Luther W Beegle

List of Publications by Year
in descending order

70 papers	5,399 citations	186265 28 h-index	138484 58 g-index
74 all docs	74 docs citations	74 times ranked	3953 citing authors

#	Article	IF	Citations
1	The power of paired proximity science observations: Co-located data from SHERLOC and PIXL on Mars. Icarus, 2022, 387, 115179.	2.5	11
2	Corrigendum to â€œDeep-ultraviolet Raman spectra of Mars-relevant evaporite minerals under 248.6â€¯nm excitationâ€•[Icarus 351 (2020) 113969]. Icarus, 2021, 357, 114068.	2.5	0
3	Perseveranceâ€™s Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) Investigation. Space Science Reviews, 2021, 217, 1.	8.1	94
4	Calibration of the SHERLOC Deep Ultraviolet Fluorescenceâ€“Raman Spectrometer on the <i>Perseverance</i> Rover. Applied Spectroscopy, 2021, 75, 000370282110133.	2.2	18
5	Detection and Degradation of Adenosine Monophosphate in Perchlorate-Spiked Martian Regolith Analog, by Deep-Ultraviolet Spectroscopy. Astrobiology, 2021, 21, 511-525.	3.0	10
6	A deep-ultraviolet Raman and Fluorescence spectral library of 62 minerals for the SHERLOC instrument onboard Mars 2020. Planetary and Space Science, 2021, 209, 105356.	1.7	21
7	An Optical Model for Quantitative Raman Microspectroscopy. Applied Spectroscopy, 2020, 74, 684-700.	2.2	16
8	Mars 2020 Mission Overview. Space Science Reviews, 2020, 216, 1.	8.1	239
9	A look back, part II: The drilling campaign of the Curiosity rover during the Mars Science Laboratory's second and third martian years. Icarus, 2020, 350, 113885.	2.5	4
10	X-Ray Emission from Jupiterâ€™s Galilean Moons: A Tool for Determining Their Surface Composition and Particle Environment. Astrophysical Journal, 2020, 895, 79.	4.5	9
11	â€œDeep-ultraviolet Raman spectra of Mars-relevant evaporite minerals under 248.6Ânm excitationâ€• Icarus, 2020, 351, 113969.	2.5	6
12	Studies of a Lacustrineâ€Volcanic Mars Analog Field Site With Marsâ€2020â€Like Instruments. Earth and Space Science, 2020, 7, e2019EA000720.	2.6	18
13	The Cell and the Sum of Its Parts: Patterns of Complexity in Biosignatures as Revealed by Deep UV Raman Spectroscopy. Frontiers in Microbiology, 2019, 10, 679.	3.5	24
14	WATSON:<i>In Situ</i>Organic Detection in Subsurface Ice Using Deep-UV Fluorescence Spectroscopy. Astrobiology, 2019, 19, 771-784.	3.0	13
15	A look back: The drilling campaign of the Curiosity rover during the Mars Science Laboratory's Prime Mission. Icarus, 2019, 319, 1-13.	2.5	19
16	The NASA Mars 2020 Rover Mission and the Search for Extraterrestrial Life. , 2018, , 275-308.		95
17	Deep UV Raman spectroscopy for planetary exploration: The search for in situ organics. Icarus, 2017, 290, 201-214.	2.5	64
18	CHEMCAM INVESTIGATION OF THE STIMSON DRILL SITES, GALE CRATER, MARS. , 2017, , .		0

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19	The Auto-Gopherâ€"A Wireline Rotary-Percussive Deep Sampler. , 2016, , .		2
20	ChemCam investigation of the John Klein and Cumberland drill holes and tailings, Gale crater, Mars. Icarus, 2016, 277, 330-341.	2.5	6
21	OUTCROP-SCALE STUDIES OF A LACUSTRINE-VOLCANIC MARS ANALOG WITH A MARS 2020-LIKE INSTRUMENT SUITE. , 2016, , .		0
22	Auto-Gopherâ€"A Wireline Deep Sampler Driven by Piezoelectric Percussive Actuator and EM Rotary Motor. , 2015, , .		2
23	SHERLOC: Scanning habitable environments with Raman & luminescence for organics & chemicals. , 2015, , .		67
24	Sample tube seal testing for Mars Sample Return. , 2014, , .		5
25	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
26	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
27	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	12.6	508
28	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
29	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
30	The Mojave Vadose Zone: A Subsurface Biosphere Analogue for Mars. Astrobiology, 2013, 13, 637-646.	3.0	4
31	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	12.6	327
32	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
33	Wireline deep drill for exploration of Mars, Europa, and Enceladus. , 2013, , .		22
34	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
35	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
36	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215

