

# Alan Berry

## List of Publications by Year in descending order

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49  
papers

2,539  
citations

218381

26  
h-index

205818

48  
g-index

53  
all docs

53  
docs citations

53  
times ranked

2550  
citing authors

#	ARTICLE	IF	CITATIONS
1	Redesign of the coenzyme specificity of a dehydrogenase by protein engineering. <i>Nature</i> , 1990, 343, 38-43.	13.7	764
2	The crystal structure of <i>Escherichia coli</i> class II fructose-1,6-bisphosphate aldolase in complex with phosphoglycolohydroxamate reveals details of mechanism and specificity 1 Edited by R. Huber. <i>Journal of Molecular Biology</i> , 1999, 287, 383-394.	2.0	117
3	The crystal structure of a class II fructose-1,6-bisphosphate aldolase shows a novel binuclear metal-binding active site embedded in a familiar fold. <i>Structure</i> , 1996, 4, 1303-1315.	1.6	112
4	Modifying the stereochemistry of an enzyme-catalyzed reaction by directed evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 3143-3148.	3.3	110
5	The moonlighting protein fructose-1, 6-bisphosphate aldolase of <i>Neisseria meningitidis</i> : surface localization and role in host cell adhesion. <i>Molecular Microbiology</i> , 2010, 76, 605-615.	1.2	101
6	Engineering aldolases as biocatalysts. <i>Current Opinion in Chemical Biology</i> , 2014, 19, 25-33.	2.8	84
7	A thermostable variant of fructose bisphosphate aldolase constructed by directed evolution also shows increased stability in organic solvents. <i>Protein Engineering, Design and Selection</i> , 2004, 17, 689-697.	1.0	78
8	Directed evolution of aldolases for exploitation in synthetic organic chemistry. <i>Archives of Biochemistry and Biophysics</i> , 2008, 474, 318-330.	1.4	77
9	Switching kinetic mechanism and putative proton donor by directed mutagenesis of glutathione reductase. <i>Biochemistry</i> , 1989, 28, 1264-1269.	1.2	68
10	Creation of a Pair of Stereochemically Complementary Biocatalysts. <i>Journal of the American Chemical Society</i> , 2006, 128, 16238-16247.	6.6	68
11	The <i>dhnA</i> gene of <i>Escherichia coli</i> encodes a Class I fructose bisphosphate aldolase. <i>Biochemical Journal</i> , 1998, 331, 437-445.	1.7	65
12	Directed evolution of enzymes for biocatalysis and the life sciences. <i>Cellular and Molecular Life Sciences</i> , 2004, 61, 3034-3046.	2.4	64
13	Exploring substrate binding and discrimination in fructose-1,6-bisphosphate and tagatose 1,6-bisphosphate aldolases. <i>FEBS Journal</i> , 2000, 267, 1858-1868.	0.2	58
14	Structure of Tagatose-1,6-bisphosphate Aldolase. <i>Journal of Biological Chemistry</i> , 2002, 277, 22018-22024.	1.6	55
15	Alternative proton donors/acceptors in the catalytic mechanism of the glutathione reductase of <i>Escherichia coli</i> : the role of histidine-439 and tyrosine-99. <i>Biochemistry</i> , 1989, 28, 9602-9607.	1.2	49
16	Identification of zinc-binding ligands in the Class II fructose- 1,6-bisphosphate aldolase of <i>Escherichia coli</i> . <i>FEBS Letters</i> , 1993, 318, 11-16.	1.3	47
17	Creation of a Tailored Aldolase for the Parallel Synthesis of Sialic Acid Mimetics. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 2109-2112.	7.2	47
18	Reaction Mechanism of <i>N</i> -Acetylneuraminic Acid Lyase Revealed by a Combination of Crystallography, QM/MM Simulation, and Mutagenesis. <i>ACS Chemical Biology</i> , 2014, 9, 1025-1032.	1.6	41

