Christopher R Pudney

List of Publications by Year
in descending order

45 papers	1,439 citations	411340 20 h-index	388640 36 g-index
47 all docs	47 docs citations	47 times ranked	1646 citing authors

#	Article	IF	Citations
1	Reliable In Silico Ranking of Engineered Therapeutic TCR Binding Affinities with MMPB/GBSA. Journal of Chemical Information and Modeling, 2022, 62, 577-590.	2.5	8
2	Conformation control of the histidine kinase BceS of Bacillus subtilis by its cognate ABCâ€transporter facilitates needâ€based activation of antibiotic resistance. Molecular Microbiology, 2021, 115, 157-174.	1.2	20
3	Flavin mimetics: Synthesis and photophysical properties. Tetrahedron, 2021, 82, 131925.	1.0	3
4	Sensing Enzyme Activation Heat Capacity at the Single-Molecule Level Using Gold-Nanorod-Based Optical Whispering Gallery Modes. ACS Applied Nano Materials, 2021, 4, 4576-4583.	2.4	20
5	Rigidifying a De Novo Enzyme Increases Activity and Induces a Negative Activation Heat Capacity. ACS Catalysis, 2021, 11, 11532-11541.	5.5	15
6	Chemical Mapping Exposes the Importance of Active Site Interactions in Governing the Temperature Dependence of Enzyme Turnover. ACS Catalysis, 2021, 11, 14854-14863.	5.5	6
7	Structure and in silico simulations of a cold-active esterase reveals its prime cold-adaptation mechanism. Open Biology, 2021, 11, 210182.	1.5	10
8	Molecular Rules Underpinning Enhanced Affinity Binding of Human T Cell Receptors Engineered for Immunotherapy. Molecular Therapy - Oncolytics, 2020, 18, 443-456.	2.0	9
9	Switching protein metalloporphyrin binding specificity by design from iron to fluorogenic zinc. Chemical Communications, 2020, 56, 4308-4311.	2.2	4
10	Peptide cargo tunes a network of correlated motions in human leucocyte antigens. FEBS Journal, 2020, 287, 3777-3793.	2.2	6
11	Enzyme evolution and the temperature dependence of enzyme catalysis. Current Opinion in Structural Biology, 2020, 65, 96-101.	2.6	54
12	Monoclonal antibody stability can be usefully monitored using the excitation-energy-dependent fluorescence edge-shift. Biochemical Journal, 2020, 477, 3599-3612.	1.7	13
13	Synthetic Cannabinoid Receptor Agonists Detection Using Fluorescence Spectral Fingerprinting. Analytical Chemistry, 2019, 91, 12971-12979.	3.2	13
14	Analysis of synthetic cannabinoid agonists and their degradation products after combustion in a smoking simulator. Analytical Methods, 2019, 11, 3101-3107.	1.3	10
15	Exposing the Interplay Between Enzyme Turnover, Protein Dynamics, and the Membrane Environment in Monoamine Oxidase B. Biochemistry, 2019, 58, 2362-2372.	1.2	12
16	Excitation-Energy-Dependent Molecular Beacon Detects Early Stage Neurotoxic AÎ² Aggregates in the Presence of Cortical Neurons. ACS Chemical Neuroscience, 2019, 10, 1240-1250.	1.7	8
17	Uncovering the Relationship between the Change in Heat Capacity for Enzyme Catalysis and Vibrational Frequency through Isotope Effect Studies. ACS Catalysis, 2018, 8, 5340-5349.	5.5	13
18	Steady-State Kinetics of Î±-Synuclein Ferrireductase Activity Identifies the Catalytically Competent Species. Biochemistry, 2017, 56, 2497-2505.	1.2	21

