary Science Letters, 1986, 77, 149-158.	4.4	108
36	The Genesis Discovery Mission: Return of Solar Matter to Earth. Space Science Reviews, 2003, 105, 509-534.	8.1	108

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37	Strategies for Mars remote Laser-Induced Breakdown Spectroscopy analysis of sulfur in geological samples. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 39-56.	2.9	107
38	First detection of fluorine on Mars: Implications for Gale Crater's geochemistry. Geophysical Research Letters, 2015, 42, 1020-1028.	4.0	107
39	An interval of high salinity in ancient Gale crater lake on Mars. Nature Geoscience, 2019, 12, 889-895.	12.9	105
40	Optimization of laser-induced breakdown spectroscopy for rapid geochemical analysis. Chemical Geology, 2010, 277, 137-148.	3.3	104
41	Overview of the Mars Science Laboratory mission: Bradbury Landing to Yellowknife Bay and beyond. Journal of Geophysical Research E: Planets, 2014, 119, 1134-1161.	3.6	104
42	Hydration state of calcium sulfates in Gale crater, Mars: Identification of bassanite veins. Earth and Planetary Science Letters, 2016, 452, 197-205.	4.4	103
43	Classification of igneous rocks analyzed by ChemCam at Gale crater, Mars. Icarus, 2017, 288, 265-283.	2.5	96
44	Gypsum, bassanite, and anhydrite at Gale crater, Mars. American Mineralogist, 2018, 103, 1011-1020.	1.9	96
45	The ChemCam Remote Micro-Imager at Gale crater: Review of the first year of operations on Mars. Icarus, 2015, 249, 93-107.	2.5	95
46	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.	3.6	95
47	The NASA Mars 2020 Rover Mission and the Search for Extraterrestrial Life. , 2018, , 275-308.		95
48	Nitrogen isotopes in the recent solar wind from the analysis of Genesis targets: Evidence for large scale isotope heterogeneity in the early solar system. Geochimica Et Cosmochimica Acta, 2010, 74, 340-355.	3.9	94
49	Perseveranceâ€™s Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. Space Science Reviews, 2021, 217, 1.	8.1	94
50	Onboard calibration igneous targets for the Mars Science Laboratory Curiosity rover and the Chemistry Camera laser induced breakdown spectroscopy instrument. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 280-289.	2.9	90
51	Chemistry of diagenetic features analyzed by ChemCam at Pahrump Hills, Gale crater, Mars. Icarus, 2017, 281, 121-136.	2.5	90
52	Laboratory shock emplacement of noble gases, nitrogen, and carbon dioxide into basalt, and implications for trapped gases in shergottite EETA 79001. Geochimica Et Cosmochimica Acta, 1988, 52, 295-307.	3.9	89
53	Diagenetic silica enrichment and lateâ€stage groundwater activity in Gale crater, Mars. Geophysical Research Letters, 2017, 44, 4716-4724.	4.0	87
54	Laser induced breakdown spectroscopy library for the Martian environment. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 805-814.	2.9	86

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55	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.	3.6	86
56	Perseverance rover reveals an ancient delta-lake system and flood deposits at Jezero crater, Mars. Science, 2021, 374, 711-717.	12.6	86
57	Calibrating the ChemCam laser-induced breakdown spectroscopy instrument for carbonate minerals on Mars. Applied Optics, 2010, 49, C211.	2.1	81
58	The influence of multivariate analysis methods and target grain size on the accuracy of remote quantitative chemical analysis of rocks using laser induced breakdown spectroscopy. Icarus, 2011, 215, 608-627.	2.5	81
59	High manganese concentrations in rocks at Gale crater, Mars. Geophysical Research Letters, 2014, 41, 5755-5763.	4.0	81
60	Diagenetic origin of nodules in the Sheepbed member, Yellowknife Bay formation, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 1637-1664.	3.6	80
61	AEGIS autonomous targeting for ChemCam on Mars Science Laboratory: Deployment and results of initial science team use. Science Robotics, 2017, 2, .	17.6	76
