

# Jason P Dworkin

## List of Publications by Year in descending order

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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	Non-protein amino acids identified in carbon-rich Hayabusa particles. <i>Meteoritics and Planetary Science</i> , 2022, 57, 776-793.	1.6	6
2	Identifying the wide diversity of extraterrestrial purine and pyrimidine nucleobases in carbonaceous meteorites. <i>Nature Communications</i> , 2022, 13, 2008.	12.8	53
3	Rapid Radiolytic Degradation of Amino Acids in the Martian Shallow Subsurface: Implications for the Search for Extinct Life. <i>Astrobiology</i> , 2022, 22, 1099-1115.	3.0	17
4	Extraterrestrial amino acids and enantiomeric excesses in the <sup>2</sup> CM carbonaceous chondrites Aguas Zarcas and Murchison. <i>Meteoritics and Planetary Science</i> , 2021, 56, 148-173.	1.6	42
5	Amino acid abundances and compositions in iron and stony-iron meteorites. <i>Meteoritics and Planetary Science</i> , 2021, 56, 586-600.	1.6	10
6	Extraterrestrial hydroxy amino acids in CM and CR carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1005-1023.	1.6	4
7	The Search for Chiral Asymmetry as a Potential Biosignature in our Solar System. <i>Chemical Reviews</i> , 2020, 120, 4660-4689.	47.7	156
8	A sensitive quantitative analysis of abiotically synthesized short homopeptides using ultraperformance liquid chromatography and time-of-flight mass spectrometry. <i>Journal of Chromatography A</i> , 2020, 1630, 461509.	3.7	3
9	Abundant extraterrestrial amino acids in the primitive CM carbonaceous chondrite Asuka 12236. <i>Meteoritics and Planetary Science</i> , 2020, 55, 1979-2006.	1.6	38
10	Extraterrestrial hexamethylenetetramine in meteorites—a precursor of prebiotic chemistry in the inner solar system. <i>Nature Communications</i> , 2020, 11, 6243.	12.8	32
11	Analysis of amino acids, hydroxy acids, and amines in CR chondrites. <i>Meteoritics and Planetary Science</i> , 2020, 55, 2422-2439.	1.6	25
12	Organometallic compounds as carriers of extraterrestrial cyanide in primitive meteorites. <i>Nature Communications</i> , 2019, 10, 2777.	12.8	28
13	Investigating the effects of gamma radiation on selected chemicals for use in biosignature detection instruments on the surface of Jupiter's moon Europa. <i>Planetary and Space Science</i> , 2019, 175, 1-12.	1.7	11
14	Methodologies for Analyzing Soluble Organic Compounds in Extraterrestrial Samples: Amino Acids, Amines, Monocarboxylic Acids, Aldehydes, and Ketones. <i>Life</i> , 2019, 9, 47.	2.4	31
15	Analyses of Aliphatic Aldehydes and Ketones in Carbonaceous Chondrites. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 463-472.	2.7	30
16	Extraterrestrial ribose and other sugars in primitive meteorites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 24440-24445.	7.1	158
17	Molecular distribution, <sup>13</sup> C isotope, and enantiomeric compositions of carbonaceous chondrite monocarboxylic acids. <i>Meteoritics and Planetary Science</i> , 2019, 54, 415-430.	1.6	15
18	Hydrothermal Decomposition of Amino Acids and Origins of Prebiotic Meteoritic Organic Compounds. <i>ACS Earth and Space Chemistry</i> , 2018, 2, 588-598.	2.7	37

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19	The Origin and Evolution of Organic Matter in Carbonaceous Chondrites and Links to Their Parent Bodies. , 2018, , 205-271.		60
20	Spontaneous Oligomerization of Nucleotide Alternatives in Aqueous Solutions. Origins of Life and Evolution of Biospheres, 2017, 47, 3-11.	1.9	2
21	Pathways to Meteoritic Glycine and Methylamine. ACS Earth and Space Chemistry, 2017, 1, 3-13.	2.7	46
22	Nanopore DNA Sequencing and Genome Assembly on the International Space Station. Scientific Reports, 2017, 7, 18022.	3.3	264
23	Aliphatic amines in Antarctic CR2, CM2, and CM1/2 carbonaceous chondrites. Geochimica Et Cosmochimica Acta, 2016, 189, 296-311.	3.9	29
24	Meteoritic Amino Acids: Diversity in Compositions Reflects Parent Body Histories. ACS Central Science, 2016, 2, 370-379.	11.3	126
25	The origin of amino acids in lunar regolith samples. Geochimica Et Cosmochimica Acta, 2016, 172, 357-369.	3.9	15
26	Indigenous aliphatic amines in the aqueously altered Orgueil meteorite. Meteoritics and Planetary Science, 2015, 50, 1733-1749.	1.6	30
27	Amino acid analyses of R and CK chondrites. Meteoritics and Planetary Science, 2015, 50, 470-482.	1.6	36
28	Prebiotic Alternatives to Proteins: Structure and Function of Hyperbranched Polyesters. Origins of Life and Evolution of Biospheres, 2015, 45, 123-137.	1.9	11
29	The amino acid composition of the Sutter's Mill <sc>CM</sc>2 carbonaceous chondrite. Meteoritics and Planetary Science, 2014, 49, 2074-2086.	1.6	57
30	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	12.6	323
31	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	12.6	687
32	Mars's™ Surface Radiation Environment Measured with the Mars Science Laboratory's™ Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
33	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	12.6	224
34	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	12.6	246
35	Amino acid analysis in micrograms of meteorite sample by nanoliquid chromatography's™ high-resolution mass spectrometry. Journal of Chromatography A, 2014, 1332, 30-34.	3.7	29
36	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

