

Paul R Carey

List of Publications by Year in descending order

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68
papers

1,787
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218677

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docs citations

68
times ranked

1880
citing authors

#	ARTICLE	IF	CITATIONS
1	Measuring Drug-Induced Changes in Metabolite Populations of Live Bacteria: Real Time Analysis by Raman Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2018, 122, 6377-6385.	2.6	7
2	Defining Molecular Details of the Chemistry of Biofilm Formation by Raman Microspectroscopy. <i>Biochemistry</i> , 2017, 56, 2247-2250.	2.5	9
3	Large β -helical movements observed in ternary crystals of RB69 DNA polymerase following nucleotide incorporation. <i>Journal of Raman Spectroscopy</i> , 2016, 47, 110-115.	2.5	2
4	Concerted Protein and Nucleic Acid Conformational Changes Observed Prior to Nucleotide Incorporation in a Bacterial RNA Polymerase: Raman Crystallographic Evidence. <i>Biochemistry</i> , 2015, 54, 5297-5305.	2.5	2
5	New techniques in antibiotic discovery and resistance: Raman spectroscopy. <i>Annals of the New York Academy of Sciences</i> , 2015, 1354, 67-81.	3.8	12
6	Detecting a Quasi-stable Imine Species on the Reaction Pathway of SHV-1 β -Lactamase and β -(Hydroxymethyl)penicillanic Acid Sulfone. <i>Biochemistry</i> , 2015, 54, 734-743.	2.5	7
7	Time-Resolved Raman and Polyacrylamide Gel Electrophoresis Observations of Nucleotide Incorporation and Misincorporation in RNA within a Bacterial RNA Polymerase Crystal. <i>Biochemistry</i> , 2015, 54, 652-665.	2.5	6
8	Measuring Propargyl-Linked Drug Populations Inside Bacterial Cells, and Their Interaction with a Dihydrofolate Reductase Target, by Raman Microscopy. <i>Biochemistry</i> , 2015, 54, 2719-2726.	2.5	15
9	"Mind the Gap" Raman Evidence for Rapid Inactivation of CTX-M-9 β -Lactamase Using Mechanism-Based Inhibitors that Bridge the Active Site. <i>Journal of the American Chemical Society</i> , 2015, 137, 12760-12763.	13.7	7
10	The Different Inhibition Mechanisms of OXA-1 and OXA-24 β -Lactamases Are Determined by the Stability of Active Site Carboxylated Lysine. <i>Journal of Biological Chemistry</i> , 2014, 289, 6152-6164.	3.4	22
11	Following Drug Uptake and Reactions inside <i>Escherichia coli</i> Cells by Raman Microspectroscopy. <i>Biochemistry</i> , 2014, 53, 4113-4121.	2.5	30
12	Following DNA Chain Extension and Protein Conformational Changes in Crystals of a Y-Family DNA Polymerase via Raman Crystallography. <i>Biochemistry</i> , 2013, 52, 4881-4890.	2.5	9
13	β -Lactamase Inhibition by 7-Alkylidenecephalosporin Sulfones: Allylic Transposition and Formation of an Unprecedented Stabilized Acyl-Enzyme. <i>Journal of the American Chemical Society</i> , 2013, 135, 18358-18369.	13.7	18
14	Raman Spectra of Interchanging β -Lactamase Inhibitor Intermediates on the Millisecond Time Scale. <i>Journal of the American Chemical Society</i> , 2013, 135, 2895-2898.	13.7	12
15	Carboxylation and Decarboxylation of Active Site Lys 84 Controls the Activity of OXA-24 β -Lactamase of <i>Acinetobacter baumannii</i> : Raman Crystallographic and Solution Evidence. <i>Journal of the American Chemical Society</i> , 2012, 134, 11206-11215.	13.7	21
16	A thioester substrate binds to the enzyme <i>Arthrobacter</i> thioesterase in two ionization states: evidence from Raman difference spectroscopy. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 65-71.	2.5	8
17	Kinetic crystallography by Raman microscopy. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2011, 1814, 742-749.	2.3	17
18	Direct Raman Measurement of an Elevated Base pK _a in the Active Site of a Small Ribozyme in a Pre-catalytic Conformation. , 2010, , .		0