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37	Auto-Gopher: A wireline deep sampler driven by piezoelectric percussive actuator and EM rotary motor. , 2013, , .		4
38	Hypervelocity Impact Effect of Molecules from Enceladusâ€™ Plume and Titanâ€™s Upper Atmosphere on NASAâ€™s Cassini Spectrometer from Reactive Dynamics Simulation. Physical Review Letters, 2012, 109, 213201.	7.8	23
39	Deep drilling and sampling via the wireline auto-gopher driven by piezoelectric percussive actuator and EM rotary motor. , 2012, , .		14
40	Collecting Samples in Gale Crater, Mars; an Overview of the Mars Science Laboratory Sample Acquisition, Sample Processing and Handling System. Space Science Reviews, 2012, 170, 57-75.	8.1	134
41	LIFE: Life Investigation For EnceladusA Sample Return Mission Concept in Search for Evidence of Life. Astrobiology, 2012, 12, 730-742.	3.0	54
42	Sample handling and processing on Mars for future astrobiology missions. , 2011, , .		7
43	Miniature mass spectrometer equipped with electrospray and desorption electrospray ionization for direct analysis of organics from solids and solutions. International Journal of Mass Spectrometry, 2011, 306, 187-195.	1.5	50
44	Interfacial Reactions of Ozone with Surfactant Protein B in a Model Lung Surfactant System. Journal of the American Chemical Society, 2010, 132, 2254-2263.	13.7	49
45	Time Resolved Studies of Interfacial Reactions of Ozone with Pulmonary Phospholipid Surfactants Using Field Induced Droplet Ionization Mass Spectrometry. Journal of Physical Chemistry B, 2010, 114, 9496-9503.	2.6	37
46	Particle transport and distribution on the Mars Science Laboratory mission: Effects of triboelectric charging. Icarus, 2009, 204, 545-557.	2.5	20
47	Particle sieving and sorting under simulated martian conditions. Icarus, 2009, 204, 687-696.	2.5	9
48	Structural Characterization of Unsaturated Phosphatidylcholines Using Traveling Wave Ion Mobility Spectrometry. Analytical Chemistry, 2009, 81, 8289-8297.	6.5	98
49	RASP-based sample acquisition of analogue Martian permafrost samples: Implications for NASA's Phoenix scout mission. Planetary and Space Science, 2008, 56, 303-309.	1.7	6
50	Mojave Mars simulantâ€"Characterization of a new geologic Mars analog. Icarus, 2008, 197, 470-479.	2.5	153
51	Experimental and Theoretical Investigation into the Correlation between Mass and Ion Mobility for Choline and Other Ammonium Cations in N₂. Analytical Chemistry, 2008, 80, 1928-1936.	6.5	76
52	Analysis of Underivatized Amino Acids in Geological Samples Using Ion-Pairing Liquid Chromatography and Electrospray Tandem Mass Spectrometry. Astrobiology, 2008, 8, 229-241.	3.0	15
53	Development and optical testing of the camera, hand lens, and microscope probe with scannable laser spectroscopy (CHAMP-SLS). Proceedings of SPIE, 2008, , .	0.8	2
54	A Concept for NASA's Mars 2016 Astrobiology Field Laboratory. Astrobiology, 2007, 7, 545-577.	3.0	44

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55	Ion mobility spectrometry in space exploration. International Journal of Mass Spectrometry, 2007, 262, 1-15.	1.5	42
56	Electrospray Ionization Ion Mobility Spectrometry of Carboxylate Anions:Â Ion Mobilities and a Massâˆ'Mobility Correlation. Journal of Physical Chemistry A, 2005, 109, 7888-7895.	2.5	27
57	Electrospray Ionization Ion Mobility Spectrometry of Amino Acids:Â Ion Mobilities and a Massâˆ'Mobility Correlation. Journal of Physical Chemistry A, 2004, 108, 5785-5792.	2.5	41
58	Effects of drift-gas polarizability on glycine peptides in ion mobility spectrometry. International Journal of Mass Spectrometry, 2002, 216, 257-268.	1.5	68
59	Investigation of drift gas selectivity in high resolution ion mobility spectrometry with mass spectrometry detection. Journal of the American Society for Mass Spectrometry, 2002, 13, 300-307.	2.8	97
60	Electrospray Ionization High-Resolution Ion Mobility Spectrometry for the Detection of Organic Compounds, 1. Amino Acids. Analytical Chemistry, 2001, 73, 3028-3034.	6.5	76
61	Hydrogenation of polycyclic aromatic hydrocarbons as a factor affecting the cosmic 6.2 micron emission band. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2001, 57, 737-744.	3.9	25
62	Laboratory Investigation of the Contribution of Complex Aromatic/Aliphatic Polycyclic Hybrid Molecular Structures to Interstellar Ultraviolet Extinction and Infrared Emission. Astrophysical Journal, 2000, 535, 815-822.	4.5	13
63	Inference of a 7.75 eV Lower Limit in the Ultraviolet Pumping of Interstellar Polycyclic Aromatic Hydrocarbon Cations with Resulting Unidentified Infrared Emissions. Astrophysical Journal, 1997, 474, 474-478.	4.5	15
64	Experimental Indication of a Naphthaleneâ€Base Molecular Aggregate for the Carrier of the 2175 A Interstellar Extinction Feature. Astrophysical Journal, 1997, 487, 976-982.	4.5	33
65	A Laboratory Analog for the Carrier of the 3 Micron Emission of the Protoplanetary Nebula IRAS 05341+0852. Astrophysical Journal, 1997, 486, L153-L155.	4.5	6
66	DIBs in captivity (?). Planetary and Space Science, 1995, 43, 1429-1435.	1.7	1
67	Plasma processing of interstellar PAHs into solar system kerogen. Planetary and Space Science, 1995, 43, 1175-1182.	1.7	5
68	Spectroscopy of PAH species in the gas phase. Planetary and Space Science, 1995, 43, 1293-1296.	1.7	6
69	A laboratory investigation of the diffuse interstellar bands and large linear molecules in dark clouds. AIP Conference Proceedings, 1994, , .	0.4	1
70	Auto-Gopher-2 - Wireline Deep Sampler Driven by Percussive Piezoelectric Actuator and Rotary EM Motors. Advances in Science and Technology, 0, , .	0.2	6