Christopher M Topham

List of Publications by Year
in descending order

59 papers	2,429 citations	346980 22 h-index	232693 48 g-index
59 all docs	59 docs citations	59 times ranked	2513 citing authors

#	Article	IF	Citations
1	Peptide nucleic acid Hoogsteen strand linker design for major groove recognition of DNA thymine bases. Journal of Computer-Aided Molecular Design, 2021, 35, 355-369.	1.3	4
2	An engineered PET depolymerase to break down and recycle plastic bottles. Nature, 2020, 580, 216-219.	13.7	913
3	Construction of a synthetic pathway for the production of 1,3-propanediol from glucose. Scientific Reports, 2019, 9, 11576.	1.6	29
4	Rational engineering of a malate dehydrogenase for microbial production of 2,4-dihydroxybutyric acid via homoserine pathway. Biochemical Journal, 2018, 475, 3887-3901.	1.7	12
5	A generic HTS assay for kinase screening: Validation for the isolation of an engineered malate kinase. PLoS ONE, 2018, 13, e0193036.	1.1	3
6	Construction of a synthetic metabolic pathway for biosynthesis of the non-natural methionine precursor 2,4-dihydroxybutyric acid. Nature Communications, 2017, 8, 15828.	5.8	50
7	An Atomistic Statistically Effective Energy Function for Computational Protein Design. Journal of Chemical Theory and Computation, 2016, 12, 4146-4168.	2.3	11
8	Tri-peptide reference structures for the calculation of relative solvent accessible surface area in protein amino acid residues. Computational Biology and Chemistry, 2015, 54, 33-43.	1.1	7
9	Adaptive Smith-Waterman residue match seeding for protein structural alignment. Proteins: Structure, Function and Bioinformatics, 2013, 81, 1823-1839.	1.5	2
10	Role of Glycoside Phosphorylases in Mannose Foraging by Human Gut Bacteria. Journal of Biological Chemistry, 2013, 288, 32370-32383.	1.6	50
11	Probing impact of active site residue mutations on stability and activity of Neisseria polysaccharea amylosucrase. Protein Science, 2013, 22, 1754-1765.	3.1	23
12	Orientation Preferences of Backbone Secondary Amide Functional Groups in Peptide Nucleic Acid Complexes: Quantum Chemical Calculations Reveal an Intrinsic Preference of Cationic D-Amino Acid-Based Chiral PNA Analogues for the P-form. Biophysical Journal, 2007, 92, 769-786.	0.2	18
13	Kinetic and Titration Methods for Determination of Active Site Contents of Enzyme and Catalytic Antibody Preparations. Methods, 2001, 24, 153-167.	1.9	16
14	A general kinetic approach to investigation of active-site availability in macromolecular catalysts. Biochemical Journal, 2000, 346, 117.	1.7	6
15	A general kinetic approach to investigation of active-site availability in macromolecular catalysts. Biochemical Journal, 2000, 346, 117-125.	1.7	15
16	The Kinetic Basis of a General Method for the Investigation of Active Site Content of Enzymes and Catalytic Antibodies: First-Order Behaviour under Single-turnover and Cycling Conditions. Journal of Theoretical Biology, 2000, 204, 239-256.	0.8	8
17	Direct Identification of a Peptide Binding Region in the Opioid Receptor-like 1 Receptor by Photoaffinity Labeling with [Bpa10,Tyr14]Nociceptin. Journal of Biological Chemistry, 2000, 275, 29268-29274.	1.6	24
18	Functional Inactivation of the Nociceptin Receptor by Alanine Substitution of Glutamine 286 at the C Terminus of Transmembrane Segment VI: Evidence from a Site-Directed Mutagenesis Study of the ORL1 Receptor Transmembrane-Binding Domain. Molecular Pharmacology, 2000, 57, 495-502.	1.0	52