62	ISOTOPIC MASS FRACTIONATION OF SOLAR WIND: EVIDENCE FROM FAST AND SLOW SOLAR WIND COLLECTED BY THE<i>GENESIS</i>MISSION. Astrophysical Journal, 2012, 759, 121.	4.5	75
63	Diagenesis and clay mineral formation at Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 1-19.	3.6	72
64	Improved accuracy in quantitative laser-induced breakdown spectroscopy using sub-models. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 129, 49-57.	2.9	71
65	Desiccation cracks provide evidence of lake drying on Mars, Sutton Island member, Murray formation, Gale Crater. Geology, 2018, 46, 515-518.	4.4	71
66	Chemistry of fractureâ€filling raised ridges in Yellowknife Bay, Gale Crater: Window into past aqueous activity and habitability on Mars. Journal of Geophysical Research E: Planets, 2014, 119, 2398-2415.	3.6	70
67	ChemCam passive reflectance spectroscopy of surface materials at the Curiosity landing site, Mars. Icarus, 2015, 249, 74-92.	2.5	70
68	Evidence for a Diagenetic Origin of Vera Rubin Ridge, Gale Crater, Mars: Summary and Synthesis of <i>Curiosity</i>'s Exploration Campaign. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006527.	3.6	69
69	Gale Crater: Formation and post-impact hydrous environments. Planetary and Space Science, 2012, 70, 84-95.	1.7	67
70	SHERLOC: Scanning habitable environments with Raman & luminescence for organics & chemicals. , 2015, , .		67
71	The potassic sedimentary rocks in Gale Crater, Mars, as seen by ChemCam on board <i>Curiosity</i>. Journal of Geophysical Research E: Planets, 2016, 121, 784-804.	3.6	67
72	Independent component analysis classification of laser induced breakdown spectroscopy spectra. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2013, 86, 31-41.	2.9	66

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73	Magmatic complexity on early Mars as seen through a combination of orbital, in-situ and meteorite data. Lithos, 2016, 254-255, 36-52.	1.4	66
74	Mineralâ€Filled Fractures as Indicators of Multigenerational Fluid Flow in the Pahrump Hills Member of the Murray Formation, Gale Crater, Mars. Earth and Space Science, 2019, 6, 238-265.	2.6	66
75	Quantification of water content by laser induced breakdown spectroscopy on Mars. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 130, 82-100.	2.9	65
76	Compositions of coarse and fine particles in martian soils at gale: A window into the production of soils. Icarus, 2015, 249, 22-42.	2.5	64
77	Analysis of Water Ice and Water Ice/Soil Mixtures Using Laser-Induced Breakdown Spectroscopy: Application to Mars Polar Exploration. Applied Spectroscopy, 2004, 58, 897-909.	2.2	62
78	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.	3.6	60
79	Shaler: <i>inÂsitu</i> analysis of a fluvial sedimentary deposit on Mars. Sedimentology, 2018, 65, 96-122.	3.1	59
80	Hydrogen detection with ChemCam at Gale crater. Icarus, 2015, 249, 43-61.	2.5	58
81	The Genesis Solar-Wind Collector Materials. Space Science Reviews, 2003, 105, 535-560.	8.1	57
82	Characterization of LIBS emission lines for the identification of chlorides, carbonates, and sulfates in salt/basalt mixtures for the application to MSL ChemCam data. Journal of Geophysical Research E: Planets, 2017, 122, 744-770.	3.6	57
83	Listening to laser sparks: a link between Laser-Induced Breakdown Spectroscopy, acoustic measurements and crater morphology. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2019, 153, 50-60.	2.9	57
84	Genesis on-board determination of the solar wind flow regime. Space Science Reviews, 2003, 105, 661-679.	8.1	56
85	Planetary Geochemical Investigations Using Raman and Laser-Induced Breakdown Spectroscopy. Applied Spectroscopy, 2014, 68, 925-936.	2.2	56
86	In situ detection of boron by ChemCam on Mars. Geophysical Research Letters, 2017, 44, 8739-8748.	4.0	56
87	Mars Extant Life: What's Next? Conference Report. Astrobiology, 2020, 20, 785-814.	3.0	56
88	Remote laserâ€induced breakdown spectroscopy (LIBS) for lunar exploration. Journal of Geophysical Research, 2012, 117, .	3.3	55
