

# Stephen G Withers

## List of Publications by Year in descending order

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434  
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24,726  
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4960

84  
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13379

130  
g-index

460  
all docs

460  
docs citations

460  
times ranked

13401  
citing authors

#	ARTICLE	IF	CITATIONS
1	Catalysis by hen egg-white lysozyme proceeds via a covalent intermediate. <i>Nature</i> , 2001, 412, 835-838.	27.8	588
2	Glycosynthases: Mutant Glycosidases for Oligosaccharide Synthesis. <i>Journal of the American Chemical Society</i> , 1998, 120, 5583-5584.	13.7	513
3	Glycosidase mechanisms. <i>Current Opinion in Chemical Biology</i> , 2000, 4, 573-580.	6.1	447
4	X-ray structures along the reaction pathway of cyclodextrin glycosyltransferase elucidate catalysis in the alpha-amylase family. <i>Nature Structural Biology</i> , 1999, 6, 432-436.	9.7	348
5	The structure of human pancreatic $\alpha$ -amylase at 1.8 Å resolution and comparisons with related enzymes. <i>Protein Science</i> , 1995, 4, 1730-1742.	7.6	333
6	Crystal structure of the retaining galactosyltransferase LgtC from <i>Neisseria meningitidis</i> in complex with donor and acceptor sugar analogs. <i>Nature Structural Biology</i> , 2001, 8, 166-175.	9.7	313
7	Mechanism of <i>Agrobacterium</i> $\beta$ -glucosidase: kinetic studies. <i>Biochemistry</i> , 1992, 31, 9961-9969.	2.5	304
8	Mutagenesis of Glycosidases. <i>Annual Review of Biochemistry</i> , 1999, 68, 487-522.	11.1	280
9	The pKa of the General Acid/Base Carboxyl Group of a Glycosidase Cycles during Catalysis: A $^{13}\text{C}$ -NMR Study of <i>Bacillus circulans</i> Xylanase. <i>Biochemistry</i> , 1996, 35, 9958-9966.	2.5	269
10	Engineering of glycosidases and glycosyltransferases. <i>Current Opinion in Chemical Biology</i> , 2006, 10, 509-519.	6.1	267
11	Snapshots along an Enzymatic Reaction Coordinate: Analysis of a Retaining $\beta$ -Glycoside Hydrolase. <i>Biochemistry</i> , 1998, 37, 11707-11713.	2.5	255
12	NAG-thiazoline, An N-Acetyl- $\beta$ -hexosaminidase Inhibitor That Implicates Acetamido Participation. <i>Journal of the American Chemical Society</i> , 1996, 118, 6804-6805.	13.7	248
13	Crystallographic Evidence for Substrate-assisted Catalysis in a Bacterial $\beta$ -Hexosaminidase. <i>Journal of Biological Chemistry</i> , 2001, 276, 10330-10337.	3.4	239
14	Unequivocal demonstration of the involvement of a glutamate residue as a nucleophile in the mechanism of a retaining glycosidase. <i>Journal of the American Chemical Society</i> , 1990, 112, 5887-5889.	13.7	236
15	Subsite Mapping of the Human Pancreatic $\alpha$ -Amylase Active Site through Structural, Kinetic, and Mutagenesis Techniques. <i>Biochemistry</i> , 2000, 39, 4778-4791.	2.5	231
16	Hydrogen bonding and catalysis: a novel explanation for how a single amino acid substitution can change the pH optimum of a glycosidase 1 Edited by M. F. Summers. <i>Journal of Molecular Biology</i> , 2000, 299, 255-279.	4.2	214
17	High-throughput screening methodology for the directed evolution of glycosyltransferases. <i>Nature Methods</i> , 2006, 3, 609-614.	19.0	211
18	Hydrogen bonding and specificity. Fluorodeoxy sugars as probes of hydrogen bonding in the glycogen phosphorylase-glucose complex. <i>Biochemistry</i> , 1986, 25, 6021-6027.	2.5	207

