Brad Sutter

List of Publications by Year
in descending order

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65 papers	8,348 citations	94433 37 h-index	110387 64 g-index
66 all docs	66 docs citations	66 times ranked	4813 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	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
3	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
4	Organic molecules in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2015, 120, 495-514.	3.6	375
5	Mars methane detection and variability at Gale crater. Science, 2015, 347, 415-417.	12.6	373
6	Organic matter preserved in 3-billion-year-old mudstones at Gale crater, Mars. Science, 2018, 360, 1096-1101.	12.6	369
7	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
8	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	12.6	327
9	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
10	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
11	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the Rocknest aeolian deposit in Gale Crater. Journal of Geophysical Research E: Planets, 2013, 118, 1955-1973.	3.6	306
12	Evidence for Calcium Carbonate at the Mars Phoenix Landing Site. Science, 2009, 325, 61-64.	12.6	300
13	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	12.6	280
14	Mineralogy of an ancient lacustrine mudstone succession from the Murray formation, Gale crater, Mars. Earth and Planetary Science Letters, 2017, 471, 172-185.	4.4	247
15	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
16	A threshold in soil formation at Earthâ€™s aridâ€“hyperarid transition. Geochimica Et Cosmochimica Acta, 2006, 70, 5293-5322.	3.9	233
17	Background levels of methane in Marsâ€™ atmosphere show strong seasonal variations. Science, 2018, 360, 1093-1096.	12.6	224
18	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215

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19	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.	7.1	172
20	Evolved gas analyses of sedimentary rocks and eolian sediment in Gale Crater, Mars: Results of the Curiosity rover's sample analysis at Mars instrument from Yellowknife Bay to the Namib Dune. Journal of Geophysical Research E: Planets, 2017, 122, 2574-2609.	3.6	168
21	Multiple stages of aqueous alteration along fractures in mudstone and sandstone strata in Gale Crater, Mars. Earth and Planetary Science Letters, 2017, 471, 186-198.	4.4	137
22	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
23	Geochemistry of Carbonates on Mars: Implications for Climate History and Nature of Aqueous Environments. Space Science Reviews, 2013, 174, 301-328.	8.1	126
24	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	12.6	103
25	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
26	Mineralogy of Vera Rubin Ridge From the Mars Science Laboratory CheMin Instrument. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006306.	3.6	86
27	Abundances and implications of volatileâ€bearing species from evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 237-254.	3.6	73
28	The MARTE VNIR Imaging Spectrometer Experiment: Design and Analysis. Astrobiology, 2008, 8, 1001-1011.	3.0	70
29	Sulfur-bearing phases detected by evolved gas analysis of the Rocknest aeolian deposit, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2014, 119, 373-393.	3.6	65
30	Low Hesperian P _{CO2} constrained from in situ mineralogical analysis at Gale Crater, Mars. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2166-2170.	7.1	59
31	Large sulfur isotope fractionations in Martian sediments at Gale crater. Nature Geoscience, 2017, 10, 658-662.	12.9	53
32	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.	3.0	52
33	Sand Mineralogy Within the Bagnold Dunes, Gale Crater, as Observed In Situ and From Orbit. Geophysical Research Letters, 2018, 45, 9488-9497.	4.0	52
34	First Detections of Dichlorobenzene Isomers and Trichloromethylpropane from Organic Matter Indigenous to Mars Mudstone in Gale Crater, Mars: Results from the Sample Analysis at Mars Instrument Onboard the Curiosity Rover. Astrobiology, 2020, 20, 292-306.	3.0	50
35	The detection of carbonate in the martian soil at the Phoenix Landing site: A laboratory investigation and comparison with the Thermal and Evolved Gas Analyzer (TEGA) data. Icarus, 2012, 218, 290-296.	2.5	49
36	The nitrate/(per)chlorate relationship on Mars. Geophysical Research Letters, 2017, 44, 2643-2651.	4.0	49