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19	The Application of Raman Microscopy in Drug Design and Drug Screening. , 2010, , .		0
20	The Raman Revolution in Structural Biology. , 2010, , .		0
21	Probing Adenine Rings and Backbone Linkages Using Base Specific Isotope-Edited Raman Spectroscopy: Application to Group II Intron Ribozyme Domain V. <i>Biochemistry</i> , 2010, 49, 3427-3435.	2.5	17
22	Why the Extended-Spectrum β -Lactamases SHV-2 and SHV-5 Are "Hypersusceptible" to Mechanism-Based Inhibitors. <i>Biochemistry</i> , 2009, 48, 9912-9920.	2.5	19
23	Role of E166 in the Imine to Enamine Tautomerization of the Clinical β -Lactamase Inhibitor Sulbactam. <i>Biochemistry</i> , 2009, 48, 10196-10198.	2.5	8
24	Raman crystallography of RNA. <i>Methods</i> , 2009, 49, 101-111.	3.8	30
25	Different Intermediate Populations Formed by Tazobactam, Sulbactam, and Clavulanate Reacting with SHV-1 β -Lactamases: Raman Crystallographic Evidence. <i>Journal of the American Chemical Society</i> , 2009, 131, 2338-2347.	13.7	39
26	Detection of Innersphere Interactions between Magnesium Hydrate and the Phosphate Backbone of the HDV Ribozyme Using Raman Crystallography. <i>Journal of the American Chemical Society</i> , 2008, 130, 9670-9672.	13.7	46
27	Carbapenems and SHV-1 β -Lactamase Form Different Acyl-Enzyme Populations in Crystals and Solution. <i>Biochemistry</i> , 2008, 47, 11830-11837.	2.5	32
28	Sulbactam Forms Only Minimal Amounts of Irreversible Acrylate-Enzyme with SHV-1 β -Lactamase. <i>Biochemistry</i> , 2007, 46, 8980-8987.	2.5	43
29	Raman Crystallographic Studies of the Intermediates Formed by Ser130Gly SHV, a β -Lactamase that Confers Resistance to Clinical Inhibitors. <i>Biochemistry</i> , 2007, 46, 8689-8699.	2.5	20
30	RAMAN CRYSTALLOGRAPHY AND OTHER BIOCHEMICAL APPLICATIONS OF RAMAN MICROSCOPY. <i>Annual Review of Physical Chemistry</i> , 2006, 57, 527-554.	10.8	100
31	Spectroscopic Characterization of Distortion in Enzyme Complexes. <i>Chemical Reviews</i> , 2006, 106, 3043-3054.	47.7	34
32	Effect of the Inhibitor-Resistant M69V Substitution on the Structures and Populations of trans-Enamine β -Lactamase Intermediates. <i>Biochemistry</i> , 2006, 45, 11895-11904.	2.5	52
33	Raman evidence for product binding to the enzyme W137F 4-chlorobenzoyl-CoA dehalogenase in two conformational states. <i>Journal of Raman Spectroscopy</i> , 2005, 36, 320-325.	2.5	2
34	Transcarboxylase: One of Nature's Early Nanomachines. <i>IUBMB Life</i> , 2004, 56, 575-583.	3.4	9
35	Proteins can convert to β -sheet in single crystals. <i>Protein Science</i> , 2004, 13, 1288-1294.	7.6	57
36	Expression and crystallization of several forms of the <i>Propionibacterium shermanii</i> transcarboxylase 5S subunit. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2004, 60, 521-523.	2.5	3

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37	Raman spectrum of fully reduced flavin. <i>Journal of Raman Spectroscopy</i> , 2004, 35, 521-524.	2.5	43
38	Tazobactam Forms a Stoichiometric trans-Enamine Intermediate in the E166A Variant of SHV-1 Î²-Lactamase:â€‰1.63 Å... Crystal Structure,. <i>Biochemistry</i> , 2004, 43, 843-848.	2.5	67
39	Following Ligand Binding and Ligand Reactions in Proteins via Raman Crystallographyâ€™. <i>Biochemistry</i> , 2004, 43, 8885-8893.	2.5	48
40	Transcarboxylase 12S crystal structure: hexamer assembly and substrate binding to a multienzyme core. <i>EMBO Journal</i> , 2003, 22, 2334-2347.	7.8	39
41	Following the Reactions of Mechanism-Based Inhibitors with Î²-Lactamase by Raman Crystallography. <i>Biochemistry</i> , 2003, 42, 13386-13392.	2.5	71
42	The Strength of Dehalogenaseâ€™Substrate Hydrogen Bonding Correlates with the Rate of Meisenheimer Intermediate Formationâ€™. <i>Biochemistry</i> , 2003, 42, 9482-9490.	2.5	18
43	In Situ Iridium LIII-Edge X-ray Absorption and Surface Enhanced Raman Spectroscopy of Electrodeposited Iridium Oxide Films in Aqueous Electrolytes. <i>Journal of Physical Chemistry B</i> , 2002, 106, 3681-3686.	2.6	104
44	Kinetic, Raman, NMR, and Site-Directed Mutagenesis Studies of the Pseudomonas Sp. Strain CBS3 4-Hydroxybenzoyl-CoA Thioesterase Active Site. <i>Biochemistry</i> , 2002, 41, 11152-11160.	2.5	28
45	Probing Inhibitors Binding to Human Urokinase Crystals by Raman Microscopy:Â Implications for Compound Screeningâ€™. <i>Biochemistry</i> , 2001, 40, 9751-9757.	2.5	22
46	Selective enhancement of ligand and flavin Raman modes in charge-transfer complexes of sarcosine oxidase. <i>Journal of Raman Spectroscopy</i> , 2001, 32, 79-92.	2.5	8
47	Comparison of resonance Raman spectra of flavin-3,4-dihydroxybenzoate charge-transfer complexes in three flavoenzymes. <i>Journal of Raman Spectroscopy</i> , 2001, 32, 579-586.	2.5	8
48	Raman difference spectroscopic studies of dithiobenzoyl substrate and product analogs binding to the enzyme dehalogenase: ?-electron polarization is prevented by the C=O to C=S substitution. <i>Journal of Raman Spectroscopy</i> , 2000, 31, 365-371.	2.5	12
49	Raman Spectroscopy of Uracil DNA Glycosylaseâ€™DNA Complexes:Â Insights into DNA Damage Recognition and Catalysisâ€™. <i>Biochemistry</i> , 2000, 39, 13241-13250.	2.5	51
50	Raman Spectroscopy, the Sleeping Giant in Structural Biology, Awakes. <i>Journal of Biological Chemistry</i> , 1999, 274, 26625-26628.	3.4	92
51	Molecular structure of 5-methyl thiophene acryloyl ethyl thiolester: A vibrational spectroscopic and density functional theory study. , 1999, 5, 201-218.		3
52	Using Raman Spectroscopy To Monitor the Solvent-Exposed and â€™Buriedâ€™Forms of Flavin in p-Hydroxybenzoate Hydroxylase. <i>Biochemistry</i> , 1999, 38, 16727-16732.	2.5	52
53	Modulating Electron Density in the Bound Product, 4-Hydroxybenzoyl-CoA, by Mutations in 4-Chlorobenzoyl-CoA Dehalogenase Near the 4-Hydroxy Groupâ€™. <i>Biochemistry</i> , 1999, 38, 4198-4206.	2.5	26
54	Raman spectroscopy in enzymology: the first 25 years. <i>Journal of Raman Spectroscopy</i> , 1998, 29, 7-14.	2.5	30