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19	Glycosyl fluorides in enzymatic reactions. <i>Carbohydrate Research</i> , 2000, 327, 27-46.	2.3	207
20	A Structural View of the Action of <i>Escherichia coli</i> ( $\beta$ -Galactosidase). <i>Biochemistry</i> , 2001, 40, 14781-14794.	2.5	207
21	Structural Insights into the Catalytic Mechanism of <i>Trypanosoma cruzi</i> $\alpha$ -Sialidase. <i>Structure</i> , 2004, 12, 775-784.	3.3	197
22	Structural analysis of the sialyltransferase CstII from <i>Campylobacter jejuni</i> in complex with a substrate analog. <i>Nature Structural and Molecular Biology</i> , 2004, 11, 163-170.	8.2	196
23	<i>Trypanosoma cruzi</i> $\alpha$ -Sialidase Operates through a Covalent Sialyl-Enzyme Intermediate: A Tyrosine Is the Catalytic Nucleophile. <i>Journal of the American Chemical Society</i> , 2003, 125, 7532-7533.	13.7	188
24	Pharmacological Enhancement of $\beta$ -Hexosaminidase Activity in Fibroblasts from Adult Tay-Sachs and Sandhoff Patients. <i>Journal of Biological Chemistry</i> , 2004, 279, 13478-13487.	3.4	186
25	Mechanism of <i>Agrobacterium</i> $\beta$ -glucosidase: kinetic analysis of the role of noncovalent enzyme/substrate interactions. <i>Biochemistry</i> , 1995, 34, 16194-16202.	2.5	182
26	Sugar Ring Distortion in the Glycosyl-Enzyme Intermediate of a Family G/11 Xylanase. <i>Biochemistry</i> , 1999, 38, 5346-5354.	2.5	182
27	The Role of Sugar Substituents in Glycoside Hydrolysis. <i>Journal of the American Chemical Society</i> , 2000, 122, 1270-1277.	13.7	175
28	Mechanism-Based Covalent Neuraminidase Inhibitors with Broad-Spectrum Influenza Antiviral Activity. <i>Science</i> , 2013, 340, 71-75.	12.6	175
29	Crystallographic Structure of Human $\beta$ -Hexosaminidase A: Interpretation of Tay-Sachs Mutations and Loss of GM2 Ganglioside Hydrolysis. <i>Journal of Molecular Biology</i> , 2006, 359, 913-929.	4.2	169
30	Covalent inhibitors of glycosidases and their applications in biochemistry and biology. <i>Glycobiology</i> , 2008, 18, 570-586.	2.5	167
31	Crystal structure of the catalytic domain of the $\beta$ -1,4-glycanase Cex from <i>Cellulomonas fimi</i> . <i>Biochemistry</i> , 1994, 33, 12546-12552.	2.5	166
32	The Mechanism of Cellulose Hydrolysis by a Two-Step, Retaining Cellobiohydrolase Elucidated by Structural and Transition Path Sampling Studies. <i>Journal of the American Chemical Society</i> , 2014, 136, 321-329.	13.7	164
33	The Search for Novel Human Pancreatic $\alpha$ -Amylase Inhibitors: High-Throughput Screening of Terrestrial and Marine Natural Product Extracts. <i>ChemBioChem</i> , 2008, 9, 433-438.	2.6	163
34	2-Deoxy-2-fluoroglucosides: a novel class of mechanism-based glucosidase inhibitors. <i>Journal of the American Chemical Society</i> , 1987, 109, 7530-7531.	13.7	161
35	Mechanistic and Structural Analysis of a Family 31 $\beta$ -Glucosidase and Its Glycosyl-enzyme Intermediate. <i>Journal of Biological Chemistry</i> , 2005, 280, 2105-2115.	3.4	156
36	Crystallographic observation of a covalent catalytic intermediate in a $\beta$ -glucosidase. <i>Nature Structural Biology</i> , 1996, 3, 149-154.	9.7	153