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37	Evidence for Multiple Diagenetic Episodes in Ancient Fluvialâ€Lacustrine Sedimentary Rocks in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006295.	3.6	45
38	Indigenous and exogenous organics and surfaceâ€“atmosphere cycling inferred from carbon and oxygen isotopes at Gale crater. Nature Astronomy, 2020, 4, 526-532.	10.1	41
39	Terrestrial analogs for interpretation of infrared spectra from the Martian surface and subsurface: Sulfate, nitrate, carbonate, and phyllosilicateâ€bearing Atacama Desert soils. Journal of Geophysical Research, 2007, 112, .	3.3	35
40	Perchlorate induced low temperature carbonate decomposition in the Mars Phoenix Thermal and Evolved Gas Analyzer (TEGA). Geophysical Research Letters, 2012, 39, .	4.0	33
41	Measurements of Oxychlorine species on Mars. International Journal of Astrobiology, 2017, 16, 203-217.	1.6	33
42	Constraints on the Mineralogy and Geochemistry of Vera Rubin Ridge, Gale Crater, Mars, From Mars Science Laboratory Sample Analysis at Mars Evolved Gas Analyses. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006309.	3.6	32
43	Organic molecules revealed in Marsâ€™s Bagnold Dunes by Curiosityâ€™s derivatization experiment. Nature Astronomy, 2022, 6, 129-140.	10.1	29
44	The Curiosity Rover's Exploration of Glen Torridon, Gale Crater, Mars: An Overview of the Campaign and Scientific Results. Journal of Geophysical Research E: Planets, 2023, 128, .	3.6	27
45	Smectite formation in the presence of sulfuric acid: Implications for acidic smectite formation on early Mars. Geochimica Et Cosmochimica Acta, 2018, 220, 248-260.	3.9	26
46	Chlorate/Feâ€Bearing Phase Mixtures as a Possible Source of Oxygen and Chlorine Detected by the Sample Analysis at Mars Instrument in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2018, 123, 2920-2938.	3.6	26
47	The effects of instrument parameters and sample properties on thermal decomposition: interpreting thermal analysis data from Mars. Planetary Science, 2013, 2, .	1.5	25
48	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.	3.6	23
49	A Review of the Phyllosilicates in Gale Crater as Detected by the CheMin Instrument on the Mars Science Laboratory, Curiosity Rover. Minerals (Basel, Switzerland), 2021, 11, 847.	2.0	23
50	Formation of Tridymite and Evidence for a Hydrothermal History at Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006569.	3.6	21
51	Pyrolysis of Oxalate, Acetate, and Perchlorate Mixtures and the Implications for Organic Salts on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006803.	3.6	20
52	Major Volatiles Evolved From Eolian Materials in Gale Crater. Geophysical Research Letters, 2018, 45, 10,240.	4.0	19
53	Synthesis of akaganeite in the presence of sulfate: Implications for akaganeite formation in Yellowknife Bay, Gale Crater, Mars. Geochimica Et Cosmochimica Acta, 2016, 188, 284-296.	3.9	17
54	A Review of Sample Analysis at Mars-Evolved Gas Analysis Laboratory Analog Work Supporting the Presence of Perchlorates and Chlorates in Gale Crater, Mars. Minerals (Basel, Switzerland), 2021, 11, 475.	2.0	14

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55	Organic carbon concentrations in 3.5-billion-year-old lacustrine mudstones of Mars. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	14
56	The Subsurface Geology of RÃo Tinto: Material Examined During a Simulated Mars Drilling Mission for the Mars Astrobiology Research and Technology Experiment (MARTE). Astrobiology, 2008, 8, 1013-1021.	3.0	12
57	Evolved Gas Analyses of Sedimentary Rocks From the Glen Torridon Clayâ€Bearing Unit, Gale Crater, Mars: Results From the Mars Science Laboratory Sample Analysis at Mars Instrument Suite. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	12
58	Xâ€Ray Amorphous Sulfurâ€Bearing Phases in Sedimentary Rocks of Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	10
59	Visibleâ€“Near Infrared Point Spectrometry of Drill Core Samples from RÃo Tinto, Spain: Results from the 2005 Mars Astrobiology Research and Technology Experiment (MARTE) Drilling Exercise. Astrobiology, 2008, 8, 1049-1060.	3.0	9
60	Highâ€Temperature HCl Evolutions From Mixtures of Perchlorates and Chlorides With Waterâ€Bearing Phases: Implications for the SAM Instrument in Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006173.	3.6	6
61	Evidence for Adsorption of Chlorine Species on Iron (III) (Hydr)oxides in the Sheepbed Mudstone, Gale Crater, Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006220.	3.6	6
62	Water uptake by chlorate salts under Mars-relevant conditions. Icarus, 2022, 371, 114715.	2.5	5
63	Mineralogy and diagenesis of Mars-analog paleosols from eastern Oregon, USA. Icarus, 2022, 380, 114965.	2.5	4
64	Volatile Detections in Gale Crater Sediment and Sedimentary Rock. , 2019, , 369-392.		3
65	Terrestrial analogs for interpretation of infrared spectra from the Martian surface and subsurface: Sulfate, nitrate, carbonate, and phyllosilicate-bearing Atacama Desert soils. , 2007, .		1