

Roger C Wiens

List of Publications by Year in descending order

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218
papers

15,945
citations

14614

66
h-index

19690

117
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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. <i>Science</i> , 2014, 343, 1242777.	6.0	687
2	Mars Science Laboratory Mission and Science Investigation. <i>Space Science Reviews</i> , 2012, 170, 5-56.	3.7	650
3	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. <i>Science</i> , 2015, 350, aac7575.	6.0	471
4	The ChemCam Instrument Suite on the Mars Science Laboratory (MSL) Rover: Body Unit and Combined System Tests. <i>Space Science Reviews</i> , 2012, 170, 167-227.	3.7	429
5	The ChemCam Instrument Suite on the Mars Science Laboratory (MSL) Rover: Science Objectives and Mast Unit Description. <i>Space Science Reviews</i> , 2012, 170, 95-166.	3.7	372
6	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	6.0	367
7	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. <i>Science</i> , 2013, 341, 263-266.	6.0	327
8	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	6.0	326
9	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	6.0	323
10	The Oxygen Isotopic Composition of the Sun Inferred from Captured Solar Wind. <i>Science</i> , 2011, 332, 1528-1532.	6.0	321
11	Multivariate analysis of remote laser-induced breakdown spectroscopy spectra using partial least squares, principal component analysis, and related techniques. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2009, 64, 79-88.	1.5	266
12	Pre-flight calibration and initial data processing for the ChemCam laser-induced breakdown spectroscopy instrument on the Mars Science Laboratory rover. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2013, 82, 1-27.	1.5	258
13	A ¹⁵ N-Poor Isotopic Composition for the Solar System As Shown by Genesis Solar Wind Samples. <i>Science</i> , 2011, 332, 1533-1536.	6.0	255
14	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	6.0	246
15	Mars 2020 Mission Overview. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	239
16	In situ evidence for continental crust on early Mars. <i>Nature Geoscience</i> , 2015, 8, 605-609.	5.4	233
17	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	6.0	215
18	Calcium sulfate veins characterized by ChemCam/Curiosity at Gale crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1991-2016.	1.5	214

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19	Redox stratification of an ancient lake in Gale crater, Mars. <i>Science</i> , 2017, 356, .	6.0	209
20	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the <i>Curiosity</i> rover investigations at Gale crater, Mars. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 4245-4250.	3.3	172
21	Laser-Induced Breakdown Spectroscopy for Mars surface analysis: capabilities at stand-off distances and detection of chlorine and sulfur elements. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 1413-1422.	1.5	163
22	The SuperCam Instrument Suite on the NASA Mars 2020 Rover: Body Unit and Combined System Tests. <i>Space Science Reviews</i> , 2021, 217, 4.	3.7	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). <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 75-106.	1.5	159
24	Recalibration of the Mars Science Laboratory ChemCam instrument with an expanded geochemical database. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 129, 64-85.	1.5	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. <i>Chemie Der Erde</i> , 2020, 80, 125605.	0.8	137
26	The Petrochemistry of Jake_M: A Martian Mugarite. <i>Science</i> , 2013, 341, 1239463.	6.0	134
27	ChemCam activities and discoveries during the nominal mission of the Mars Science Laboratory in Gale crater, Mars. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 863-889.	1.6	134
28	The SuperCam Instrument Suite on the Mars 2020 Rover: Science Objectives and Mast-Unit Description. <i>Space Science Reviews</i> , 2021, 217, 1.	3.7	131
29	Joint analyses by laser-induced breakdown spectroscopy (LIBS) and Raman spectroscopy at stand-off distances. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2005, 61, 2324-2334.	2.0	128
30	Evaluation of a compact spectrograph for in-situ and stand-off Laser-Induced Breakdown Spectroscopy analyses of geological samples on Mars missions. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2005, 60, 805-815.	1.5	121
31	Igneous mineralogy at Bradbury Rise: The first ChemCam campaign at Gale crater. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 30-46.	1.5	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. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 64-81.	1.5	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. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2007, 68, 1036-1045.	2.0	111
34	Oxidation of manganese in an ancient aquifer, Kimberley formation, Gale crater, Mars. <i>Geophysical Research Letters</i> , 2016, 43, 7398-7407.	1.5	110
35	The case for a martian origin of the shergottites, II. Trapped and indigenous gas components in EETA 79001 glass. <i>Earth and Planetary Science Letters</i> , 1986, 77, 149-158.	1.8	108
36	The Genesis Discovery Mission: Return of Solar Matter to Earth. <i>Space Science Reviews</i> , 2003, 105, 509-534.	3.7	108