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55	Resonance Raman labels and Raman labels. <i>Journal of Raman Spectroscopy</i> , 1998, 29, 861-868.	2.5	16
56	Scan rate dependence in protein calorimetry: The reversible transitions of <i>Bacillus circulans</i> xylanase and a disulfide-bridge mutant. <i>Protein Science</i> , 1998, 7, 1538-1544.	7.6	40
57	Structural characterization of the entire 1.3S subunit of transcarboxylase from <i>Propionibacterium shermanii</i> . <i>Protein Science</i> , 1998, 7, 2156-2163.	7.6	24
58	Resonance Raman labels and Raman labels. <i>Journal of Raman Spectroscopy</i> , 1998, 29, 861-868.	2.5	2
59	Active Site Properties of the 3C Proteinase from Hepatitis A Virus (a Hybrid Cysteine/Serine Protease) Probed by Raman Spectroscopy. <i>Biochemistry</i> , 1997, 36, 4943-4948.	2.5	13
60	Raman Study of the Polarizing Forces Promoting Catalysis in 4-Chlorobenzoate-CoA Dehalogenase. <i>Biochemistry</i> , 1997, 36, 10192-10199.	2.5	45
61	$\hat{\pm}$ -Helix Dipoles and Catalysis: Absorption and Raman Spectroscopic Studies of Acyl Cysteine Proteases. <i>Biochemistry</i> , 1996, 35, 12495-12502.	2.5	31
62	Deacylation and Reacylation for a Series of Acyl Cysteine Proteases, Including Acyl Groups Derived from Novel Chromophoric Substrates. <i>Biochemistry</i> , 1996, 35, 12487-12494.	2.5	9
63	Unlocking the Secrets of Enzyme Power Using Raman Spectroscopy. <i>Accounts of Chemical Research</i> , 1995, 28, 8-13.	15.6	51
64	Evidence for electrophilic catalysis in the 4-chlorobenzoyl-CoA dehalogenase reaction: UV, Raman, and ¹³ C-NMR spectral studies of dehalogenase complexes of benzoyl-CoA adducts. <i>Biochemistry</i> , 1995, 34, 13881-13888.	2.5	45
65	Chemistry of enzyme-substrate complexes revealed by resonance Raman spectroscopy. <i>Chemical Society Reviews</i> , 1990, 19, 293-316.	38.1	18
66	Molecular details of enzyme-substrate transients by resonance Raman spectroscopy. <i>Accounts of Chemical Research</i> , 1983, 16, 455-460.	15.6	21
67	Resonance Raman labels: a submolecular probe for interactions in biochemical and biological systems. <i>Accounts of Chemical Research</i> , 1978, 11, 122-128.	15.6	33
68	Advances in applying Raman spectroscopy to the study of enzyme mechanisms. <i>Journal of Raman Spectroscopy</i> , 0, , .	2.5	2