Carlos R Baiz

List of Publications by Year
in descending order

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66	1,872	236925	265206
papers	citations	25 h-index	42 g-index

69	69	69	1696
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Vibrational Spectroscopic Map, Vibrational Spectroscopy, and Intermolecular Interaction. Chemical Reviews, 2020, 120, 7152-7218.	47.7	205
2	Ultrabroadband detection of a mid-IR continuum by chirped-pulse upconversion. Optics Letters, 2011, 36, 187.	3.3	99
3	Two-Dimensional Infrared Spectroscopy of Metal Carbonyls. Accounts of Chemical Research, 2009, 42, 1395-1404.	15.6	98
4	Quantifying Hydrogenâ€Bond Populations in Dimethyl Sulfoxide/Water Mixtures. Angewandte Chemie - International Edition, 2017, 56, 11375-11379.	13.8	94
5	Coordination to lanthanide ions distorts binding site conformation in calmodulin. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3126-E3134.	7.1	90
6	Ultrafast 2D IR microscopy. Optics Express, 2014, 22, 18724.	3.4	69
7	Multilevel vibrational coherence transfer and wavepacket dynamics probed with multidimensional IR spectroscopy. Journal of Chemical Physics, 2008, 129, 084503.	3.0	67
8	Solvent-Dependent Spectral Diffusion in a Hydrogen Bonded â€œVibrational Aggregateâ€• Journal of Physical Chemistry A, 2010, 114, 10590-10604.	2.5	67
9	Coherent two-dimensional infrared spectroscopy: Quantitative analysis of protein secondary structure in solution. Analyst, The, 2012, 137, 1793.	3.5	65
10	An Empirical IR Frequency Map for Ester Câ•O Stretching Vibrations. Journal of Physical Chemistry A, 2016, 120, 3888-3896.	2.5	54
11	Ultrafast nonequilibrium Fourier-transform two-dimensional infrared spectroscopy. Optics Letters, 2008, 33, 2533.	3.3	50
12	Direct observation of ground-state lactamâ€“lactim tautomerization using temperature-jump transient 2D IR spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9243-9248.	7.1	50
13	A Molecular Interpretation of 2D IR Protein Folding Experiments with Markov State Models. Biophysical Journal, 2014, 106, 1359-1370.	0.5	48
14	Studying Proteinâ€“Protein Binding through T-Jump Induced Dissociation: Transient 2D IR Spectroscopy of Insulin Dimer. Journal of Physical Chemistry B, 2016, 120, 5134-5145.	2.6	42
15	Molecular Theory and Simulation of Coherence Transfer in Metal Carbonyls and Its Signature on Multidimensional Infrared Spectra. Journal of Physical Chemistry B, 2011, 115, 5322-5339.	2.6	38
16	Crowding Stabilizes DMSOâ€“Water Hydrogen-Bonding Interactions. Journal of Physical Chemistry B, 2018, 122, 5984-5990.	2.6	37
17	Ultrafast equilibrium and non-equilibrium chemical reaction dynamics probed with multidimensional infrared spectroscopy. International Reviews in Physical Chemistry, 2012, 31, 367-419.	2.3	34
18	Structurally Selective Geminate Rebinding Dynamics of Solvent-Caged Radicals Studied with Nonequilibrium Infrared Echo Spectroscopy. Journal of the American Chemical Society, 2009, 131, 13590-13591.	13.7	32