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19	On the spatial disposition of the fifth transmembrane helix and the structural integrity of the transmembrane binding site in the opioid and ORL1 G protein-coupled receptor family. Protein Engineering, Design and Selection, 2000, 13, 477-490.	1.0	3
20	The nociceptin (ORL1) receptor: molecular cloning and functional architecture. Peptides, 2000, 21, 893-900.	1.2	55
21	A general kinetic approach to investigation of active-site availability in macromolecular catalysts. Biochemical Journal, 2000, 346 Pt 1, 117-25.	1.7	4
22	The influence of helix morphology on co-operative polyamide backbone conformational flexibility in peptide nucleic acid complexes 1 1Edited by I. Tinoco. Journal of Molecular Biology, 1999, 292, 1017-1038.	2.0	9
23	Molecular modelling of the ORL1 receptor and its complex with nociceptin. Protein Engineering, Design and Selection, 1998, 11, 1163-1179.	1.0	75
24	ACTINIDIN AND CHYMOPAPAIN B PROVIDE VARIATION IN THE COMMON ELECTROSTATIC ENVIRONMENT OF GLU50 IN PAPAIN AND CARICAIN. Biochemical Society Transactions, 1997, 25, 89S-89S.	1.6	1
25	Prediction of the stability of protein mutants based on structural environment-dependent amino acid substitution and propensity tables. Protein Engineering, Design and Selection, 1997, 10, 7-21.	1.0	191
26	Characterization of the Electrostatic Perturbation of a Catalytic Site (Cys)-Sâ€"/(His)-Im+H Ion-pair in One Type of Serine Proteinase Architecture by Kinetic and Computational Studies on Chemically Mutated Subtilisin Variants. Journal of Molecular Biology, 1996, 257, 1088-1111.	2.0	32
27	Force field development and conformational search strategy in the simulation of biomolecular recognition processes. Biochemical Society Transactions, 1996, 24, 268-274.	1.6	2
28	Comparative modelling of major house dust mite allergen Der p I: structure validation using an extended environmental amino acid propensity table. Protein Engineering, Design and Selection, 1994, 7, 869-894.	1.0	82
29	Structure of chymopapain M the late-eluted chymopapain deduced by comparative modelling techniques and active-centre characteristics determined by pH-dependent kinetics of catalysis and reactions with time-dependent inhibitors: the Cys-25/His-159 ion-pair is insufficient for catalytic competence in both chymopapain M and papain. Biochemical Journal, 1994, 300, 805-820.	1.7	24
30	Fragment Ranking in Modelling of Protein Structure. Journal of Molecular Biology, 1993, 229, 194-220.	2.0	119
31	Ionization characteristics of the Cys-25/His-159 interactive system and of the modulatory group of papain: resolution of ambiguity by electronic perturbation of the quasi-2-mercaptopyridine leaving group in a new pyrimidyl disulphide reactivity probe. Biochemical Journal, 1993, 290, 289-296.	1.7	47
32	Some classical errors in the kinetic analysis of enzyme reactions. Biochemical Journal, 1993, 295, 898-899.	1.7	6
33	In defence of the general validity of the Cha method of deriving rate equations. The importance of explicit recognition of the thermodynamic box in enzyme kinetics. Biochemical Journal, 1992, 282, 261-265.	1.7	21
34	Making sense of the kinetics of reactions of unstable modifiers with enzymes. Biochemical Journal, 1992, 287, 334-335.	1.7	2
35	A polyclonal antibody preparation with Michaelian catalytic properties. Biochemical Journal, 1991, 279, 871-881.	1.7	48
36	Structure-function relationships in the cysteine proteinases actinidin, papain and papaya proteinase Î©. Three-dimensional structure of papaya proteinase Î© deduced by knowledge-based modelling and active-centre characteristics determined by two-hydronic-state reactivity probe kinetics and kinetics of catalysis. Biochemical Journal, 1991, 280, 79-92.	1.7	56