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19	The isolation and characterization of catalytically competent porphobilinogen deaminase-intermediate complexes. <i>FEBS Letters</i> , 1981, 129, 220-224.	1.3	36
20	Identification of arginine 331 as an important active site residue in the Class II fructose-1,6-bisphosphate aldolase of <i>Escherichia coli</i> . <i>Protein Science</i> , 1996, 5, 154-161.	3.1	35
21	An Enantio- and Diastereoselective Chemoenzymatic Synthesis of Fluoro Hydroxy Carboxylic Esters. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 6767-6770.	7.2	35
22	New enzymes for old: Redesigning the coenzyme and substrate specificities of glutathione reductase. <i>BioEssays</i> , 1991, 13, 515-525.	1.2	34
23	Structural Differences between Wild-type NADP-dependent Glutathione Reductase from <i>Escherichia coli</i> and a Redesigned NAD-dependent Mutant. <i>Journal of Molecular Biology</i> , 1993, 231, 191-195.	2.0	32
24	Extending enzyme molecular recognition with an expanded amino acid alphabet. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2610-2615.	3.3	30
25	Engineering of an intersubunit disulphide bridge in glutathione reductase from <i>Escherichia coli</i> . <i>FEBS Letters</i> , 1988, 241, 46-50.	1.3	29
26	Structural Insights into Substrate Specificity in Variants of N-Acetylneuraminic Acid Lyase Produced by Directed Evolution. <i>Journal of Molecular Biology</i> , 2010, 404, 56-69.	2.0	28
27	Structural Insights into the Recovery of Aldolase Activity in N-Acetylneuraminic Acid Lyase by Replacement of the Catalytically Active Lysine with Thialysine by Using a Chemical Mutagenesis Strategy. <i>ChemBioChem</i> , 2013, 14, 474-481.	1.3	26
28	Cloning, over-expression, purification, and characterisation of N-acetylneuraminic acid synthase from <i>Streptococcus agalactiae</i> . <i>Protein Expression and Purification</i> , 2003, 27, 346-356.	0.6	22
29	A Reactive, Surface Cysteine Residue of the Class-II Fructose-1,6-Bisphosphate Aldolase of <i>Escherichia coli</i> Revealed by Electrospray Ionisation Mass Spectrometry. <i>FEBS Journal</i> , 1995, 227, 510-515.	0.2	19
30	Identification and characterization of important residues in the catalytic mechanism of CMP-Neu5Ac synthetase from <i>Neisseria meningitidis</i> . <i>FEBS Journal</i> , 2010, 277, 2779-2790.	2.2	19
31	Evaluation of fluoropyruvate as nucleophile in reactions catalysed by N-acetyl neuraminic acid lyase variants: scope, limitations and stereoselectivity. <i>Organic and Biomolecular Chemistry</i> , 2016, 14, 105-112.	1.5	19
32	Engineering of a Cytidine Monophosphate Sialic Acid Synthetase for Improved Tolerance to Functional Sialic Acids. <i>Advanced Synthesis and Catalysis</i> , 2013, 355, 3597-3612.	2.1	18
33	An Enantio- and Diastereoselective Chemoenzymatic Synthesis of Fluoro Hydroxy Carboxylic Esters. <i>Angewandte Chemie</i> , 2016, 128, 6879-6882.	1.6	18
34	Development of an organo- and enzyme-catalysed one-pot, sequential three-component reaction. <i>Tetrahedron</i> , 2012, 68, 7719-7722.	1.0	16
35	Advances in Pathway Engineering for Natural Product Biosynthesis. <i>ChemCatChem</i> , 2015, 7, 3078-3093.	1.8	16
36	Towards designer organelles by subverting the peroxisomal import pathway. <i>Nature Communications</i> , 2017, 8, 454.	5.8	16

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37	Synthesis of screening substrates for the directed evolution of sialic acid aldolase: towards tailored enzymes for the preparation of influenza A sialidase inhibitor analogues. <i>Organic and Biomolecular Chemistry</i> , 2005, 3, 1795.	1.5	13
38	Aldolase-catalysed stereoselective synthesis of fluorinated small molecules. <i>Current Opinion in Chemical Biology</i> , 2017, 37, 33-38.	2.8	12
39	A quantitative methodology for the de novo design of proteins. <i>Protein Science</i> , 1994, 3, 1871-1882.	3.1	11
40	Structure of an <i>Escherichia coli</i> N-acetyl-D-neuraminic acid lyase mutant, E192N, in complex with pyruvate at 1.45 Å resolution. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2009, 65, 1088-1090.	0.7	9
41	C-type cytochrome-initiated reduction of bacterial lytic polysaccharide monooxygenases. <i>Biochemical Journal</i> , 2021, 478, 2927-2944.	1.7	9
42	The organization of divalent cations in the active site of cadmium <i>Escherichia coli</i> fructose-1,6-bisphosphate aldolase. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2003, 59, 611-614.	2.5	8
43	Crystal structure of the putative cyclase IdmH from the indanomycin nonribosomal peptide synthase/polyketide synthase. <i>IUCr</i> , 2019, 6, 1120-1133.	1.0	8
44	Porphobilinogen Deaminase: Involvement of stable covalent enzyme intermediate complexes in the enzyme from <i>Rhodospseudomonas spheroides</i> . <i>Biochemical Society Transactions</i> , 1981, 9, 231-232.	1.6	3
45	Flavoprotein disulphide oxidoreductases: protein engineering of glutathione reductase from <i>Escherichia coli</i> . <i>Biochemical Society Transactions</i> , 1988, 16, 84-87.	1.6	3
46	The oxidative and reductive half reactions of subunit interface mutants of <i>Escherichia coli</i> glutathione reductase. <i>Biochemical Society Transactions</i> , 1996, 24, 9S-9S.	1.6	2
47	Hadamard NMR spectroscopy for relaxation measurements of large (>35 kDa) proteins. <i>Journal of Biomolecular NMR</i> , 2007, 39, 239-245.	1.6	2
48	Protein engineering of glutathione reductase: over-expression of the gene from <i>Escherichia coli</i> . <i>Biochemical Society Transactions</i> , 1986, 14, 1229-1230.	1.6	0
49	Site-Directed Mutagenesis and the Mechanism of Flavoprotein Disulphide Oxidoreductases. , 1989, , 333-346.		0