Jason P Dworkin

List of Publications by Year
in descending order

88 papers	12,422 citations	50276 46 h-index	53230 85 g-index
89 all docs	89 docs citations	89 times ranked	7921 citing authors

#	Article	IF	Citations
1	Comet 81P/Wild 2 Under a Microscope. Science, 2006, 314, 1711-1716.	12.6	848
2	Racemic amino acids from the ultraviolet photolysis of interstellar ice analogues. Nature, 2002, 416, 401-403.	27.8	702
3	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
4	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. Science, 2006, 314, 1720-1724.	12.6	519
5	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
6	Carbonaceous meteorites contain a wide range of extraterrestrial nucleobases. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13995-13998.	7.1	460
7	The Sample Analysis at Mars Investigation and Instrument Suite. Space Science Reviews, 2012, 170, 401-478.	8.1	435
8	Cometary glycine detected in samples returned by Stardust. Meteoritics and Planetary Science, 2009, 44, 1323-1330.	1.6	397
9	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	12.6	367
10	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	12.6	327
11	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	12.6	326
12	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
13	Extraterrestrial nucleobases in the Murchison meteorite. Earth and Planetary Science Letters, 2008, 270, 130-136.	4.4	317
14	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
15	Understanding prebiotic chemistry through the analysis of extraterrestrial amino acids and nucleobases in meteorites. Chemical Society Reviews, 2012, 41, 5459.	38.1	301
16	The Miller Volcanic Spark Discharge Experiment. Science, 2008, 322, 404-404.	12.6	298
17	Enrichment of the amino acid <scp>l</scp> -isovaline by aqueous alteration on CI and CM meteorite parent bodies. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5487-5492.	7.1	264
18	Nanopore DNA Sequencing and Genome Assembly on the International Space Station. Scientific Reports, 2017, 7, 18022.	3.3	264

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19	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
20	Primordial synthesis of amines and amino acids in a 1958 Miller H ₂ S-rich spark discharge experiment. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5526-5531.	7.1	232
21	The First Cell Membranes. Astrobiology, 2002, 2, 371-381.	3.0	231
22	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
23	The effects of parent body processes on amino acids in carbonaceous chondrites. Meteoritics and Planetary Science, 2010, 45, 1948-1972.	1.6	218
24	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	12.6	215
25	Mechanisms of Amino Acid Formation in Interstellar Ice Analogs. Astrophysical Journal, 2007, 660, 911-918.	4.5	192
26	Origin and Evolution of Prebiotic Organic Matter As Inferred from the Tagish Lake Meteorite. Science, 2011, 332, 1304-1307.	12.6	189
27	Amino acid analyses of Antarctic CM2 meteorites using liquid chromatography-time of flight-mass spectrometry. Meteoritics and Planetary Science, 2006, 41, 889-902.	1.6	167
28	Extraterrestrial ribose and other sugars in primitive meteorites. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24440-24445.	7.1	158
29	The Search for Chiral Asymmetry as a Potential Biosignature in our Solar System. Chemical Reviews, 2020, 120, 4660-4689.	47.7	156
30	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	12.6	134
31	The roads to and from the RNA world. Journal of Theoretical Biology, 2003, 222, 127-134.	1.7	131
32	Meteoritic Amino Acids: Diversity in Compositions Reflects Parent Body Histories. ACS Central Science, 2016, 2, 370-379.	11.3	126
33	Detection of cometary amines in samples returned by Stardust. Meteoritics and Planetary Science, 2008, 43, 399-413.	1.6	117
34	Unusual nonterrestrial <scp>l</scp>â€proteinogenic amino acid excesses in the Tagish Lake meteorite. Meteoritics and Planetary Science, 2012, 47, 1347-1364.	1.6	106
35	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	12.6	103
36	Formation of Uracil from the Ultraviolet Photo-Irradiation of Pyrimidine in Pure H₂O Ices. Astrobiology, 2009, 9, 683-695.	3.0	99