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37	Strategies for Mars remote Laser-Induced Breakdown Spectroscopy analysis of sulfur in geological samples. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 39-56.	1.5	107
38	First detection of fluorine on Mars: Implications for Gale Crater's geochemistry. <i>Geophysical Research Letters</i> , 2015, 42, 1020-1028.	1.5	107
39	An interval of high salinity in ancient Gale crater lake on Mars. <i>Nature Geoscience</i> , 2019, 12, 889-895.	5.4	105
40	Optimization of laser-induced breakdown spectroscopy for rapid geochemical analysis. <i>Chemical Geology</i> , 2010, 277, 137-148.	1.4	104
41	Overview of the Mars Science Laboratory mission: Bradbury Landing to Yellowknife Bay and beyond. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1134-1161.	1.5	104
42	Hydration state of calcium sulfates in Gale crater, Mars: Identification of bassanite veins. <i>Earth and Planetary Science Letters</i> , 2016, 452, 197-205.	1.8	103
43	Classification of igneous rocks analyzed by ChemCam at Gale crater, Mars. <i>Icarus</i> , 2017, 288, 265-283.	1.1	96
44	Gypsum, bassanite, and anhydrite at Gale crater, Mars. <i>American Mineralogist</i> , 2018, 103, 1011-1020.	0.9	96
45	The ChemCam Remote Micro-Imager at Gale crater: Review of the first year of operations on Mars. <i>Icarus</i> , 2015, 249, 93-107.	1.1	95
46	Chemistry, mineralogy, and grain properties at Namib and High dunes, Bagnold dune field, Gale crater, Mars: A synthesis of Curiosity rover observations. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2510-2543.	1.5	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. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 340-355.	1.6	94
49	Perseverance's Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. <i>Space Science Reviews</i> , 2021, 217, 1.	3.7	94
50	Onboard calibration igneous targets for the Mars Science Laboratory Curiosity rover and the Chemistry Camera laser induced breakdown spectroscopy instrument. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 280-289.	1.5	90
51	Chemistry of diagenetic features analyzed by ChemCam at Pahrump Hills, Gale crater, Mars. <i>Icarus</i> , 2017, 281, 121-136.	1.1	90
52	Laboratory shock emplacement of noble gases, nitrogen, and carbon dioxide into basalt, and implications for trapped gases in shergottite EETA 79001. <i>Geochimica Et Cosmochimica Acta</i> , 1988, 52, 295-307.	1.6	89
53	Diagenetic silica enrichment and late-stage groundwater activity in Gale crater, Mars. <i>Geophysical Research Letters</i> , 2017, 44, 4716-4724.	1.5	87
54	Laser induced breakdown spectroscopy library for the Martian environment. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 805-814.	1.5	86