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19	Physiological Calcium Concentrations Slow Dynamics at the Lipid-Water Interface. Biophysical Journal, 2018, 115, 1541-1551.	0.5	30
20	Ultrafast Dynamics at Lipidâ€“Water Interfaces. Accounts of Chemical Research, 2020, 53, 1860-1868.	15.6	30
21	Orientational Dynamics of Transient Molecules Measured by Nonequilibrium Two-Dimensional Infrared Spectroscopy. Journal of Physical Chemistry A, 2009, 113, 8907-8916.	2.5	29
22	Amide I Two-Dimensional Infrared Spectroscopy: Methods for Visualizing the Vibrational Structure of Large Proteins. Journal of Physical Chemistry A, 2013, 117, 5955-5961.	2.5	29
23	Liquidâ€“Liquid Phase Separation Produces Fast H-Bond Dynamics in DMSOâ€“Water Mixtures. Journal of Physical Chemistry Letters, 2020, 11, 1903-1908.	4.6	28
24	Ultrafast Vibrational Stark-Effect Spectroscopy: Exploring Charge-Transfer Reactions by Directly Monitoring the Solvation Shell Response. Journal of the American Chemical Society, 2010, 132, 12784-12785.	13.7	27
25	Ultrafast Dynamics at the Lipidâ€“Water Interface: DMSO Modulates H-Bond Lifetimes. Langmuir, 2020, 36, 6502-6511.	3.5	27
26	Visualizing KcsA Conformational Changes upon Ion Binding by Infrared Spectroscopy and Atomistic Modeling. Journal of Physical Chemistry B, 2015, 119, 5824-5831.	2.6	25
27	Quantifying Hydrogenâ€Bond Populations in Dimethyl Sulfoxide/Water Mixtures. Angewandte Chemie, 2017, 129, 11533-11537.	2.0	25
28	Local-Mode Approach to Modeling Multidimensional Infrared Spectra of Metal Carbonyls. Journal of Physical Chemistry A, 2011, 115, 5354-5363.	2.5	24
29	Structural Disorder of Folded Proteins: Isotope-Edited 2D IR Spectroscopy and Markov State Modeling. Biophysical Journal, 2015, 108, 1747-1757.	0.5	23
30	Interfacial H-Bond Dynamics in Reverse Micelles: The Role of Surfactant Heterogeneity. Langmuir, 2019, 35, 11463-11470.	3.5	23
31	Interfacial Dynamics in Lipid Membranes: The Effects of Headgroup Structures. Journal of Physical Chemistry B, 2021, 125, 1343-1350.	2.6	23
32	Ultrafast Spectroscopy of Lipidâ€“Water Interfaces: Transmembrane Crowding Drives H-Bond Dynamics. Journal of Physical Chemistry Letters, 2020, 11, 4093-4098.	4.6	22
33	Two-Dimensional Infrared Spectroscopy of Dimanganese Decacarbonyl and Its Photoproducts: An Ab Initio Study. Journal of Physical Chemistry A, 2009, 113, 9617-9623.	2.5	21
34	Slow Oil, Slow Water: Long-Range Dynamic Coupling across a Liquidâ€“Liquid Interface. Journal of the American Chemical Society, 2020, 142, 8063-8067.	13.7	18
35	Molecular heterogeneity in aqueous cosolvent systems. Journal of Chemical Physics, 2020, 152, 190901.	3.0	17
36	Molecular Mechanism of Cell Membrane Protection by Sugars: A Study of Interfacial H-Bond Networks. Journal of Physical Chemistry Letters, 2021, 12, 9602-9607.	4.6	17