89	Combined remote mineralogical and elemental identification from rovers: Field and laboratory tests using reflectance and laser-induced breakdown spectroscopy. Journal of Geophysical Research, 2002, 107, FIDO 3-1-FIDO 3-14.	3.3	54
90	ChemCam: Chemostratigraphy by the First Mars Microprobe. Elements, 2015, 11, 33-38.	0.5	54

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91	Composition of conglomerates analyzed by the Curiosity rover: Implications for Gale Crater crust and sediment sources. Journal of Geophysical Research E: Planets, 2016, 121, 353-387.	3.6	53
92	The solar oxygenâ€isotopic composition: Predictions and implications for solar nebula processes. Meteoritics and Planetary Science, 1999, 34, 99-107.	1.6	52
93	Ceramic ChemCam Calibration Targets on Mars Science Laboratory. Space Science Reviews, 2012, 170, 229-255.	8.1	52
94	ChemCam results from the Shaler outcrop in Gale crater, Mars. Icarus, 2015, 249, 2-21.	2.5	52
95	Mars Science Laboratory Observations of Chloride Salts in Gale Crater, Mars. Geophysical Research Letters, 2019, 46, 10754-10763.	4.0	52
96	Chemical alteration of fine-grained sedimentary rocks at Gale crater. Icarus, 2019, 321, 619-631.	2.5	52
97	Brine-driven destruction of clay minerals in Gale crater, Mars. Science, 2021, 373, 198-204.	12.6	52
98	Chemical variations in Yellowknife Bay formation sedimentary rocks analyzed by ChemCam on board the Curiosity rover on Mars. Journal of Geophysical Research E: Planets, 2015, 120, 452-482.	3.6	51
99	Remote laser-induced breakdown spectroscopy analyses of Dar al Gani 476 and Zagami Martian meteorites. Journal of Geophysical Research, 2006, 111, .	3.3	50
100	Elemental Abundances of the Bulk Solar Wind: Analyses from Genesis and ACE. Space Science Reviews, 2007, 130, 79-86.	8.1	50
101	Fluids during diagenesis and sulfate vein formation in sediments at Gale crater, Mars. Meteoritics and Planetary Science, 2016, 51, 2175-2202.	1.6	50
102	Late-stage diagenetic concretions in the Murray formation, Gale crater, Mars. Icarus, 2019, 321, 866-890.	2.5	50
103	Examining natural rock varnish and weathering rinds with laser-induced breakdown spectroscopy for application to ChemCam on Mars. Applied Optics, 2012, 51, B74.	1.8	49
104	Understanding the signature of rock coatings in laser-induced breakdown spectroscopy data. Icarus, 2015, 249, 62-73.	2.5	49
105	Chemistry and texture of the rocks at Rocknest, Gale Crater: Evidence for sedimentary origin and diagenetic alteration. Journal of Geophysical Research E: Planets, 2014, 119, 2109-2131.	3.6	48
106	Alkali trace elements in Gale crater, Mars, with ChemCam: Calibration update and geological implications. Journal of Geophysical Research E: Planets, 2017, 122, 650-679.	3.6	48
107	The dynamic atmospheric and aeolian environment of Jezero crater, Mars. Science Advances, 2022, 8, .	10.3	47
108	Solar and solar-wind isotopic compositions. Earth and Planetary Science Letters, 2004, 222, 697-712.	4.4	46

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109	Puncturing Mars: How impact craters interact with the Martian cryosphere. Earth and Planetary Science Letters, 2012, 335-336, 9-17.	4.4	46
110	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.	3.6	46
111	Geochemistry of the Bagnold dune field as observed by ChemCam and comparison with other aeolian deposits at Gale Crater. Journal of Geophysical Research E: Planets, 2017, 122, 2144-2162.	3.6	46
112	Classification scheme for sedimentary and igneous rocks in Gale crater, Mars. Icarus, 2017, 284, 1-17.	2.5	46
113	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.	2.9	45
114	In situ calibration using univariate analyses based on the onboard ChemCam targets: first prediction of Martian rock and soil compositions. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 99, 34-51.	2.9	45
115	Characteristics of pebbleâ€and cobbleâ€sized clasts along the Curiosity rover traverse from Bradbury Landing to Rocknest. Journal of Geophysical Research E: Planets, 2013, 118, 2361-2380.	3.6	44
