David Jakeman

List of Publications by Year
in descending order

96 papers	2,219 citations	159585 30 h-index	265206 42 g-index
102 all docs	102 docs citations	102 times ranked	2202 citing authors

#	Article	IF	Citations
1	Fungal zymosan induces leukotriene production by human mast cells through aÂdectin-1â€“dependent mechanism. Journal of Allergy and Clinical Immunology, 2006, 118, 837-843.	2.9	107
2	Directed evolution of new glycosynthases from Agrobacterium Î²-glucosidase: a general screen to detect enzymes for oligosaccharide synthesis. Chemistry and Biology, 2001, 8, 437-443.	6.0	87
3	Solid-Phase Oligosaccharide and Glycopeptide Synthesis Using Glycosynthases. Journal of Organic Chemistry, 2002, 67, 4143-4149.	3.2	79
4	Structural Characterization of the Antimicrobial Peptide Pleurocidin from Winter Flounderâ€. Biochemistry, 2005, 44, 7282-7293.	2.5	66
5	Antimicrobial Activities of Jadomycin B and Structurally Related Analogues. Antimicrobial Agents and Chemotherapy, 2009, 53, 1245-1247.	3.2	65
6	Enzymatic Synthesis of Carbonâ˜'Fluorine Bonds. Journal of the American Chemical Society, 2001, 123, 4350-4351.	13.7	64
7	Highly Potent Bisphosphonate Ligands for Phosphoglycerate Kinaseâ€. Journal of Medicinal Chemistry, 1998, 41, 4439-4452.	6.4	61
8	An Improved Method for the Synthesis of Nucleoside Triphosphate Analogues. Journal of Organic Chemistry, 2005, 70, 10588-10591.	3.2	59
9	Culture conditions improving the production of jadomycin B. Journal of Industrial Microbiology and Biotechnology, 2006, 33, 767-772.	3.0	58
10	Structure-Activity Analysis of Quorum-Sensing Signaling Peptides from Streptococcus mutans. Journal of Bacteriology, 2007, 189, 1441-1450.	2.2	54
11	Myristoylation, a Protruding Loop, and Structural Plasticity Are Essential Features of a Nonenveloped Virus Fusion Peptide Motif. Journal of Biological Chemistry, 2004, 279, 51386-51394.	3.4	50
12	Exploiting Nucleotidylyltransferases To Prepare Sugar Nucleotides. Organic Letters, 2007, 9, 857-860.	4.6	49
13	Stereoselective Chemical Synthesis of Sugar Nucleotides via Direct Displacement of Acylated Glycosyl Bromides. Organic Letters, 2007, 9, 1227-1230.	4.6	49
14	Stereochemical Integrity of Oxazolone Ring-Containing Jadomycins. ChemBioChem, 2007, 8, 1198-1203.	2.6	46
15	Chloride anion transport and copper-mediated DNA cleavage by C-ring functionalized prodigiosenes. Chemical Communications, 2007, , 2701-2703.	4.1	45
16	Î±-Fluorophosphonates reveal how a phosphomutase conserves transition state conformation over hexose recognition in its two-step reaction. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12384-12389.	7.1	42
17	Glycosynthases: New Tools for Oligosaccharide Synthesis.. Trends in Glycoscience and Glycotechnology, 2002, 14, 13-25.	0.1	40
18	Chemoenzymatic Synthesis, Inhibition Studies, and X-ray Crystallographic Analysis of the Phosphono Analog of UDP-Galp as an Inhibitor and Mechanistic Probe for UDP-Galactopyranose Mutase. Journal of Molecular Biology, 2010, 403, 578-590.	4.2	40