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37	Kinetic parameters of the acyl-enzyme mechanism and conditions for quasi-equilibrium and for optimal catalytic characteristics. Biochemical Journal, 1990, 270, 561-563.	1.7	16
38	A re-appraisal of the structural basis of stereochemical recognition in papain. Insensitivity of binding-site-catalytic-site signalling to P2-chirality in a time-dependent inhibition. Biochemical Journal, 1990, 266, 645-651.	1.7	15
39	Dependence of the P2-S2 stereochemical selectivity of papain on the nature of the catalytic-site chemistry. Quantification of selectivity in the catalysed hydrolysis of the enantiomeric N-acetylphenylalanylglycine 4-nitroanilides. Biochemical Journal, 1990, 266, 653-660.	1.7	21
40	Investigation of mechanistic consequences of natural structural variation within the cysteine proteinases by knowledge-based modelling and kinetic methods. Biochemical Society Transactions, 1990, 18, 579-580.	1.6	4
41	A general kinetic equation for multihydronic state reactions and rapid procedures for parameter evaluation. Biochemical Society Transactions, 1990, 18, 598-600.	1.6	25
42	Polyclonal-antibody-catalysed hydrolysis of an aryl nitrophenyl carbonate. Biochemical Society Transactions, 1990, 18, 600-601.	1.6	18
43	Three-dimensional structure of a B-type chymopapain. Biochemical Society Transactions, 1990, 18, 933-934.	1.6	6
44	Three-dimensional structure and thiol reactivity characteristics of chymopapain M (papaya proteinase) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.6	4
45	A generalized theoretical treatment of the kinetics of an enzyme-catalysed reaction in the presence of an unstable irreversible modifier. Journal of Theoretical Biology, 1990, 145, 547-572.	0.8	36
46	An assessment of COMPOSER: a rule-based approach to modelling protein structure. Biochemical Society Symposia, 1990, 57, 1-9.	2.7	10
47	The interplay of electrostatic and binding interactions determining active centre chemistry and catalytic activity in actinidin and papain. Biochemical Journal, 1989, 257, 309-310.	1.7	18
48	Identification of signalling and non-signalling binding contributions to enzyme reactivity. Alternative combinations of binding interactions provide for change in transition-state geometry in reactions of papain. Biochemical Journal, 1989, 258, 755-764.	1.7	34
49	The interplay of electrostatic fields and binding interactions determining catalytic-site reactivity in actinidin. A possible origin of differences in the behaviour of actinidin and papain. Biochemical Journal, 1989, 259, 443-452.	1.7	34
50	Ill-conditioning associated with the â€œend-pointâ€•method for the determination of kinetic parameters describing irreversible enzyme inactivation by an unstable inhibitor. Journal of Theoretical Biology, 1988, 135, 169-173.	0.8	4
51	Half-time analysis of the kinetics of irreversible enzyme inhibition by an unstable site-specific reagent. BBA - Proteins and Proteomics, 1988, 955, 65-76.	2.1	7
52	Supracrystallographic resolution of interactions contributing to enzyme catalysis by use of natural structural variants and reactivity-probe kinetics. Biochemical Journal, 1988, 256, 543-558.	1.7	44
53	Alternative methods for the determination of rate constants describing enzyme inactivation by an unstable inhibitor. Biochemical Journal, 1987, 246, 804-806.	1.7	10
54	The chemical mechanism of sheep liver 6-phosphogluconate dehydrogenase. A Schiff-base intermediate is not involved. Biochemical Journal, 1986, 234, 671-677.	1.7	13

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55	Computer simulations of the kinetics of irreversible enzyme inhibition by an unstable inhibitor. Biochemical Journal, 1986, 240, 817-820.	1.7	14
56	Chemical modification of sheep-liver 6-phosphogluconate dehydrogenase by diethylpyrocarbonate. Evidence for an essential histidine residue. FEBS Journal, 1986, 155, 87-94.	0.2	36
57	Kinetic studies of 6-phosphogluconate dehydrogenase from sheep liver. FEBS Journal, 1986, 156, 555-567.	0.2	19
58	Chemical modification of enzymes: reaction with an unstable inhibitor. Biochemical Journal, 1985, 227, 1025-1027.	1.7	17
59	Extracellular Cellulase Production by Sporocytophaga myxococcoides NCIB 8639. Microbiology (United Kingdom), 1980, 117, 235-241.	0.7	4