116	SuperCam Calibration Targets: Design and Development. Space Science Reviews, 2020, 216, 138.	8.1	44
117	Terrain physical properties derived from orbital data and the first 360 sols of Mars Science Laboratory Curiosity rover observations in Gale Crater. Journal of Geophysical Research E: Planets, 2014, 119, 1322-1344.	3.6	43
118	Clustering and training set selection methods for improving the accuracy of quantitative laser induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2012, 70, 24-32.	2.9	41
119	The Chemostratigraphy of the Murray Formation and Role of Diagenesis at Vera Rubin Ridge in Gale Crater, Mars, as Observed by the ChemCam Instrument. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006320.	3.6	41
120	Nonlinear mapping technique for data visualization and clustering assessment of LIBS data: application to ChemCam data. Analytical and Bioanalytical Chemistry, 2011, 400, 3247-3260.	3.7	40
121	Analysis of geological materials containing uranium using laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2016, 120, 1-8.	2.9	40
122	Visible/nearâ€infrared spectral diversity from in situ observations of the Bagnold Dune Field sands in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2017, 122, 2655-2684.	3.6	40
123	Martian Eolian Dust Probed by ChemCam. Geophysical Research Letters, 2018, 45, 10,968.	4.0	40
124	Post-landing major element quantification using SuperCam laser induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, 188, 106347.	2.9	40
125	Retrieval of water vapor column abundance and aerosol properties from ChemCam passive sky spectroscopy. Icarus, 2018, 307, 294-326.	2.5	39
126	Alteration trends and geochemical source region characteristics preserved in the fluviolacustrine sedimentary record of Gale crater, Mars. Geochimica Et Cosmochimica Acta, 2019, 246, 234-266.	3.9	39

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127	Gale crater and impact processes â€“ Curiosityâ€™s first 364 Sols on Mars. Icarus, 2015, 249, 108-128.	2.5	37
128	Using ChemCam LIBS data to constrain grain size in rocks on Mars: Proof of concept and application to rocks at Yellowknife Bay and Pahrump Hills, Gale crater. Icarus, 2019, 321, 82-98.	2.5	37
129	Solar Wind Conditions and Composition During the Genesis Mission as Measured by in situ Spacecraft. Space Science Reviews, 2013, 175, 125-164.	8.1	36
130	In Situ Analysis of Opal in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2018, 123, 1955-1972.	3.6	36
131	Roughness effects on the hydrogen signal in laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 137, 13-22.	2.9	34
132	Basaltâ€“trachybasalt samples in Gale Crater, Mars. Meteoritics and Planetary Science, 2017, 52, 2931-2410.	1.6	34
133	Chemical variability in mineralized veins observed by ChemCam on the lower slopes of Mount Sharp in Gale crater, Mars. Icarus, 2018, 311, 69-86.	2.5	34
134	Comparison of two partial least squares-discriminant analysis algorithms for identifying geological samples with the ChemCam laser-induced breakdown spectroscopy instrument. Applied Optics, 2012, 51, B130.	1.8	33
135	Alternating wet and dry depositional environments recorded in the stratigraphy of Mount Sharp at Gale crater, Mars. Geology, 2021, 49, 842-846.	4.4	33
136	Observation of >â€‰5â€‰wt % zinc at the Kimberley outcrop, Gale crater, Mars. Journal of Geophysical Research E: Planets, 2016, 121, 338-352.	3.6	32
137	Characterization of Hydrogen in Basaltic Materials With Laserâ€Induced Breakdown Spectroscopy (<scp>LIBS</scp>) for Application to <scp>MSL</scp> ChemCam Data. Journal of Geophysical Research E: Planets, 2018, 123, 1996-2021.	3.6	32
138	Laser-induced breakdown spectroscopy acoustic testing of the Mars 2020 microphone. Planetary and Space Science, 2019, 165, 260-271.	1.7	32
139	Constraints on iron sulfate and iron oxide mineralogy from ChemCam visible/near-infrared reflectance spectroscopy of Mt. Sharp basal units, Gale Crater, Mars. American Mineralogist, 2016, 101, 1501-1514.	1.9	31