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19	Synthesis and antimalarial activity of prodigiosenes. Organic and Biomolecular Chemistry, 2014, 12, 4132.	2.8	40
20	Eight-Membered Ring-Containing Jadomycins: Implications for Non-enzymatic Natural Products Biosynthesis. Journal of the American Chemical Society, 2015, 137, 3271-3275.	13.7	38
21	Synthesis of phosphonate analogues of 1,3-bisphosphoglyceric acid and their binding to yeast phosphoglycerate kinase. Bioorganic and Medicinal Chemistry Letters, 1994, 4, 2573-2578.	2.2	37
22	Novel jadomycins: incorporation of non-natural and natural amino acids. Bioorganic and Medicinal Chemistry Letters, 2005, 15, 1447-1449.	2.2	37
23	Site-Directed Mutagenesis of Putative Active Site Residues of 5-Enolpyruvylshikimate-3-phosphate Synthaseâ€. Biochemistry, 1999, 38, 296-302.	2.5	35
24	Stereospecific synthesis of sugar-1-phosphates and their conversion to sugar nucleotides. Carbohydrate Research, 2008, 343, 865-874.	2.3	35
25	Synthetic diversification of natural products: semi-synthesis and evaluation of triazole jadomycins. Chemical Science, 2012, 3, 1640.	7.4	35
26	Effects of sample preparation conditions on biomolecular solid-state NMR lineshapes. Journal of Biomolecular NMR, 1998, 12, 417-421.	2.8	34
27	Diverse DNA-Cleaving Capacities of the Jadomycins through Precursor-Directed Biosynthesis. Organic Letters, 2010, 12, 1172-1175.	4.6	34
28	Synthesis and enzymatic evaluation of ketose phosphonates: the interplay between mutarotation, monofluorination and acidity. Chemical Science, 2012, 3, 1866.	7.4	33
29	Ring-Opening Dynamics of Jadomycin A and B and Dalomycin T. Organic Letters, 2006, 8, 697-700.	4.6	31
30	Enzyme-Catalyzed Synthesis of Furanosyl Nucleotides. Organic Letters, 2008, 10, 161-163.	4.6	31
31	Substrate flexibility of a 2,6-dideoxyglycosyltransferase. Chemical Communications, 2006, , 3738.	4.1	29
32	Enzyme-catalyzed synthesis of isosteric phosphono-analogues of sugar nucleotides. Chemical Communications, 2009, , 238-240.	4.1	28
33	Jadomycins are cytotoxic to ABCB1-, ABCC1-, and ABCG2-overexpressing MCF7 breast cancer cells. Anti-Cancer Drugs, 2014, 25, 255-269.	1.4	28
34	Novel and expanded jadomycins incorporating non-proteogenic amino acids. Bioorganic and Medicinal Chemistry Letters, 2005, 15, 5280-5283.	2.2	26
35	Jadomycins Derived from the Assimilation and Incorporation of Norvaline and Norleucine. Journal of Natural Products, 2011, 74, 2420-2424.	3.0	26
36	Synthesis and Evaluation of <scp>l</scp>-Rhamnose 1C-Phosphonates as Nucleotidylyltransferase Inhibitors. Journal of Organic Chemistry, 2013, 78, 9822-9833.	3.2	26

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37	Jadomycin breast cancer cytotoxicity is mediated by a copperâ€dependent, reactive oxygen speciesâ€“inducing mechanism. Pharmacology Research and Perspectives, 2015, 3, e00110.	2.4	26
38	On expanding the repertoire of glycosynthases: Mutant Î²-galactosidases forming Î²-(1,6)-linkages. Canadian Journal of Chemistry, 2002, 80, 866-870.	1.1	24
39	Jadomycins, put a bigger ring in it: isolation of seven- to ten-membered ring analogues. Chemical Communications, 2015, 51, 14617-14619.	4.1	24
40	On the Mechanism of 5-Enolpyruvylshikimate-3-phosphate Synthaseâ€. Biochemistry, 1998, 37, 12012-12019.	2.5	23
41	Lipophilic sugar nucleotide synthesis by structure-based design of nucleotidylyltransferase substrates. Organic and Biomolecular Chemistry, 2008, 6, 477-484.	2.8	23
42	Engineering Ribonucleoside Triphosphate Specificity in a Thymidylyltransferase. Biochemistry, 2008, 47, 8719-8725.	2.5	22
43	A Method for Structureâ€“Activity Analysis of Quorum-Sensing Signaling Peptides from Naturally Transformable Streptococci. Biological Procedures Online, 2009, 11, 207-226.	2.9	21
44	Copper-mediated nuclease activity of jadomycin B. Bioorganic and Medicinal Chemistry, 2011, 19, 3357-3360.	3.0	21
45	Isolation and Synthetic Diversification of Jadomycin 4-Amino-<scp>l</scp>-phenylalanine. Journal of Natural Products, 2015, 78, 1208-1214.	3.0	21
46	Synthesis of Î±-Deoxymono and Difluorohexopyranosyl 1-Phosphates and Kinetic Evaluation with Thymidylyl- and Guanidylyltransferases. Journal of Organic Chemistry, 2016, 81, 8816-8825.	3.2	21
47	Jadomycins Inhibit Type II Topoisomerases and Promote DNA Damage and Apoptosis in Multidrug-Resistant Triple-Negative Breast Cancer Cells. Journal of Pharmacology and Experimental Therapeutics, 2017, 363, 196-210.	2.5	20
48	Characterization of novel lignocellulose-degrading enzymes from the porcupine microbiome using synthetic metagenomics. PLoS ONE, 2019, 14, e0209221.	2.5	20
49	On the synthesis of the 2,6-dideoxysugar l-digitoxose. Carbohydrate Research, 2007, 342, 2695-2704.	2.3	17
50	Isolation and characterization of jadomycin L from Streptomyces venezuelae ISP5230 for solid tumor efficacy studies. Pure and Applied Chemistry, 2009, 81, 1041-1049.	1.9	17
51	Kinetic evaluation of glucose 1-phosphate analogues with a thymidylyltransferase using a continuous coupled enzyme assay. Organic and Biomolecular Chemistry, 2015, 13, 866-875.	2.8	17
52	Homochiral synthesis of an aza analogue of S-adenosyl-L-methionine (AdoMet) and its binding to the E. coli methionine repressor protein (MetJ). Chemical Communications, 1996, , 791.	4.1	15
53	Thiophosphate and thiophosphonate analogues of glucose-1-phosphate: synthesis and enzymatic activity with a thymidylyltransferase. Carbohydrate Research, 2013, 379, 43-50.	2.3	15
54	Characterization of <scp>l</scp>-Digitoxosyl-phenanthroviridin from <i>Streptomyces venezuelae</i> ISP5230. Journal of Natural Products, 2015, 78, 1942-1948.	3.0	12