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37	Beyond 7-Azaindole: Conjugation Effects on Intermolecular Double Hydrogen-Atom Transfer Reactions. Journal of Physical Chemistry A, 2009, 113, 4862-4867.	2.5	16
38	Empirical S=O stretch vibrational frequency map. Journal of Chemical Physics, 2019, 151, 234107.	3.0	16
39	Short- and long-range crowding effects on waterâ€™s hydrogen bond networks. Cell Reports Physical Science, 2021, 2, 100419.	5.6	15
40	Pump Slice Amplitudes: A Simple and Robust Method for Connecting Two-Dimensional Infrared and Fourier Transform Infrared Spectra. Journal of Physical Chemistry A, 2021, 125, 6498-6504.	2.5	15
41	Site-Specific Peptide Probes Detect Buried Water in a Lipid Membrane. Biophysical Journal, 2019, 116, 1692-1700.	0.5	13
42	Theoretical Studies of Conjugation Effects on Excited State Intramolecular Hydrogen-Atom Transfer Reactions in Model Systems. Journal of Physical Chemistry A, 2007, 111, 10139-10143.	2.5	11
43	Vibrational Relaxation in EDTA Is Ion-Dependent. Journal of Physical Chemistry A, 2018, 122, 6585-6592.	2.5	11
44	Non-Additive Effects of Binding Site Mutations in Calmodulin. Biochemistry, 2019, 58, 2730-2739.	2.5	10
45	Calcium-Lipid Interactions Observed with Isotope-Edited Infrared Spectroscopy. Biophysical Journal, 2020, 118, 2694-2702.	0.5	9
46	Ions Slow Water Dynamics at Nonionic Surfactant Interfaces. Journal of Physical Chemistry B, 2020, 124, 11895-11900.	2.6	8
47	Lanthanide-dependent coordination interactions in lanmodulin: a 2D IR and molecular dynamics simulations study. Physical Chemistry Chemical Physics, 2021, 23, 21690-21700.	2.8	8
48	Generative Adversarial Neural Networks for Denoising Coherent Multidimensional Spectra. Journal of Physical Chemistry A, 2022, 126, 3816-3825.	2.5	8
49	Spatial Control of the Self-assembled Block Copolymer Domain Orientation and Alignment on Photopatterned Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 23399-23409.	8.0	7
50	Bursting the bubble: A molecular understanding of surfactant-water interfaces. Journal of Chemical Physics, 2021, 154, 170901.	3.0	7
51	Origin of thiocyanate spectral shifts in water and organic solvents. Journal of Chemical Physics, 2022, 156, 104106.	3.0	6
52	Transient Vibrational Echo versus Transient Absorption Spectroscopy: A Direct Experimental and Theoretical Comparison. Applied Spectroscopy, 2010, 64, 1037-1044.	2.2	5
53	Phase Transition in a Heterogeneous Membrane: Atomically Detailed Picture. Journal of Physical Chemistry Letters, 2020, 11, 5263-5267.	4.6	5
54	Infrared spectroscopy probes ion binding geometries. Methods in Enzymology, 2021, 651, 157-191.	1.0	5

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55	Ultrafast pH-jump two-dimensional infrared spectroscopy. Optics Letters, 2019, 44, 4937.	3.3	5
56	Dynamic effect of polymers at the surfactantâ€“water interface: an ultrafast study. Soft Matter, 2022, 18, 1793-1800.	2.7	4
57	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie - International Edition, 2022, 61, .	13.8	4
58	Interfacial Dynamics in Inverted-Headgroup Lipid Membranes. Journal of Chemical Physics, 2022, 156, 075102.	3.0	3
59	Proton-modulated interactions of ions with transport sites of prokaryotic and eukaryotic NCX prototypes. Cell Calcium, 2021, 99, 102476.	2.4	2
60	Interactive Tools for Teaching Fourier Transforms. The Biophysicist, 2020, 1, .	0.3	2
61	Titelbild: Quantifying Hydrogenâ€Bond Populations in Dimethyl Sulfoxide/Water Mixtures (Angew.) Tj ETQq1 1 0.784314 rgBT /Overlo	2.0	0
62	Fast Dynamics of Lipid Mixtures Investigated with Vibrational Spectroscopy. Biophysical Journal, 2020, 118, 85a.	0.5	0
63	Viewpoint on ACS PHYS Division Sponsored Virtual Seminars. Journal of Physical Chemistry C, 2021, 125, 4342-4342.	3.1	0
64	Viewpoint on ACS PHYS Division Sponsored Virtual Seminars. Journal of Physical Chemistry A, 2021, 125, 1680-1680.	2.5	0
65	Viewpoint on ACS PHYS Division Sponsored Virtual Seminars. Journal of Physical Chemistry B, 2021, 125, 1973-1973.	2.6	0
66	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie, 0, , .	2.0	0