Christopher M Cheatum

List of Publications by Year
in descending order

Version: 2024-02-01

37 papers	983 citations	430874 18 h-index	434195 31 g-index
37 all docs	37 docs citations	37 times ranked	962 citing authors

#	Article	IF	Citations
1	Evolution of the Chemical Step in Enzyme Catalysis. ACS Catalysis, 2021, 11, 6726-6732.	11.2	14
2	Least-Squares Fitting of Multidimensional Spectra to Kubo Line-Shape Models. Journal of Physical Chemistry B, 2021, 125, 12876-12891.	2.6	7
3	Evolution of Optimized Hydride Transfer Reaction and Overall Enzyme Turnover in Human Dihydrofolate Reductase. Biochemistry, 2021, 60, 3822-3828.	2.5	3
4	Edge-pixel referencing suppresses correlated baseline noise in heterodyned spectroscopies. Journal of Chemical Physics, 2020, 152, 094201.	3.0	18
5	Low-Frequency Protein Motions Coupled to Catalytic Sites. Annual Review of Physical Chemistry, 2020, 71, 267-288.	10.8	20
6	Optimized reconstructions of compressively sampled two-dimensional infrared spectra. Journal of Chemical Physics, 2019, 150, 234202.	3.0	4
7	Isotopic Labeling of Formate Dehydrogenase Perturbs the Protein Dynamics. Journal of Physical Chemistry B, 2019, 123, 10403-10409.	2.6	14
8	Oscillatory Active-Site Motions Correlate with Kinetic Isotope Effects in Formate Dehydrogenase. ACS Catalysis, 2019, 9, 11199-11206.	11.2	29
9	Evolution Conserves the Network of Coupled Residues in Dihydrofolate Reductase. Biochemistry, 2019, 58, 3861-3868.	2.5	3
10	Evolutionary Effects on Bound Substrate pK_a in Dihydrofolate Reductase. Journal of the American Chemical Society, 2018, 140, 16650-16660.	13.7	17
11	Two-dimensional infrared study of the C D and C O stretching vibrations in strongly hydrogen-bonded complexes. Chemical Physics, 2018, 512, 3-12.	1.9	3
12	Effect of Asp122 Mutation on the Hydride Transfer in E. coli DHFR Demonstrates the Goldilocks of Enzyme Flexibility. Journal of Physical Chemistry B, 2018, 122, 8006-8017.	2.6	11
13	Picosecond Activeâ€Site Dynamics Correlate with the Temperature Dependence of KIEs in Enzymeâ€Catalyzed Hydride Transfer. FASEB Journal, 2018, 32, .	0.5	0
14	Compressively Sampled Two-Dimensional Infrared Spectroscopy That Preserves Line Shape Information. Journal of Physical Chemistry A, 2017, 121, 3088-3093.	2.5	6
15	Protein Mass Effects on Formate Dehydrogenase. Journal of the American Chemical Society, 2017, 139, 17405-17413.	13.7	17
16	Accelerating two-dimensional infrared spectroscopy while preserving lineshapes using GIRAF. Optics Letters, 2017, 42, 4573.	3.3	5
17	Effects of Isotopic Substitution in Enzyme and Coâ€factor on Enzyme Catalyzed Hydride Transfer. FASEB Journal, 2017, 31, 764.1.	0.5	0
18	Structural and Kinetic Studies of Formate Dehydrogenase from Candida boidinii. Biochemistry, 2016, 55, 2760-2771.	2.5	76

#	Article	IF	Citations
19	Oscillatory Enzyme Dynamics Revealed by Two-Dimensional Infrared Spectroscopy. Journal of Physical Chemistry Letters, 2016, 7, 2507-2511.	4.6	33
20	Improved Parametrization for Extended Derjaguin, Landau, Verwey, and Overbeek Predictions of Functionalized Gold Nanosphere Stability. Journal of Physical Chemistry C, 2015, 119, 10064-10075.	3.1	59
21	Line shape analysis of two-dimensional infrared spectra. Journal of Chemical Physics, 2015, 142, 212427.	3.0	76
22	Characterization of Catalytically Relevant Fast Dynamics at the Active Site of Formate Dehydrogenase. FASEB Journal, 2015, 29, 891.1.	0.5	0
23	Relationship of Femtosecondâ€“Picosecond Dynamics to Enzyme-Catalyzed H-Transfer. Topics in Current Chemistry, 2013, 337, 1-39.	4.0	20
24	2D IR Spectroscopy using Four-Wave Mixing, Pulse Shaping, and IR Upconversion: A Quantitative Comparison. Journal of Physical Chemistry A, 2013, 117, 6073-6083.	2.5	56
25	3-Picolyl Azide Adenine Dinucleotide as a Probe of Femtosecond to Picosecond Enzyme Dynamics. Journal of Physical Chemistry B, 2012, 116, 542-548.	2.6	36
26	Hydrogen Donorâ€“Acceptor Fluctuations from Kinetic Isotope Effects: A Phenomenological Model. Biochemistry, 2012, 51, 6860-6870.	2.5	53
27	2D IR Spectroscopy of the Câ€“D stretching vibration of the deuterated formic acid dimer. Physical Chemistry Chemical Physics, 2011, 13, 6098.	2.8	19
28	Two-dimensional infrared spectroscopy of azido-nicotinamide adenine dinucleotide in water. Journal of Chemical Physics, 2011, 135, 055106.	3.0	27
29	Characterization of azido-NAD+ to assess its potential as a two-dimensional infrared probe of enzyme dynamics. Analytical Biochemistry, 2010, 407, 241-246.	2.4	19
30	Characterizing the dynamics of functionally relevant complexes of formate dehydrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17974-17979.	7.1	72
31	Two-dimensional infrared study of 3-azidopyridine as a potential spectroscopic reporter of protonation state. Journal of Chemical Physics, 2010, 133, 134506.	3.0	50
32	Exploring the Molecular Origins of Protein Dynamics in the Active Site of Human Carbonic Anhydrase II. Journal of Physical Chemistry B, 2009, 113, 11505-11510.	2.6	30
33	Efforts toward Developing Probes of Protein Dynamics: Vibrational Dephasing and Relaxation of Carbonâ€“Deuterium Stretching Modes in Deuterated Leucine. Journal of Physical Chemistry B, 2009, 113, 7991-7994.	2.6	26
34	Examination of Enzymatic H-Tunneling through Kinetics and Dynamics. Journal of the American Chemical Society, 2009, 131, 10151-10155.	13.7	42
35	Fast Enzyme Dynamics at the Active Site of Formate Dehydrogenase. Journal of the American Chemical Society, 2008, 130, 22-23.	13.7	80
36	Relaxation and anharmonic couplings of the Oâ€“H stretching vibration of asymmetric strongly hydrogen-bonded complexes. Journal of Chemical Physics, 2007, 127, 044501.	3.0	23

#	Article	IF	Citations
37	Vibrational relaxation of Câ€“D stretching vibrations in CDCl3, CDBr3, and CDI3. Journal of Chemical Physics, 2006, 125, 174503.	3.0	15