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55	Investigations into the binding of jadomycin DS to human topoisomerase IIÎ² by WaterLOGSY NMR spectroscopy. Organic and Biomolecular Chemistry, 2015, 13, 10324-10327.	2.8	12
56	Furan and Lactam Jadomycin Biosynthetic Congeners Isolated from <i>Streptomyces venezuelae</i> ISP5230 Cultured with <i>N</i>_{Îµ}-Trifluoroacetyl-<scp>l</scp>-lysine. Journal of Natural Products, 2017, 80, 1860-1866.	3.0	12
57	A Î²-(1,2)-Glycosynthase and an Attempted Selection Method for the Directed Evolution of Glycosynthases. Biochemistry, 2011, 50, 10359-10366.	2.5	11
58	Synthesis and binding of stable bisubstrate ligands for phosphoglycerate kinase. Bioorganic and Medicinal Chemistry Letters, 1998, 8, 2603-2608.	2.2	10
59	On the phosphorylase activity of GH3 enzymes: A Î²-N-acetylglucosaminidase from Herbaspirillum seropedicae SmR1 and a glucosidase from Saccharopolyspora erythraea. Carbohydrate Research, 2016, 435, 106-112.	2.3	10
60	JadX is a Disparate Natural Product Binding Protein. Journal of the American Chemical Society, 2016, 138, 2200-2208.	13.7	10
61	Post Polyketide Synthase Carbonâ€“Carbon Bond Formation in Type-II PKS-Derived Natural Products from <i>Streptomyces venezuelae</i>. Journal of Organic Chemistry, 2018, 83, 1876-1890.	3.2	10
62	Glycosidase Inhibition by Macrolide Antibiotics Elucidated by STD-NMR Spectroscopy. Chemistry and Biology, 2008, 15, 739-749.	6.0	9
63	Synthesis, Derivatization, and Structural Analysis of Phosphorylated Mono-, Di-, and Trifluorinated <scp>d</scp>-Gluco-heptuloses by Glucokinase: Tunable Phosphoglucomutase Inhibition. ACS Omega, 2019, 4, 7029-7037.	3.5	9
64	Orientation of 1,3-Bisphosphoglycerate Analogs Bound to Phosphoglycerate Kinase. Journal of Biological Chemistry, 2003, 278, 10957-10962.	3.4	8
65	Streptomyces venezuelae ISP5230 Maintains Excretion of Jadomycin upon Disruption of the MFS Transporter JadL Located within the Natural Product Biosynthetic Gene Cluster. Frontiers in Microbiology, 2017, 8, 432.	3.5	8
66	Inhibitory Evaluation of Î±PMM/PGM from <i>Pseudomonas aeruginosa</i>: Chemical Synthesis, Enzyme Kinetics, and Protein Crystallographic Study. Journal of Organic Chemistry, 2019, 84, 9627-9636.	3.2	8
67	Structural and dynamical description of the enzymatic reaction of a phosphohexomutase. Structural Dynamics, 2019, 6, 024703.	2.3	8
68	Mechanisms of Glycosyltransferases: The In and the Out. ChemBioChem, 2011, 12, 2540-2542.	2.6	7
69	Time-resolved solid-state REDOR-edited NMR detection of a transient enzymeâ€“intermediate. Chemical Communications, 1997, , 1019-1020.	4.1	6
70	The effect of bisphosphonate acidity on the activity of a thymidylyltransferase. Organic and Biomolecular Chemistry, 2013, 11, 5473.	2.8	6
71	Polyphosphate-containing bisubstrate analogues as inhibitors of a bacterial cell wall thymidylyltransferase. Organic and Biomolecular Chemistry, 2015, 13, 3347-3350.	2.8	6
72	On the mechanism of phosphoenolpyruvate synthetase (PEPs) and its inhibition by sodium fluoride: potential magnesium and aluminum fluoride complexes of phosphoryl transfer. Biochemistry and Cell Biology, 2015, 93, 236-240.	2.0	5