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37	A Plausible Simultaneous Synthesis of Amino Acids and Simple Peptides on the Primordial Earth. Angewandte Chemie - International Edition, 2014, 53, 8132-8136.	13.8	82
38	On the Origin of Primitive Cells: From Nutrient Intake to Elongation of Encapsulated Nucleotides. Angewandte Chemie - International Edition, 2010, 49, 3738-3750.	13.8	79
39	Amino Acids from Ion-Irradiated Nitrile-Containing Ices. Astrobiology, 2008, 8, 771-779.	3.0	77
40	Compoundâ€specific carbon, nitrogen, and hydrogen isotopic ratios for amino acids in CM and CR chondrites and their use in evaluating potential formation pathways. Meteoritics and Planetary Science, 2012, 47, 1517-1536.	1.6	77
41	Chemistry and Physics of Primitive Membranes. , 0, , 1-27.		70
42	A propensity for nâ€‰â€amino acids in thermally altered Antarctic meteorites. Meteoritics and Planetary Science, 2012, 47, 374-386.	1.6	66
43	The Origin and Evolution of Organic Matter in Carbonaceous Chondrites and Links to Their Parent Bodies. , 2018, , 205-271.		60
44	Prebiotic Synthesis of Methionine and Other Sulfur-Containing Organic Compounds on the Primitive Earth: A Contemporary Reassessment Based on an Unpublished 1958 Stanley Miller Experiment. Origins of Life and Evolution of Biospheres, 2011, 41, 201-212.	1.9	59
45	The amino acid composition of the Sutter's Mill <scp>CM</scp>2 carbonaceous chondrite. Meteoritics and Planetary Science, 2014, 49, 2074-2086.	1.6	57
46	Assessment and control of organic and other contaminants associated with the Stardust sample return from comet 81P/Wild 2. Meteoritics and Planetary Science, 2010, 45, 406-433.	1.6	55
47	Identifying the wide diversity of extraterrestrial purine and pyrimidine nucleobases in carbonaceous meteorites. Nature Communications, 2022, 13, 2008.	12.8	53
48	Extraterrestrial amino acids in the Almahata Sitta meteorite. Meteoritics and Planetary Science, 2010, 45, 1695-1709.	1.6	50
49	Extraterrestrial amino acids identified in metalâ€rich <scp>CH</scp> and <scp>CB</scp> carbonaceous chondrites from Antarctica. Meteoritics and Planetary Science, 2013, 48, 390-402.	1.6	48
50	Investigation of pyridine carboxylic acids in CM2 carbonaceous chondrites: Potential precursor molecules for ancient coenzymes. Geochimica Et Cosmochimica Acta, 2014, 136, 1-12.	3.9	47
51	The effects of parent-body hydrothermal heating on amino acid abundances in CI-like chondrites. Polar Science, 2014, 8, 255-263.	1.2	46
52	Pathways to Meteoritic Glycine and Methylamine. ACS Earth and Space Chemistry, 2017, 1, 3-13.	2.7	46
53	Assessing the origins of aliphatic amines in the Murchison meteorite from their compound-specific carbon isotopic ratios and enantiomeric composition. Geochimica Et Cosmochimica Acta, 2014, 141, 331-345.	3.9	45
54	A search for amino acids and nucleobases in the Martian meteorite Roberts Massif 04262 using liquid chromatographyâ€mass spectrometry. Meteoritics and Planetary Science, 2013, 48, 786-795.	1.6	43