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37	The Acid/Base Catalyst in the Exoglucanase/Xylanase from <i>Cellulomonas fimi</i> Is Glutamic Acid 127: Evidence from Detailed Kinetic Studies of Mutants. <i>Biochemistry</i> , 1994, 33, 6371-6376.	2.5	152
38	Ultra-high-throughput FACS-based screening for directed enzyme evolution. <i>ChemBioChem</i> , 2009, 10, 2704-2715.	2.6	151
39	Inactivation of a $\beta$ -glucosidase through the accumulation of a stable 2-deoxy-2-fluoro- $\alpha$ -D-glucopyranosyl-enzyme intermediate: a detailed investigation. <i>Biochemistry</i> , 1992, 31, 9970-9978.	2.5	150
40	Approaches to labeling and identification of active site residues in glycosidases. <i>Protein Science</i> , 1995, 4, 361-372.	7.6	148
41	Dissection of nucleophilic and acid-base catalysis in glycosidases. <i>Current Opinion in Chemical Biology</i> , 2001, 5, 643-649.	6.1	146
42	Thioglycosylases: Mutant Glycosidases for Thioglycoside Synthesis. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 352-354.	13.8	143
43	Crystal Structure of <i>Thermotoga maritima</i> $\alpha$ -L-Fucosidase. <i>Journal of Biological Chemistry</i> , 2004, 279, 13119-13128.	3.4	141
44	Advances in Enzymatic Glycoside Synthesis. <i>ACS Chemical Biology</i> , 2016, 11, 1784-1794.	3.4	140
45	Carbohydrate-active enzymes (CAZymes) in the gut microbiome. <i>Nature Reviews Microbiology</i> , 2022, 20, 542-556.	28.6	139
46	Identification of a covalent $\alpha$ -D-glucopyranosyl enzyme intermediate formed on a $\beta$ -glucosidase. <i>Journal of the American Chemical Society</i> , 1988, 110, 8551-8553.	13.7	135
47	Emerging methods for the production of homogeneous human glycoproteins. <i>Nature Chemical Biology</i> , 2009, 5, 206-215.	8.0	133
48	Observing cellulose biosynthesis and membrane translocation in crystallo. <i>Nature</i> , 2016, 531, 329-334.	27.8	133
49	Identification of Glutamic Acid 78 as the Active Site Nucleophile in <i>Bacillus subtilis</i> Xylanase Using Electrospray Tandem Mass Spectrometry. <i>Biochemistry</i> , 1994, 33, 7027-7032.	2.5	130
50	Dissecting the Electrostatic Interactions and pH-Dependent Activity of a Family 11 Glycosidase. <i>Biochemistry</i> , 2001, 40, 10115-10139.	2.5	128
51	Substrate Distortion by a $\beta$ -Mannanase: Snapshots of the Michaelis and Covalent-Intermediate Complexes Suggest a B <sub>2,5</sub> Conformation for the Transition State. <i>Angewandte Chemie - International Edition</i> , 2002, 41, 2824-2827.	13.8	127
52	Mechanisms of Cellulases and Xylanases: A Detailed Kinetic Study of the Exo- $\beta$ -1,4-glycanase from <i>Cellulomonas Fimi</i> . <i>Biochemistry</i> , 1994, 33, 6363-6370.	2.5	126
53	Pre-Steady State Kinetic Analysis of an Enzymatic Reaction Monitored by Time-Resolved Electrospray Ionization Mass Spectrometry. <i>Biochemistry</i> , 1998, 37, 7664-7669.	2.5	126
54	Aspartate 313 in the <i>Streptomyces plicatus</i> Hexosaminidase Plays a Critical Role in Substrate-assisted Catalysis by Orienting the 2-Acetamido Group and Stabilizing the Transition State. <i>Journal of Biological Chemistry</i> , 2002, 277, 40055-40065.	3.4	126

