Peter Kast

List of Publications by Year
in descending order

29 papers	2,032 citations	304743 22 h-index	477307 29 g-index
30 all docs	30 docs citations	30 times ranked	1855 citing authors

#	Article	IF	Citations
1	An evolution-based model for designing chorismate mutase enzymes. Science, 2020, 369, 440-445.	12.6	195
2	Evolving the naturally compromised chorismate mutase from Mycobacterium tuberculosis to top performance. Journal of Biological Chemistry, 2020, 295, 17514-17534.	3.4	10
3	Inter-Enzyme Allosteric Regulation of Chorismate Mutase in <i>Corynebacterium glutamicum</i>: Structural Basis of Feedback Activation by Trp. Biochemistry, 2018, 57, 557-573.	2.5	23
4	Remote Control by Inter-Enzyme Allostery: A Novel Paradigm for Regulation of the Shikimate Pathway. Journal of Molecular Biology, 2016, 428, 1237-1255.	4.2	26
5	Functional Mapping of Protein-Protein Interactions in an Enzyme Complex by Directed Evolution. PLoS ONE, 2014, 9, e116234.	2.5	16
6	Electrostatic transition state stabilization rather than reactant destabilization provides the chemical basis for efficient chorismate mutase catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17516-17521.	7.1	31
7	Affinity maturation of a computationally designed binding protein affords a functional but disordered polypeptide. Journal of Structural Biology, 2014, 185, 168-177.	2.8	10
8	An N-Terminal Protein Degradation Tag Enables Robust Selection of Highly Active Enzymes. Biochemistry, 2011, 50, 8594-8602.	2.5	20
9	Structure and function of a complex between chorismate mutase and DAHP synthase: efficiency boost for the junior partner. EMBO Journal, 2009, 28, 2128-2142.	7.8	52
10	Evolutionary Cycles for Pericyclic Reactions â€“ Or Why We Keep Mutating Mutases. Chimia, 2009, 63, 313.	0.6	11
11	Protein Design by Directed Evolution. Annual Review of Biophysics, 2008, 37, 153-173.	10.0	344
12	Exhaustive Mutagenesis of Six Secondary Active-Site Residues inEscherichia coliChorismate Mutase Shows the Importance of Hydrophobic Side Chains and a Helix N-Capping Position for Stability and Catalysisâ€. Biochemistry, 2007, 46, 6883-6891.	2.5	30
13	1.6Å… Crystal Structure of the Secreted Chorismate Mutase from Mycobacterium tuberculosis: Novel Fold Topology Revealed. Journal of Molecular Biology, 2006, 357, 1483-1499.	4.2	55
14	Characterization of the secreted chorismate mutase from the pathogen Mycobacterium tuberculosis. FEBS Journal, 2005, 272, 375-389.	4.7	68
15	Mechanistic Insights into the Isochorismate Pyruvate Lyase Activity of the Catalytically Promiscuous PchB from Combinatorial Mutagenesis and Selection. Journal of Biological Chemistry, 2005, 280, 32827-32834.	3.4	54
16	Salicylate Biosynthesis in Pseudomonas aeruginosa. Journal of Biological Chemistry, 2002, 277, 21768-21775.	3.4	115
17	Investigating and Engineering Enzymes by Genetic Selection. Angewandte Chemie - International Edition, 2001, 40, 3310-3335.	13.8	182
18	Probing the Role of the C-Terminus ofBacillus subtilisChorismate Mutase by a Novel Random Protein-Termination Strategyâ€. Biochemistry, 2000, 39, 14087-14094.	2.5	37

#	Article	IF	Citations
19	Bacillus subtilis chorismate mutase is partially diffusion-controlled. FEBS Journal, 1999, 261, 25-32.	0.2	54
20	Heavy Atom Isotope Effects Reveal a Highly Polarized Transition State for Chorismate Mutase. Journal of the American Chemical Society, 1999, 121, 1756-1757.	13.7	88
21	Exploring sequence constraints on an interhelical turn using in vivo selection for catalytic activity. Protein Science, 1998, 7, 325-335.	7.6	20
22	Probing enzyme quaternary structure by combinatorial mutagenesis and selection. Protein Science, 1998, 7, 1757-1767.	7.6	31
23	A Small, Thermostable, and Monofunctional Chorismate Mutase from the Archeon Methanococcus jannaschii. Biochemistry, 1998, 37, 10062-10073.	2.5	88
24	Redesigning Enzyme Topology by Directed Evolution. Science, 1998, 279, 1958-1961.	12.6	139
25	UGA Read-Through Artifactsâ€"When Popular Gene Expression Systems Need a pATCH. BioTechniques, 1998, 24, 789-794.	1.8	50
26	Efficientin VivoSynthesis and Rapid Purification of Chorismic Acid Using an EngineeredEscherichia coliStrain. Bioorganic Chemistry, 1997, 25, 297-305.	4.1	45
27	Genetic selection strategies for generating and characterizing catalysts. Pure and Applied Chemistry, 1996, 68, 2017-2024.	1.9	14
28	pKSS â€" A second-generation general purpose cloning vector for efficient positive selection of recombinant clones. Gene, 1994, 138, 109-114.	2.2	91
29	Amino acid substrate specificity of Escherichia coli phenylalanyl-tRNA synthetase altered by distinct mutations. Journal of Molecular Biology, 1991, 222, 99-124.	4.2	132