

Matthew Powner

List of Publications by Year in descending order

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Version: 2024-02-01

37
papers

2,871
citations

257450

24
h-index

289244

40
g-index

45
all docs

45
docs citations

45
times ranked

2057
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of activated pyrimidine ribonucleotides in prebiotically plausible conditions. <i>Nature</i> , 2009, 459, 239-242.	27.8	1,080
2	Chemoselective Multicomponent One-Pot Assembly of Purine Precursors in Water. <i>Journal of the American Chemical Society</i> , 2010, 132, 16677-16688.	13.7	143
3	Peptide ligation by chemoselective aminonitrile coupling in water. <i>Nature</i> , 2019, 571, 546-549.	27.8	119
4	Prebiotic chemistry: a new <i>modus operandi</i> . <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2011, 366, 2870-2877.	4.0	118
5	Prebiotic synthesis of cysteine peptides that catalyze peptide ligation in neutral water. <i>Science</i> , 2020, 370, 865-869.	12.6	105
6	Prebiotic Systems Chemistry: Complexity Overcoming Clutter. <i>CheM</i> , 2017, 2, 470-501.	11.7	103
7	Prebiotically plausible oligoribonucleotide ligation facilitated by chemoselective acetylation. <i>Nature Chemistry</i> , 2013, 5, 383-389.	13.6	90
8	Functional RNAs exhibit tolerance for non-heritable 2' vs 3' backbone heterogeneity. <i>Nature Chemistry</i> , 2013, 5, 390-394.	13.6	88
9	Prebiotic synthesis of phosphoenol pyruvate by $\hat{1}\pm$ -phosphorylation-controlled triose glycolysis. <i>Nature Chemistry</i> , 2017, 9, 310-317.	13.6	88
10	Divergent prebiotic synthesis of pyrimidine and 8-oxo-purine ribonucleotides. <i>Nature Communications</i> , 2017, 8, 15270.	12.8	84
11	Prebiotic selection and assembly of proteinogenic amino acids and natural nucleotides from complex mixtures. <i>Nature Chemistry</i> , 2017, 9, 584-589.	13.6	82
12	Direct Assembly of Nucleoside Precursors from Two- and Three-Carbon Units. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 6176-6179.	13.8	77
13	RNA: Prebiotic Product, or Biotic Invention?. <i>Chemistry and Biodiversity</i> , 2007, 4, 721-739.	2.1	75
14	Heated gas bubbles enrich, crystallize, dry, phosphorylate and encapsulate prebiotic molecules. <i>Nature Chemistry</i> , 2019, 11, 779-788.	13.6	66
15	Multicomponent Assembly of Proposed DNA Precursors in Water. <i>Journal of the American Chemical Society</i> , 2012, 134, 13889-13895.	13.7	61
16	The Origins of Nucleotides. <i>Synlett</i> , 2011, 2011, 1956-1964.	1.8	58
17	A Chemist's Perspective on the Role of Phosphorus at the Origins of Life. <i>Life</i> , 2017, 7, 31.	2.4	49
18	A Stereoelectronic Effect in Prebiotic Nucleotide Synthesis. <i>ACS Chemical Biology</i> , 2010, 5, 655-657.	3.4	48

#	ARTICLE	IF	CITATIONS
19	Phosphate-Mediated Interconversion of <i>Ribo</i> and <i>Arabino</i> -Configured Prebiotic Nucleotide Intermediates. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 4641-4643.	13.8	45
20	Selective prebiotic conversion of pyrimidine and purine anhydronucleosides into Watson-Crick base-pairing arabino-furanosyl nucleosides in water. <i>Nature Communications</i> , 2018, 9, 4073.	12.8	36
21	On the Prebiotic Synthesis of Ribonucleotides: Photoanomerisation of Cytosine Nucleosides and Nucleotides Revisited. <i>ChemBioChem</i> , 2007, 8, 1170-1179.	2.6	33
22	Potentially Prebiotic Synthesis of Pyrimidine β -Ribonucleotides by Photoanomerization/Hydrolysis of β -Cytidine-2-phosphate. <i>ChemBioChem</i> , 2008, 9, 2386-2387.	2.6	31
23	Detection of Potential TNA and RNA Nucleoside Precursors in a Prebiotic Mixture by Pure Shift Diffusion-Ordered NMR Spectroscopy. <i>Chemistry - A European Journal</i> , 2013, 19, 4586-4595.	3.3	30
24	Analyses of Aliphatic Aldehydes and Ketones in Carbonaceous Chondrites. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 463-472.	2.7	30
25	Selective prebiotic synthesis of phosphoroaminonitriles and aminothioamides in neutral water. <i>Communications Chemistry</i> , 2019, 2, .	4.5	17
26	One-step protecting-group-free synthesis of azepinomycin in water. <i>Organic and Biomolecular Chemistry</i> , 2015, 13, 3378-3381.	2.8	14
27	Prebiotic nucleic acids need space to grow. <i>Nature Communications</i> , 2018, 9, 5172.	12.8	14
28	Selective Prebiotic Synthesis of β -Threofuranosyl Cytidine by Photochemical Anomerization. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10526-10530.	13.8	13
29	Prebiotic Catalytic Peptide Ligation Yields Proteinogenic Peptides by Intramolecular Amide Catalyzed Hydrolysis Facilitating Regioselective Lysine Ligation in Neutral Water. <i>Journal of the American Chemical Society</i> , 2022, 144, 10151-10155.	13.7	13
30	Photostability of oxazoline RNA-precursors in UV-rich prebiotic environments. <i>Chemical Communications</i> , 2018, 54, 13407-13410.	4.1	11
31	Selective Acylation of Nucleosides, Nucleotides, and Glycerol-3-phosphocholine in Water. <i>Synlett</i> , 2016, 28, 78-83.	1.8	8
32	Selective aqueous acetylation controls the photoanomerization of β -cytidine-5-phosphate. <i>Chemical Communications</i> , 2018, 54, 4850-4853.	4.1	7
33	Prebiotic synthesis of aminooxazoline-5-phosphates in water by oxidative phosphorylation. <i>Chemical Communications</i> , 2017, 53, 4919-4921.	4.1	6
34	Prebiotic synthesis and triphosphorylation of 3-amino-TNA nucleosides. <i>Nature Chemistry</i> , 2022, 14, 766-774.	13.6	4
35	Scalable Synthesis of 2-Anhydro-arabinofuranosyl Imidazoles. <i>Synlett</i> , 2017, 28, 2650-2654.	1.8	2
36	Protocells realize their potential. <i>Nature Catalysis</i> , 2018, 1, 569-570.	34.4	2

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37	Selective Prebiotic Synthesis of Î±-Threofuranosyl Cytidine by Photochemical Anomerization. <i>Angewandte Chemie</i> , 2021, 133, 10620-10624.	2.0	2