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55	Unequivocal Identification of Asp-214 as the Catalytic Nucleophile of <i>Saccharomyces cerevisiae</i> $\beta$ -Glucosidase Using 5-Fluoro Glycosyl Fluorides. <i>Journal of Biological Chemistry</i> , 1996, 271, 6889-6894.	3.4	124
56	An Unusual Mechanism of Glycoside Hydrolysis Involving Redox and Elimination Steps by a Family 4 $\beta$ -Glucosidase from <i>Thermotoga maritima</i> . <i>Journal of the American Chemical Society</i> , 2004, 126, 8354-8355.	13.7	119
57	Mechanistic Analyses of Catalysis in Human Pancreatic $\alpha$ -Amylase: Detailed Kinetic and Structural Studies of Mutants of Three Conserved Carboxylic Acids. <i>Biochemistry</i> , 2002, 41, 4492-4502.	2.5	116
58	Directed Evolution of a Glycosynthase from <i>Agrobacterium</i> sp. Increases Its Catalytic Activity Dramatically and Expands Its Substrate Repertoire. <i>Journal of Biological Chemistry</i> , 2004, 279, 42787-42793.	3.4	116
59	Cloning, Expression, Characterization, and Nucleophile Identification of Family 3, <i>Aspergillus niger</i> $\beta$ -Glucosidase. <i>Journal of Biological Chemistry</i> , 2000, 275, 4973-4980.	3.4	115
60	5-Fluoro Glycosides: A New Class of Mechanism-Based Inhibitors of Both $\alpha$ - and $\beta$ -Glucosidases. <i>Journal of the American Chemical Society</i> , 1996, 118, 241-242.	13.7	113
61	The E358S mutant of <i>Agrobacterium</i> sp. $\beta$ -glucosidase is a greatly improved glycosynthase. <i>FEBS Letters</i> , 2000, 466, 40-44.	2.8	113
62	The amylase inhibitor montbretin A reveals a new glycosidase inhibition motif. <i>Nature Chemical Biology</i> , 2015, 11, 691-696.	8.0	113
63	Alternative Catalytic Anions Differentially Modulate Human $\alpha$ -Amylase Activity and Specificity. <i>Biochemistry</i> , 2008, 47, 3332-3344.	2.5	111
64	Mechanism of Action and Identification of Asp242 as the Catalytic Nucleophile of <i>Vibrio furnisii</i> N-Acetyl- $\beta$ -D-glucosaminidase Using 2-Acetamido-2-deoxy- $\beta$ -D-idopyranosyl Fluoride. <i>Biochemistry</i> , 2000, 39, 117-126.	2.5	106
65	Structural insight into mammalian sialyltransferases. <i>Nature Structural and Molecular Biology</i> , 2009, 16, 1186-1188.	8.2	105
66	The Donor Subsite of Trehalose-6-phosphate Synthase. <i>Journal of Biological Chemistry</i> , 2004, 279, 1950-1955.	3.4	104
67	Teaching old enzymes new tricks: engineering and evolution of glycosidases and glycosyl transferases for improved glycoside synthesis This paper is one of a selection of papers published in this Special Issue, entitled CSBMCB "Systems and Chemical Biology, and has undergone the Journal's usual peer review process. <i>Biochemistry and Cell Biology</i> , 2008, 86, 169-177.	2.0	104
68	The Structure of <i>Clostridium perfringens</i> NanI Sialidase and Its Catalytic Intermediates. <i>Journal of Biological Chemistry</i> , 2008, 283, 9080-9088.	3.4	102
69	$\beta$ -Mannosynthase: Synthesis of $\beta$ -Mannosides with a Mutant $\beta$ -Mannosidase. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 417-420.	13.8	101
70	High-Throughput Screening for Human Lysosomal $\beta$ -N-Acetyl Hexosaminidase Inhibitors Acting as Pharmacological Chaperones. <i>Chemistry and Biology</i> , 2007, 14, 153-164.	6.0	99
71	Detailed Comparative Analysis of the Catalytic Mechanisms of $\beta$ -N-Acetylglucosaminidases from Families 3 and 20 of Glycoside Hydrolases. <i>Biochemistry</i> , 2005, 44, 12809-12818.	2.5	98
72	Insights into transition state stabilization of the $\beta$ -1,4-glycosidase Cex by covalent intermediate accumulation in active site mutants. <i>Nature Structural Biology</i> , 1998, 5, 812-818.	9.7	97