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55	Extraterrestrial amino acids and Lâ€enantiomeric excesses in the <scp>CM</scp>2 carbonaceous chondrites Aguas Zarcas and Murchison. Meteoritics and Planetary Science, 2021, 56, 148-173.	1.6	42
56	Abundant extraterrestrial amino acids in the primitive CM carbonaceous chondrite Asuka 12236. Meteoritics and Planetary Science, 2020, 55, 1979-2006.	1.6	38
57	Hydrothermal Decomposition of Amino Acids and Origins of Prebiotic Meteoritic Organic Compounds. ACS Earth and Space Chemistry, 2018, 2, 588-598.	2.7	37
58	Distribution and Stable Isotopic Composition of Amino Acids from Fungal Peptaibiotics: Assessing the Potential for Meteoritic Contamination. Astrobiology, 2011, 11, 123-133.	3.0	36
59	Amino acid analyses of R and CK chondrites. Meteoritics and Planetary Science, 2015, 50, 470-482.	1.6	36
60	Extraterrestrial hexamethylenetetramine in meteoritesâ€"a precursor of prebiotic chemistry in the inner solar system. Nature Communications, 2020, 11, 6243.	12.8	32
61	Methodologies for Analyzing Soluble Organic Compounds in Extraterrestrial Samples: Amino Acids, Amines, Monocarboxylic Acids, Aldehydes, and Ketones. Life, 2019, 9, 47.	2.4	31
62	Indigenous aliphatic amines in the aqueously altered Orgueil meteorite. Meteoritics and Planetary Science, 2015, 50, 1733-1749.	1.6	30
63	Analyses of Aliphatic Aldehydes and Ketones in Carbonaceous Chondrites. ACS Earth and Space Chemistry, 2019, 3, 463-472.	2.7	30
64	Amino acid analysis in micrograms of meteorite sample by nanoliquid chromatographyâ€"high-resolution mass spectrometry. Journal of Chromatography A, 2014, 1332, 30-34.	3.7	29
65	Aliphatic amines in Antarctic CR2, CM2, and CM1/2 carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2016, 189, 296-311.	3.9	29
66	Heterogeneous distributions of amino acids provide evidence of multiple sources within the Almahata Sitta parent body, asteroid 2008 TC₃. Meteoritics and Planetary Science, 2011, 46, 1703-1712.	1.6	28
67	Amino acids generated from hydrated Titan tholins: Comparison with Millerâ€"Urey electric discharge products. Icarus, 2014, 237, 182-189.	2.5	28
68	Organometallic compounds as carriers of extraterrestrial cyanide in primitive meteorites. Nature Communications, 2019, 10, 2777.	12.8	28
69	Luminescence from Vacuumâ€Ultravioletâ€"irradiated Cosmic Ice Analogs and Residues. Astrophysical Journal, 2003, 583, 514-523.	4.5	26
70	Analysis of amino acids, hydroxy acids, and amines in CR chondrites. Meteoritics and Planetary Science, 2020, 55, 2422-2439.	1.6	25
71	An evolutionary connection between interstellar ices and IDPs? Clues from mass spectroscopy measurements of laboratory simulations. Advances in Space Research, 2004, 33, 67-71.	2.6	24
72	Enhanced Synthesis of Alkyl Amino Acids in Millerâ€™s 1958 H2S Experiment. Origins of Life and Evolution of Biospheres, 2011, 41, 569-574.	1.9	18

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73	Rapid Radiolytic Degradation of Amino Acids in the Martian Shallow Subsurface: Implications for the Search for Extinct Life. Astrobiology, 2022, 22, 1099-1115.	3.0	17
74	The origin of amino acids in lunar regolith samples. Geochimica Et Cosmochimica Acta, 2016, 172, 357-369.	3.9	15
75	Molecular distribution, ¹³Câ€isotope, and enantiomeric compositions of carbonaceous chondrite monocarboxylic acids. Meteoritics and Planetary Science, 2019, 54, 415-430.	1.6	15
76	Prebiotic Alternatives to Proteins: Structure and Function of Hyperbranched Polyesters. Origins of Life and Evolution of Biospheres, 2015, 45, 123-137.	1.9	11
77	Investigating the effects of gamma radiation on selected chemicals for use in biosignature detection instruments on the surface of Jupiter's moon Europa. Planetary and Space Science, 2019, 175, 1-12.	1.7	11
78	Amino acid abundances and compositions in iron and stonyâ€iron meteorites. Meteoritics and Planetary Science, 2021, 56, 586-600.	1.6	10
79	Organics Analyzer for Sampling Icy Surfaces: A liquid chromatograph-mass spectrometer for future in situ small body missions. , 2013, , .		8
80	Conducting Miller-Urey Experiments. Journal of Visualized Experiments, 2014, , e51039.	0.3	8
81	Isovaline monohydrate. Acta Crystallographica Section E: Structure Reports Online, 2013, 69, o1829-o1830.	0.2	6
82	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, , n/a-n/a.	3.6	6
83	Nonâ€protein amino acids identified in carbonâ€rich Hayabusa particles. Meteoritics and Planetary Science, 2022, 57, 776-793.	1.6	6
84	The Sample Analysis at Mars Investigation and Instrument Suite. , 2012, , 401-478.		5
85	Extraterrestrial hydroxy amino acids in CM and CR carbonaceous chondrites. Meteoritics and Planetary Science, 2021, 56, 1005-1023.	1.6	4
86	A sensitive quantitative analysis of abiotically synthesized short homopeptides using ultraperformance liquid chromatography and time-of-flight mass spectrometry. Journal of Chromatography A, 2020, 1630, 461509.	3.7	3
87	Spontaneous Oligomerization of Nucleotide Alternatives in Aqueous Solutions. Origins of Life and Evolution of Biospheres, 2017, 47, 3-11.	1.9	2
88	2-Methylaspartic acid monohydrate. Acta Crystallographica Section E: Structure Reports Online, 2013, 69, o1856-o1857.	0.2	2