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55	Trace element geochemistry (Li, Ba, Sr, and Rb) using <i>Curiosity's</i> ChemCam: Early results for Gale crater from Bradbury Landing Site to Rocknest. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 255-285.	1.5	86
56	Perseverance rover reveals an ancient delta-lake system and flood deposits at Jezero crater, Mars. <i>Science</i> , 2021, 374, 711-717.	6.0	86
57	Calibrating the ChemCam laser-induced breakdown spectroscopy instrument for carbonate minerals on Mars. <i>Applied Optics</i> , 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. <i>Icarus</i> , 2011, 215, 608-627.	1.1	81
59	High manganese concentrations in rocks at Gale crater, Mars. <i>Geophysical Research Letters</i> , 2014, 41, 5755-5763.	1.5	81
60	Diagenetic origin of nodules in the Sheepbed member, Yellowknife Bay formation, Gale crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1637-1664.	1.5	80
61	AEGIS autonomous targeting for ChemCam on Mars Science Laboratory: Deployment and results of initial science team use. <i>Science Robotics</i> , 2017, 2, .	9.9	76
62	ISOTOPIC MASS FRACTIONATION OF SOLAR WIND: EVIDENCE FROM FAST AND SLOW SOLAR WIND COLLECTED BY THE <i>GENESIS</i> MISSION. <i>Astrophysical Journal</i> , 2012, 759, 121.	1.6	75
63	Diagenesis and clay mineral formation at Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 1-19.	1.5	72
64	Improved accuracy in quantitative laser-induced breakdown spectroscopy using sub-models. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 129, 49-57.	1.5	71
65	Desiccation cracks provide evidence of lake drying on Mars, Sutton Island member, Murray formation, Gale Crater. <i>Geology</i> , 2018, 46, 515-518.	2.0	71
66	Chemistry of fracture-filling raised ridges in Yellowknife Bay, Gale Crater: Window into past aqueous activity and habitability on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2398-2415.	1.5	70
67	ChemCam passive reflectance spectroscopy of surface materials at the <i>Curiosity</i> landing site, Mars. <i>Icarus</i> , 2015, 249, 74-92.	1.1	70
68	Evidence for a Diagenetic Origin of Vera Rubin Ridge, Gale Crater, Mars: Summary and Synthesis of <i>Curiosity's</i> Exploration Campaign. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006527.	1.5	69
69	Gale Crater: Formation and post-impact hydrous environments. <i>Planetary and Space Science</i> , 2012, 70, 84-95.	0.9	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> . <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 784-804.	1.5	67
72	Independent component analysis classification of laser induced breakdown spectroscopy spectra. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2013, 86, 31-41.	1.5	66