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73	Mechanistic consequences of mutation of the active site nucleophile Glu 358 in <i>Agrobacterium</i> $\beta$ -glucosidase. <i>Biochemistry</i> , 1992, 31, 9979-9985.	2.5	96
74	Mechanistic analogies amongst carbohydrate modifying enzymes. <i>Chemical Communications</i> , 2004, , 2243.	4.1	95
75	Order and Disorder: Differential Structural Impacts of Myricetin and Ethyl Caffeeate on Human Amylase, an Antidiabetic Target. <i>Journal of Medicinal Chemistry</i> , 2012, 55, 10177-10186.	6.4	95
76	Mechanism-based Inhibition of Yeast $\beta$ -Glucosidase and Human Pancreatic $\beta$ -Amylase by a New Class of Inhibitors. <i>Journal of Biological Chemistry</i> , 1995, 270, 26778-26781.	3.4	94
77	Exploring the Cellulose/Xylan Specificity of the $\beta$ -1,4-Glycanase Cex from <i>Cellulomonas fimi</i> through Crystallography and Mutation,. <i>Biochemistry</i> , 1998, 37, 4751-4758.	2.5	94
78	Breakdown of oligosaccharides by the process of elimination. <i>Current Opinion in Chemical Biology</i> , 2006, 10, 147-155.	6.1	92
79	The synthesis and hydrolysis of a series of deoxyfluoro-d-glucopyranosyl phosphates. <i>Carbohydrate Research</i> , 1986, 154, 127-144.	2.3	91
80	Insights into the Mechanism of <i>Drosophila melanogaster</i> Golgi $\beta$ -Mannosidase II through the Structural Analysis of Covalent Reaction Intermediates. <i>Journal of Biological Chemistry</i> , 2003, 278, 48074-48083.	3.4	91
81	Structural Analysis of the $\beta$ -2,3-Sialyltransferase Cst-I from <i>Campylobacter jejuni</i> in Apo and Substrate-Analogue Bound Forms,. <i>Biochemistry</i> , 2007, 46, 7196-7204.	2.5	90
82	Intermediate Trapping on a Mutant Retaining $\beta$ -Galactosyltransferase Identifies an Unexpected Aspartate Residue. <i>Journal of Biological Chemistry</i> , 2004, 279, 28339-28344.	3.4	89
83	Mechanistic Consequences of Mutation of Active Site Carboxylates in a Retaining $\beta$ -1,4-Glycanase from <i>Cellulomonas fimi</i> . <i>Biochemistry</i> , 1996, 35, 13165-13172.	2.5	88
84	Novel Catalytic Mechanism of Glycoside Hydrolysis Based on the Structure of an NAD <sup>+</sup> /Mn <sup>2+</sup> -Dependent Phospho- $\beta$ -Glucosidase from <i>Bacillus subtilis</i> . <i>Structure</i> , 2004, 12, 1619-1629.	3.3	88
85	Directed evolution of new glycosynthases from <i>Agrobacterium</i> $\beta$ -glucosidase: a general screen to detect enzymes for oligosaccharide synthesis. <i>Chemistry and Biology</i> , 2001, 8, 437-443.	6.0	87
86	Direct <sup>1</sup> H N.M.R. determination of the stereochemical course of hydrolyses catalysed by glucanase components of the cellulase complex. <i>Biochemical and Biophysical Research Communications</i> , 1986, 139, 487-494.	2.1	84
87	Direct Observation of the Protonation State of an Imino Sugar Glycosidase Inhibitor upon Binding. <i>Journal of the American Chemical Society</i> , 2003, 125, 7496-7497.	13.7	84
88	Configurationaly selective transition state analogue inhibitors of glycosidases. A study with nojiritetrazoles, a new class of glycosidase inhibitors. <i>Carbohydrate Research</i> , 1993, 250, 113-128.	2.3	83
89	Site-Directed Mutation of the Putative Catalytic Residues of Endoglucanase CenA from <i>Cellulomonas fimi</i> . <i>Biochemistry</i> , 1995, 34, 2220-2224.	2.5	83
90	Self-Immobilizing Fluorogenic Imaging Agents of Enzyme Activity. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 300-303.	13.8	81