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37	A Plausible Simultaneous Synthesis of Amino Acids and Simple Peptides on the Primordial Earth. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 8132-8136.	13.8	82
38	Investigation of pyridine carboxylic acids in CM2 carbonaceous chondrites: Potential precursor molecules for ancient coenzymes. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 136, 1-12.	3.9	47
39	The effects of parent-body hydrothermal heating on amino acid abundances in CI-like chondrites. <i>Polar Science</i> , 2014, 8, 255-263.	1.2	46
40	Amino acids generated from hydrated Titan tholins: Comparison with Miller-Urey electric discharge products. <i>Icarus</i> , 2014, 237, 182-189.	2.5	28
41	Conducting Miller-Urey Experiments. <i>Journal of Visualized Experiments</i> , 2014, , e51039.	0.3	8
42	Organics Analyzer for Sampling Icy Surfaces: A liquid chromatograph-mass spectrometer for future in situ small body missions. , 2013, , .		8
43	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. <i>Science</i> , 2013, 341, 263-266.	12.6	327
44	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. <i>Science</i> , 2013, 341, 1238937.	12.6	367
45	A search for amino acids and nucleobases in the Martian meteorite Roberts Massif 04262 using liquid chromatography-mass spectrometry. <i>Meteoritics and Planetary Science</i> , 2013, 48, 786-795.	1.6	43
46	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326
47	The Petrochemistry of Jake_M: A Martian Mugarite. <i>Science</i> , 2013, 341, 1239463.	12.6	134
48	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	12.6	215
49	Low Upper Limit to Methane Abundance on Mars. <i>Science</i> , 2013, 342, 355-357.	12.6	103
50	Extraterrestrial amino acids identified in metal-rich $\text{CH}$ and $\text{CB}$ carbonaceous chondrites from Antarctica. <i>Meteoritics and Planetary Science</i> , 2013, 48, 390-402.	1.6	48
51	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the Rocknest aeolian deposit in Gale Crater. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1955-1973.	3.6	306
52	Isovaline monohydrate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2013, 69, o1829-o1830.	0.2	6
53	2-Methylaspartic acid monohydrate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2013, 69, o1856-o1857.	0.2	2
54	Evidence for perchlorates and the origin of chlorinated hydrocarbons detected by SAM at the rocknest aeolian deposit in gale crater. <i>Journal of Geophysical Research E: Planets</i> , 2013, , n/a-n/a.	3.6	6