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73	Magmatic complexity on early Mars as seen through a combination of orbital, in-situ and meteorite data. <i>Lithos</i> , 2016, 254-255, 36-52.	0.6	66
74	Mineral-Filled Fractures as Indicators of Multigenerational Fluid Flow in the Pahrump Hills Member of the Murray Formation, Gale Crater, Mars. <i>Earth and Space Science</i> , 2019, 6, 238-265.	1.1	66
75	Quantification of water content by laser induced breakdown spectroscopy on Mars. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 130, 82-100.	1.5	65
76	Compositions of coarse and fine particles in martian soils at gale: A window into the production of soils. <i>Icarus</i> , 2015, 249, 22-42.	1.1	64
77	Analysis of Water Ice and Water Ice/Soil Mixtures Using Laser-Induced Breakdown Spectroscopy: Application to Mars Polar Exploration. <i>Applied Spectroscopy</i> , 2004, 58, 897-909.	1.2	62
78	Geologic overview of the Mars Science Laboratory rover mission at the Kimberley, Gale crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2-20.	1.5	60
79	Shaler: <i>in-situ</i> analysis of a fluvial sedimentary deposit on Mars. <i>Sedimentology</i> , 2018, 65, 96-122.	1.6	59
80	Hydrogen detection with ChemCam at Gale crater. <i>Icarus</i> , 2015, 249, 43-61.	1.1	58
81	The Genesis Solar-Wind Collector Materials. <i>Space Science Reviews</i> , 2003, 105, 535-560.	3.7	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. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 744-770.	1.5	57
83	Listening to laser sparks: a link between Laser-Induced Breakdown Spectroscopy, acoustic measurements and crater morphology. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2019, 153, 50-60.	1.5	57
84	Genesis on-board determination of the solar wind flow regime. <i>Space Science Reviews</i> , 2003, 105, 661-679.	3.7	56
85	Planetary Geochemical Investigations Using Raman and Laser-Induced Breakdown Spectroscopy. <i>Applied Spectroscopy</i> , 2014, 68, 925-936.	1.2	56
86	In situ detection of boron by ChemCam on Mars. <i>Geophysical Research Letters</i> , 2017, 44, 8739-8748.	1.5	56
87	Mars Extant Life: What's Next? Conference Report. <i>Astrobiology</i> , 2020, 20, 785-814.	1.5	56
88	Remote laser-induced breakdown spectroscopy (LIBS) for lunar exploration. <i>Journal of Geophysical Research</i> , 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. <i>Journal of Geophysical Research</i> , 2002, 107, FIDO 3-1-FIDO 3-14.	3.3	54
90	ChemCam: Chemostratigraphy by the First Mars Microprobe. <i>Elements</i> , 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. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 353-387.	1.5	53
92	The solar oxygen- $\delta^{18}O$ isotopic composition: Predictions and implications for solar nebula processes. <i>Meteoritics and Planetary Science</i> , 1999, 34, 99-107.	0.7	52
93	Ceramic ChemCam Calibration Targets on Mars Science Laboratory. <i>Space Science Reviews</i> , 2012, 170, 229-255.	3.7	52
94	ChemCam results from the Shaler outcrop in Gale crater, Mars. <i>Icarus</i> , 2015, 249, 2-21.	1.1	52
95	Mars Science Laboratory Observations of Chloride Salts in Gale Crater, Mars. <i>Geophysical Research Letters</i> , 2019, 46, 10754-10763.	1.5	52
96	Chemical alteration of fine-grained sedimentary rocks at Gale crater. <i>Icarus</i> , 2019, 321, 619-631.	1.1	52
97	Brine-driven destruction of clay minerals in Gale crater, Mars. <i>Science</i> , 2021, 373, 198-204.	6.0	52
98	Chemical variations in Yellowknife Bay formation sedimentary rocks analyzed by ChemCam on board the Curiosity rover on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 452-482.	1.5	51
99	Remote laser-induced breakdown spectroscopy analyses of Dar al Gani 476 and Zagami Martian meteorites. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	50
100	Elemental Abundances of the Bulk Solar Wind: Analyses from Genesis and ACE. <i>Space Science Reviews</i> , 2007, 130, 79-86.	3.7	50
101	Fluids during diagenesis and sulfate vein formation in sediments at Gale crater, Mars. <i>Meteoritics and Planetary Science</i> , 2016, 51, 2175-2202.	0.7	50
102	Late-stage diagenetic concretions in the Murray formation, Gale crater, Mars. <i>Icarus</i> , 2019, 321, 866-890.	1.1	50
103	Examining natural rock varnish and weathering rinds with laser-induced breakdown spectroscopy for application to ChemCam on Mars. <i>Applied Optics</i> , 2012, 51, B74.	0.9	49
104	Understanding the signature of rock coatings in laser-induced breakdown spectroscopy data. <i>Icarus</i> , 2015, 249, 62-73.	1.1	49
105	Chemistry and texture of the rocks at Rocknest, Gale Crater: Evidence for sedimentary origin and diagenetic alteration. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2109-2131.	1.5	48
106	Alkali trace elements in Gale crater, Mars, with ChemCam: Calibration update and geological implications. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 650-679.	1.5	48
107	The dynamic atmospheric and aeolian environment of Jezero crater, Mars. <i>Science Advances</i> , 2022, 8, .	4.7	47
108	Solar and solar-wind isotopic compositions. <i>Earth and Planetary Science Letters</i> , 2004, 222, 697-712.	1.8	46

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109	Puncturing Mars: How impact craters interact with the Martian cryosphere. <i>Earth and Planetary Science Letters</i> , 2012, 335-336, 9-17.	1.8	46
110	The rock abrasion record at Gale Crater: Mars Science Laboratory results from Bradbury Landing to Rocknest. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1374-1389.	1.5	46
111	Geochemistry of the Bagnold dune field as observed by ChemCam and comparison with other aeolian deposits at Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2144-2162.	1.5	46
112	Classification scheme for sedimentary and igneous rocks in Gale crater, Mars. <i>Icarus</i> , 2017, 284, 1-17.	1.1	46
113	Correcting for variable laser-target distances of laser-induced breakdown spectroscopy measurements with ChemCam using emission lines of Martian dust spectra. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 96, 51-60.	1.5	45
114	In situ calibration using univariate analyses based on the onboard ChemCam targets: first prediction of Martian rock and soil compositions. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 99, 34-51.	1.5	45
115	Characteristics of pebble- and cobble-sized clasts along the Curiosity rover traverse from Bradbury Landing to Rocknest. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 2361-2380.	1.5	44
116	SuperCam Calibration Targets: Design and Development. <i>Space Science Reviews</i> , 2020, 216, 138.	3.7	44
117	Terrain physical properties derived from orbital data and the first 360 sols of Mars Science Laboratory Curiosity rover observations in Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1322-1344.	1.5	43
118	Clustering and training set selection methods for improving the accuracy of quantitative laser induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2012, 70, 24-32.	1.5	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. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006320.	1.5	41
120	Nonlinear mapping technique for data visualization and clustering assessment of LIBS data: application to ChemCam data. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 400, 3247-3260.	1.9	40
121	Analysis of geological materials containing uranium using laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2016, 120, 1-8.	1.5	40
122	Visible/near-infrared spectral diversity from in situ observations of the Bagnold Dune Field sands in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2655-2684.	1.5	40
123	Martian Eolian Dust Probed by ChemCam. <i>Geophysical Research Letters</i> , 2018, 45, 10,968.	1.5	40
124	Post-landing major element quantification using SuperCam laser induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2022, 188, 106347.	1.5	40
125	Retrieval of water vapor column abundance and aerosol properties from ChemCam passive sky spectroscopy. <i>Icarus</i> , 2018, 307, 294-326.	1.1	39
126	Alteration trends and geochemical source region characteristics preserved in the fluviolacustrine sedimentary record of Gale crater, Mars. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 246, 234-266.	1.6	39