140	Geochemical variation in the Stimson formation of Gale crater: Provenance, mineral sorting, and a comparison with modern Martian dunes. Icarus, 2020, 341, 113622.	2.5	31
141	Analyses of Highâ€Iron Sedimentary Bedrock and Diagenetic Features Observed With ChemCam at Vera Rubin Ridge, Gale Crater, Mars: Calibration and Characterization. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006314.	3.6	30
142	Iron Mobility During Diagenesis at Vera Rubin Ridge, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006299.	3.6	30
143	In situ recording of Mars soundscape. Nature, 2022, 605, 653-658.	27.8	30
144	Grain Size Variations in the Murray Formation: Stratigraphic Evidence for Changing Depositional Environments in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006230.	3.6	29

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145	Application of distance correction to ChemCam laser-induced breakdown spectroscopy measurements. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2016, 120, 19-29.	2.9	27
146	Pulsed laser-induced heating of mineral phases: Implications for laser-induced breakdown spectroscopy combined with Raman spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2019, 160, 105687.	2.9	27
147	Synergistic Ground and Orbital Observations of Iron Oxides on Mt. Sharp and Vera Rubin Ridge. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006294.	3.6	27
148	The Plasma Ion and Electron Instruments for the Genesis Mission. Space Science Reviews, 2003, 105, 627-660.	8.1	25
149	Recording laser-induced sparks on Mars with the SuperCam microphone. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 174, 106000.	2.9	25
150	VARIATIONS IN SOLAR WIND FRACTIONATION AS SEEN BY<i>ACE</i>/SWICS AND THE IMPLICATIONS FOR<i>GENESIS</i>MISSION RESULTS. Astrophysical Journal, 2015, 812, 1.	4.5	24
151	Textural and modal analyses of picritic basalts with ChemCam Laserâ€Induced Breakdown Spectroscopy. Journal of Geophysical Research, 2012, 117, .	3.3	23
152	Copper enrichments in the Kimberley formation in Gale crater, Mars: Evidence for a Cu deposit at the source. Icarus, 2019, 321, 736-751.	2.5	23
153	Mars Science Laboratory Mission and Science Investigation. , 2012, , 5-56.		23
154	Automatic preprocessing of laser-induced breakdown spectra using partial least squares regression and feed-forward artificial neural network: Applications to Earth and Mars data. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 171, 105930.	2.9	22
155	Genesis Solar Wind Concentrator: Computer Simulations of Performance Under Solar Wind Conditions. Space Science Reviews, 2003, 105, 601-626.	8.1	21
156	Extraformational sediment recycling on Mars. , 2020, 16, 1508-1537.		20
157	Spectral, Compositional, and Physical Properties of the Upper Murray Formation and Vera Rubin Ridge, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006290.	3.6	20
158	The Genesis Discovery Mission: Return of Solar Matter to Earth. , 2003, , 1-26.		20
159	SuperCam calibration targets on board the perseverance rover: Fabrication and quantitative characterization. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, 188, 106341.	2.9	20
160	The SuperCam infrared spectrometer for the perseverance rover of the Mars2020 mission. Icarus, 2022, 373, 114773.	2.5	19
161	From Lake to River: Documenting an Environmental Transition Across the Jura/Knockfarril Hill Members Boundary in the Glen Torridon Region of Gale Crater (Mars). Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	19
162	Fluidized-sediment pipes in Gale crater, Mars, and possible Earth analogs. Geology, 2017, 45, 7-10.	4.4	18

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163	Studies of a Lacustrineâ€Volcanic Mars Analog Field Site With Marsâ€2020â€Like Instruments. Earth and Space Science, 2020, 7, e2019EA000720.	2.6	18
164	The Genesis Solar Wind Concentrator. Space Science Reviews, 2003, 105, 561-599.	8.1	17
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