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19	A complete thermodynamic analysis of enzyme turnover links the free energy landscape to enzyme catalysis. FEBS Journal, 2017, 284, 2829-2842.	2.2	39
20	Modelling flavoenzymatic charge transfer events: development of catalytic indole deuteration strategies. Organic and Biomolecular Chemistry, 2016, 14, 3787-3792.	1.5	6
21	The red edge excitation shift phenomenon can be used to unmask protein structural ensembles: implications for NEMOâ€“ubiquitin interactions. FEBS Journal, 2016, 283, 2272-2284.	2.2	44
22	On the Temperature Dependence of Enzyme-Catalyzed Rates. Biochemistry, 2016, 55, 1681-1688.	1.2	233
23	Change in heat capacity accurately predicts vibrational coupling in enzyme catalyzed reactions. FEBS Letters, 2015, 589, 2200-2206.	1.3	19
24	Polyubiquitin Drives the Molecular Interactions of the NF-ÎºB Essential Modulator (NEMO) by Allosteric Regulation. Journal of Biological Chemistry, 2015, 290, 14130-14139.	1.6	23
25	Practical Aspects on the Use of Kinetic Isotope Effects as Probes of Flavoprotein Enzyme Mechanisms. Methods in Molecular Biology, 2014, 1146, 161-175.	0.4	6
26	Fast Protein Motions Are Coupled to Enzyme H-Transfer Reactions. Journal of the American Chemical Society, 2013, 135, 2512-2517.	6.6	83
27	Excited State Dynamics Can Be Used to Probe Donor-Acceptor Distances for H-Tunneling Reactions Catalyzed by Flavoproteins. Biophysical Journal, 2013, 105, 2549-2558.	0.2	17
28	Enzymatic Single-Molecule Kinetic Isotope Effects. Journal of the American Chemical Society, 2013, 135, 3855-3864.	6.6	21
29	Gating mechanisms for biological electron transfer: Integrating structure with biophysics reveals the nature of redox control in cytochrome P450 reductase and copperâ€dependent nitrite reductase. FEBS Letters, 2012, 586, 578-584.	1.3	31
30	Kinetic and spectroscopic probes of motions and catalysis in the cytochrome P450 reductase family of enzymes. FEBS Journal, 2012, 279, 1534-1544.	2.2	18
31	Coupled Motions Direct Electrons along Human Microsomal P450 Chains. PLoS Biology, 2011, 9, e1001222.	2.6	48
32	Biocatalysis with Thermostable Enzymes: Structure and Properties of a Thermophilic â€˜eneâ€™â€Reductase related to Old Yellow Enzyme. ChemBioChem, 2010, 11, 197-207.	1.3	110
33	Probing active site geometry using high pressure and secondary isotope effects in an enzymeâ€catalysed â€˜deepâ€™ Hâ€tunnelling reaction. Journal of Physical Organic Chemistry, 2010, 23, 696-701.	0.9	16
34	Direct Analysis of Donorâ‹¯Acceptor Distance and Relationship to Isotope Effects and the Force Constant for Barrier Compression in Enzymatic H-Tunneling Reactions. Journal of the American Chemical Society, 2010, 132, 11329-11335.	6.6	74
35	Parallel Pathways and Freeâ€Energy Landscapes for Enzymatic Hydride Transfer Probed by Hydrostatic Pressure. ChemBioChem, 2009, 10, 1379-1384.	1.3	22
36	Barrier Compression Enhances an Enzymatic Hydrogenâ€Transfer Reaction. Angewandte Chemie - International Edition, 2009, 48, 1452-1454.	7.2	52

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37	Structural and mechanistic aspects of flavoproteins: probes of hydrogen tunnelling. FEBS Journal, 2009, 276, 3930-3941.	2.2	27
38	Bipartite recognition and conformational sampling mechanisms for hydride transfer from nicotinamide coenzyme to FMN in pentaerythritol tetranitrate reductase. FEBS Journal, 2009, 276, 4780-4789.	2.2	24
39	Evidence To Support the Hypothesis That Promoting Vibrations Enhance the Rate of an Enzyme Catalyzed H-Tunneling Reaction. Journal of the American Chemical Society, 2009, 131, 17072-17073.	6.6	79
40	Solvent as a Probe of Active Site Motion and Chemistry during the Hydrogen Tunnelling Reaction in Morphinone Reductase. ChemPhysChem, 2008, 9, 1875-1881.	1.0	16
41	Are Environmentally Coupled Enzymatic Hydrogen Tunneling Reactions Influenced by Changes in Solution Viscosity?. Angewandte Chemie - International Edition, 2008, 47, 537-540.	7.2	34
42	Correction of Pre-Steady-State KIEs for Isotopic Impurities and the Consequences of Kinetic Isotope Fractionation. Journal of Physical Chemistry A, 2008, 112, 13109-13115.	1.1	9
43	Atomistic insight into the origin of the temperature-dependence of kinetic isotope effects and H-tunnelling in enzyme systems is revealed through combined experimental studies and biomolecular simulation. Biochemical Society Transactions, 2008, 36, 16-21.	1.6	21
44	Mutagenesis of Morphinone Reductase Induces Multiple Reactive Configurations and Identifies Potential Ambiguity in Kinetic Analysis of Enzyme Tunneling Mechanisms. Journal of the American Chemical Society, 2007, 129, 13949-13956.	6.6	55
45	Î±-Secondary Isotope Effects as Probes of â€œTunneling-Readyâ€•Configurations in Enzymatic H-Tunneling:Â Insight from Environmentally Coupled Tunneling Models. Journal of the American Chemical Society, 2006, 128, 14053-14058.	6.6	66