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91	Solid-Phase Oligosaccharide and Glycopeptide Synthesis Using Glycosynthases. <i>Journal of Organic Chemistry</i> , 2002, 67, 4143-4149.	3.2	79
92	Glycosynthase-Mediated Synthesis of Glycosphingolipids. <i>Journal of the American Chemical Society</i> , 2006, 128, 6300-6301.	13.7	79
93	Crystal structure of the family 7 endoglucanase I (Cel7B) from <i>Humicola insolens</i> at 2.2 Å resolution and identification of the catalytic nucleophile by trapping of the covalent glycosyl-enzyme intermediate. <i>Biochemical Journal</i> , 1998, 335, 409-416.	3.7	77
94	A New Generation of Specific <i>Trypanosoma cruzi</i> Trans-Sialidase Inhibitors. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 2700-2703.	13.8	77
95	Designer enzymes for glycosphingolipid synthesis by directed evolution. <i>Nature Chemical Biology</i> , 2009, 5, 508-514.	8.0	76
96	Trapping and Characterization of the Reaction Intermediate in Cyclodextrin Glycosyltransferase by Use of Activated Substrates and a Mutant Enzyme. <i>Biochemistry</i> , 1997, 36, 9927-9934.	2.5	75
97	Structural and Kinetic Analysis of Two Covalent Sialosyl-Enzyme Intermediates on <i>Trypanosoma rangeli</i> Sialidase. <i>Journal of Biological Chemistry</i> , 2006, 281, 4149-4155.	3.4	75
98	Identification of the Active Site Nucleophile in Jack Bean $\alpha$ -Mannosidase Using 5-Fluoro- $\beta$ -D-Gulosyl Fluoride. <i>Journal of Biological Chemistry</i> , 1998, 273, 2067-2072.	3.4	74
99	Acarbose Rearrangement Mechanism Implied by the Kinetic and Structural Analysis of Human Pancreatic $\alpha$ -Amylase in Complex with Analogues and Their Elongated Counterparts. <i>Biochemistry</i> , 2005, 44, 3347-3357.	2.5	74
100	Rapid Assembly of a Library of Lipophilic Iminosugars via the Thiol-Ene Reaction Yields Promising Pharmacological Chaperones for the Treatment of Gaucher Disease. <i>Journal of Medicinal Chemistry</i> , 2012, 55, 2737-2745.	6.4	74
101	Positioning the Acid/Base Catalyst in a Glycosidase: Studies with <i>Bacillus circulans</i> Xylanase. <i>Biochemistry</i> , 1997, 36, 2257-2265.	2.5	73
102	Active-site Peptide Fingerprinting of Glycosidases in Complex Mixtures by Mass Spectrometry. <i>Journal of Biological Chemistry</i> , 2005, 280, 35126-35135.	3.4	73
103	Expanding the Thioglycosylase Strategy to the Synthesis of $\alpha$ -Linked Thioglycosides Allows Structural Investigation of the Parent Enzyme/Substrate Complex. <i>Journal of the American Chemical Society</i> , 2006, 128, 2202-2203.	13.7	72
104	Identification of the Catalytic Nucleophile of the Family 29 $\alpha$ -L-Fucosidase from <i>Thermotoga maritima</i> through Trapping of a Covalent Glycosyl-Enzyme Intermediate and Mutagenesis. <i>Journal of Biological Chemistry</i> , 2003, 278, 47394-47399.	3.4	70
105	Subsite structure of the endo-type chitin deacetylase from a Deuteromycete, <i>Colletotrichum lindemuthianum</i> : an investigation using steady-state kinetic analysis and MS. <i>Biochemical Journal</i> , 2003, 374, 369-380.	3.7	70
106	N-Acetylglucosaminidases from CAZy Family GH3 Are Really Glycoside Phosphorylases, Thereby Explaining Their Use of Histidine as an Acid/Base Catalyst in Place of Glutamic Acid. <i>Journal of Biological Chemistry</i> , 2015, 290, 4887-4895.	3.4	70
107	Crystal Structure of $\beta$ -D-Xylosidase from <i>Thermoanaerobacterium saccharolyticum</i> , a Family 39 Glycoside Hydrolase. <i>Journal of Molecular Biology</i> , 2004, 335, 155-165.	4.2	69
108	Detailed Structural Analysis of Glycosidase/Inhibitor Interactions: Complexes of Cex from <i>Cellulomonas fimi</i> with Xylobiose-Derived Aza-Sugars. <i>Biochemistry</i> , 2000, 39, 11553-11563.	2.5	68