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55	Unusual nonterrestrial $\delta^{15}\text{N}$ proteinogenic amino acid excesses in the Tagish Lake meteorite. <i>Meteoritics and Planetary Science</i> , 2012, 47, 1347-1364.	1.6	106
56	Compound-specific carbon, nitrogen, and hydrogen isotopic ratios for amino acids in CM and CR chondrites and their use in evaluating potential formation pathways. <i>Meteoritics and Planetary Science</i> , 2012, 47, 1517-1536.	1.6	77
57	The Sample Analysis at Mars Investigation and Instrument Suite. <i>Space Science Reviews</i> , 2012, 170, 401-478.	8.1	435
58	Understanding prebiotic chemistry through the analysis of extraterrestrial amino acids and nucleobases in meteorites. <i>Chemical Society Reviews</i> , 2012, 41, 5459.	38.1	301
59	A propensity for $\delta^{15}\text{N}$ amino acids in thermally altered Antarctic meteorites. <i>Meteoritics and Planetary Science</i> , 2012, 47, 374-386.	1.6	66
60	The Sample Analysis at Mars Investigation and Instrument Suite. , 2012, , 401-478.		5
61	Distribution and Stable Isotopic Composition of Amino Acids from Fungal Peptaibiotics: Assessing the Potential for Meteoritic Contamination. <i>Astrobiology</i> , 2011, 11, 123-133.	3.0	36
62	Primordial synthesis of amines and amino acids in a 1958 Miller H <sub>2</sub> S-rich spark discharge experiment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 5526-5531.	7.1	232
63	Carbonaceous meteorites contain a wide range of extraterrestrial nucleobases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 13995-13998.	7.1	460
64	Heterogeneous distributions of amino acids provide evidence of multiple sources within the Almahata Sitta parent body, asteroid 2008 TC <sub>3</sub> . <i>Meteoritics and Planetary Science</i> , 2011, 46, 1703-1712.	1.6	28
65	Origin and Evolution of Prebiotic Organic Matter As Inferred from the Tagish Lake Meteorite. <i>Science</i> , 2011, 332, 1304-1307.	12.6	189
66	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. <i>Origins of Life and Evolution of Biospheres</i> , 2011, 41, 201-212.	1.9	59
67	Enhanced Synthesis of Alkyl Amino Acids in Miller's 1958 H <sub>2</sub> S Experiment. <i>Origins of Life and Evolution of Biospheres</i> , 2011, 41, 569-574.	1.9	18
68	On the Origin of Primitive Cells: From Nutrient Intake to Elongation of Encapsulated Nucleotides. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 3738-3750.	13.8	79
69	Assessment and control of organic and other contaminants associated with the Stardust sample return from comet 81P/Wild 2. <i>Meteoritics and Planetary Science</i> , 2010, 45, 406-433.	1.6	55
70	Extraterrestrial amino acids in the Almahata Sitta meteorite. <i>Meteoritics and Planetary Science</i> , 2010, 45, 1695-1709.	1.6	50
71	The effects of parent body processes on amino acids in carbonaceous chondrites. <i>Meteoritics and Planetary Science</i> , 2010, 45, 1948-1972.	1.6	218
72	Enrichment of the amino acid $\delta^{15}\text{N}$ -isovaline by aqueous alteration on CI and CM meteorite parent bodies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 5487-5492.	7.1	264

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73	Formation of Uracil from the Ultraviolet Photo-Irradiation of Pyrimidine in Pure H <sub>2</sub> O Ices. <i>Astrobiology</i> , 2009, 9, 683-695.	3.0	99
74	Cometary glycine detected in samples returned by Stardust. <i>Meteoritics and Planetary Science</i> , 2009, 44, 1323-1330.	1.6	397
75	The Miller Volcanic Spark Discharge Experiment. <i>Science</i> , 2008, 322, 404-404.	12.6	298
76	Extraterrestrial nucleobases in the Murchison meteorite. <i>Earth and Planetary Science Letters</i> , 2008, 270, 130-136.	4.4	317
77	Detection of cometary amines in samples returned by Stardust. <i>Meteoritics and Planetary Science</i> , 2008, 43, 399-413.	1.6	117
78	Amino Acids from Ion-Irradiated Nitrile-Containing Ices. <i>Astrobiology</i> , 2008, 8, 771-779.	3.0	77
79	Mechanisms of Amino Acid Formation in Interstellar Ice Analogs. <i>Astrophysical Journal</i> , 2007, 660, 911-918.	4.5	192
80	Comet 81P/Wild 2 Under a Microscope. <i>Science</i> , 2006, 314, 1711-1716.	12.6	848
81	Amino acid analyses of Antarctic CM2 meteorites using liquid chromatography-time of flight-mass spectrometry. <i>Meteoritics and Planetary Science</i> , 2006, 41, 889-902.	1.6	167
82	Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. <i>Science</i> , 2006, 314, 1720-1724.	12.6	519
83	An evolutionary connection between interstellar ices and IDPs? Clues from mass spectroscopy measurements of laboratory simulations. <i>Advances in Space Research</i> , 2004, 33, 67-71.	2.6	24
84	The roads to and from the RNA world. <i>Journal of Theoretical Biology</i> , 2003, 222, 127-134.	1.7	131
85	Luminescence from Vacuum-Ultraviolet-Irradiated Cosmic Ice Analogs and Residues. <i>Astrophysical Journal</i> , 2003, 583, 514-523.	4.5	26
86	The First Cell Membranes. <i>Astrobiology</i> , 2002, 2, 371-381.	3.0	231
87	Racemic amino acids from the ultraviolet photolysis of interstellar ice analogues. <i>Nature</i> , 2002, 416, 401-403.	27.8	702
88	Chemistry and Physics of Primitive Membranes. , 0, , 1-27.		70