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127	Gale crater and impact processes â€œ Curiosityâ€™s first 364 Sols on Mars. <i>Icarus</i> , 2015, 249, 108-128.	1.1	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. <i>Icarus</i> , 2019, 321, 82-98.	1.1	37
129	Solar Wind Conditions and Composition During the Genesis Mission as Measured by in situ Spacecraft. <i>Space Science Reviews</i> , 2013, 175, 125-164.	3.7	36
130	In Situ Analysis of Opal in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1955-1972.	1.5	36
131	Roughness effects on the hydrogen signal in laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 137, 13-22.	1.5	34
132	Basaltâ€™trachybasalt samples in Gale Crater, Mars. <i>Meteoritics and Planetary Science</i> , 2017, 52, 2931-2410.	0.7	34
133	Chemical variability in mineralized veins observed by ChemCam on the lower slopes of Mount Sharp in Gale crater, Mars. <i>Icarus</i> , 2018, 311, 69-86.	1.1	34
134	Comparison of two partial least squares-discriminant analysis algorithms for identifying geological samples with the ChemCam laser-induced breakdown spectroscopy instrument. <i>Applied Optics</i> , 2012, 51, B130.	0.9	33
135	Alternating wet and dry depositional environments recorded in the stratigraphy of Mount Sharp at Gale crater, Mars. <i>Geology</i> , 2021, 49, 842-846.	2.0	33
136	Observation of >â€™5â€™wt % zinc at the Kimberley outcrop, Gale crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 338-352.	1.5	32
137	Characterization of Hydrogen in Basaltic Materials With Laserâ€™Induced Breakdown Spectroscopy (<sc>LIBS</sc>) for Application to <sc>MSL</sc> ChemCam Data. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1996-2021.	1.5	32
138	Laser-induced breakdown spectroscopy acoustic testing of the Mars 2020 microphone. <i>Planetary and Space Science</i> , 2019, 165, 260-271.	0.9	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. <i>American Mineralogist</i> , 2016, 101, 1501-1514.	0.9	31
140	Geochemical variation in the Stimson formation of Gale crater: Provenance, mineral sorting, and a comparison with modern Martian dunes. <i>Icarus</i> , 2020, 341, 113622.	1.1	31
141	Analyses of Highâ€™Iron Sedimentary Bedrock and Diagenetic Features Observed With ChemCam at Vera Rubin Ridge, Gale Crater, Mars: Calibration and Characterization. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006314.	1.5	30
142	Iron Mobility During Diagenesis at Vera Rubin Ridge, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006299.	1.5	30
143	In situ recording of Mars soundscape. <i>Nature</i> , 2022, 605, 653-658.	13.7	30
144	Grain Size Variations in the Murray Formation: Stratigraphic Evidence for Changing Depositional Environments in Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006230.	1.5	29

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145	Application of distance correction to ChemCam laser-induced breakdown spectroscopy measurements. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2016, 120, 19-29.	1.5	27
146	Pulsed laser-induced heating of mineral phases: Implications for laser-induced breakdown spectroscopy combined with Raman spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2019, 160, 105687.	1.5	27
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