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73	Expression, purification, and characterization of a carbohydrateâ€active enzyme: A researchâ€inspired methods optimization experiment for the biochemistry laboratory. Biochemistry and Molecular Biology Education, 2016, 44, 75-85.	1.2	5
74	Biosynthetic 4,6-dehydratase gene deletion: isolation of a glucosylated jadomycin natural product provides insight into the substrate specificity of glycosyltransferase JadS. Organic and Biomolecular Chemistry, 2017, 15, 2725-2729.	2.8	5
75	The expansive library of jadomycins. Canadian Journal of Chemistry, 2018, 96, 495-501.	1.1	5
76	Overexpression, Purification, and Use of Phosphoenol Pyruvate Synthetase in the Synthesis of PEP Analogues. Bioorganic Chemistry, 1998, 26, 245-253.	4.1	4
77	Isolation of a jadomycin incorporating l-ornithine, analysis of antimicrobial activity and jadomycin reactive oxygen species (ROS) generation in MDA-MB-231 breast cancer cells. Journal of Antibiotics, 2018, 71, 722-730.	2.0	4
78	On the Catalytic Activity of a GT1 Family Glycosyltransferase from <i>Streptomyces venezuelae</i> ISP5230. Journal of Organic Chemistry, 2019, 84, 11482-11492.	3.2	4
79	Mechanistic Evaluation of a Nucleoside Tetraphosphate with a Thymidylyltransferase. Biochemistry, 2015, 54, 1703-1707.	2.5	3
80	Automated lineshape analysis of complex NMR spectra for a novel synthetic tetrafluorobisphosphonate, a potential ligand for phosphoglycerate kinase. Phosphorus, Sulfur and Silicon and the Related Elements, 2016, 191, 367-372.	1.6	3
81	Synthesis and kinetic studies of bisubstrate analogues of phosphoglycerate kinase. Collection of Czechoslovak Chemical Communications, 1996, 61, 88-91.	1.0	3
82	Enzymatic and structural characterization of HAD5, an essential phosphomannomutase of malaria-causing parasites. Journal of Biological Chemistry, 2022, 298, 101550.	3.4	3
83	Highly Potent Bisphosphonate Ligands for Phosphoglycerate Kinase and Protein Binding Studies. Phosphorus, Sulfur and Silicon and the Related Elements, 1999, 144, 533-536.	1.6	2
84	13C chemical shielding tensor orientations in a phosphoenolpyruvate moiety from 13C rotational-resonance MAS NMR lineshapes. Solid State Sciences, 2004, 6, 1097-1105.	3.2	2
85	Sweetly Expanding Enzymatic Glycodiversification. Chemistry and Biology, 2008, 15, 307-308.	6.0	2
86	Interplay of catalytic subsite residues in the positioning of Î±-d-glucose 1-phosphate in sucrose phosphorylase. Biochemistry and Biophysics Reports, 2015, 2, 36-44.	1.3	2
87	The acidity of Î²-phosphoglucomutase monofluoromethylenephosphonate ligands probed by NMR spectroscopy and quantum mechanical methods. Canadian Journal of Chemistry, 2016, 94, 902-908.	1.1	2
88	MgF₃^{âˆ’}and AlF₄^{âˆ’}transition state analogue complexes of yeast phosphoglycerate kinase. Biochemistry and Cell Biology, 2017, 95, 295-303.	2.0	2
89	Observing enzyme ternary transition state analogue complexes by ¹⁹F NMR spectroscopy. Chemical Science, 2017, 8, 8427-8434.	7.4	2
90	Isolation of a post-PKS Câ€“C branching jadomycin from <i>S. venezuelae</i> ISP5230 in the presence of 8-aminooctanoic acid. Canadian Journal of Chemistry, 2018, 96, 760-764.	1.1	2

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91	Stereoselective Synthesis of Sugar Nucleotides Using Neighboring Group Participation. Current Protocols in Nucleic Acid Chemistry, 2007, 31, Unit 13.7.	0.5	1
92	A missense variant remote from the active site impairs stability of human phosphoglucomutase 1. Journal of Inherited Metabolic Disease, 2020, 43, 861-870.	3.6	1
93	Engineering glycosidases for constructive purposes. Special Publication - Royal Society of Chemistry, 0, , 3-8.	0.0	1
94	Glycosynthases: New Tools for Oligosaccharide Synthesis.. ChemInform, 2002, 33, 250-250.	0.0	0
95	Investigation of the cytotoxcity of novel jadomycins in drug resistant breast cancer cells. FASEB Journal, 2009, 23, 761.2.	0.5	0
96	Characterization of the anticancer pharmacology of novel jadomycin molecules. FASEB Journal, 2013, 27, 671.3.	0.5	0