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109	Elucidation of the Mechanism of Polysaccharide Cleavage by Chondroitin AC Lyase from <i>Flavobacterium heparinum</i> . <i>Journal of the American Chemical Society</i> , 2002, 124, 9756-9767.	13.7	68
110	Using substrate engineering to harness enzymatic promiscuity and expand biological catalysis. , 2006, 2, 724-728.		68
111	Anatomy of Glycosynthesis. <i>Chemistry and Biology</i> , 2003, 10, 619-628.	6.0	67
112	Unusual Enzymatic Glycoside Cleavage Mechanisms. <i>Accounts of Chemical Research</i> , 2014, 47, 226-235.	15.6	67
113	Expansion of the glycosynthase repertoire to produce defined manno-oligosaccharides. <i>Chemical Communications</i> , 2003, , 1327-1329.	4.1	66
114	The purification and characterization of a $\beta$ -glucosidase from <i>Alcaligenes faecalis</i> . <i>Biochemistry and Cell Biology</i> , 1986, 64, 914-922.	2.0	65
115	Enzymatic Synthesis of Carbon-Fluorine Bonds. <i>Journal of the American Chemical Society</i> , 2001, 123, 4350-4351.	13.7	64
116	Engineering of a thioglycoligase: randomized mutagenesis of the acid-base residue leads to the identification of improved catalysts. <i>Protein Engineering, Design and Selection</i> , 2005, 18, 33-40.	2.1	62
117	Structure of human ST8Siall sialyltransferase provides insight into cell-surface polysialylation. <i>Nature Structural and Molecular Biology</i> , 2015, 22, 627-635.	8.2	62
118	The synthesis and hydrolysis of a series of deoxy- and deoxyfluoro- $\beta$ -D- $\alpha$ -glucopyranosyl-phosphates. <i>Carbohydrate Research</i> , 1989, 187, 43-66.	2.3	61
119	Effects of both Shortening and Lengthening the Active Site Nucleophile of <i>Bacillus circulans</i> Xylanase on Catalytic Activity. <i>Biochemistry</i> , 1996, 35, 10110-10118.	2.5	61
120	Nanomolar versus Millimolar Inhibition by Xylobiose-Derived Azasugars: Significant Differences between Two Structurally Distinct Xylanases. <i>Journal of the American Chemical Society</i> , 2000, 122, 2223-2235.	13.7	61
121	Mechanistic Studies of a Retaining $\beta$ -Galactosyltransferase from <i>Neisseria meningitidis</i> . <i>Biochemistry</i> , 2002, 41, 5075-5085.	2.5	60
122	Characterization of a beta-N-acetylhexosaminidase and a beta-N-acetylglucosaminidase/beta-glucosidase from <i>Cellulomonas fimi</i> . <i>FEBS Journal</i> , 2006, 273, 2929-2941.	4.7	60
123	Assignment of Sweet Almond $\beta$ -Glucosidase as a Family 1 Glycosidase and Identification of Its Active Site Nucleophile. <i>Journal of Biological Chemistry</i> , 1997, 272, 24864-24867.	3.4	59
124	Detailed Dissection of a New Mechanism for Glycoside Cleavage: $\beta$ -1,4-Glucan Lyase. <i>Biochemistry</i> , 2003, 42, 13081-13090.	2.5	59
125	Reassessment of the catalytic mechanism of glycogen debranching enzyme. <i>Biochemistry</i> , 1991, 30, 1419-1424.	2.5	58
126	Identification of Asp-130 as the Catalytic Nucleophile in the Main $\beta$ -Galactosidase from <i>Phanerochaete chrysosporium</i> , a Family 27 Glycosyl Hydrolase. <i>Biochemistry</i> , 2000, 39, 9826-9836.	2.5	58



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127	Glycosynthase-based synthesis of xylo-oligosaccharides using an engineered retaining xylanase from <i>Cellulomonas fimi</i> . <i>Organic and Biomolecular Chemistry</i> , 2006, 4, 2025.	2.8	58
128	Fluorescence Activated Cell Sorting as a General Ultra-High-Throughput Screening Method for Directed Evolution of Glycosyltransferases. <i>Journal of the American Chemical Society</i> , 2010, 132, 10570-10577.	13.7	58
129	Directed evolution of an $\alpha$ 1,3-fucosyltransferase using a single-cell ultrahigh-throughput screening method. <i>Science Advances</i> , 2019, 5, eaaw8451.	10.3	58
130	The Crystal Structure of a 2-Fluorocellootriosyl Complex of the <i>Streptomyces lividans</i> Endoglucanase CelB2 at 1.2 Å Resolution. <i>Biochemistry</i> , 1999, 38, 4826-4833.	2.5	56
131	Thioglycosynthases: double mutant glycosidases that serve as scaffolds for thioglycoside synthesis. <i>Chemical Communications</i> , 2004, , 274-275.	4.1	56
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