Carlos R Baiz

List of Publications by Year
in descending order

66 papers	1,872 citations	257101 24 h-index	276539 41 g-index
69 all docs	69 docs citations	69 times ranked	1696 citing authors

#	Article	IF	Citations
1	Interfacial Dynamics in Inverted-Headgroup Lipid Membranes. Journal of Chemical Physics, 2022, 156, 075102.	1.2	3
2	Dynamic effect of polymers at the surfactantâ€“water interface: an ultrafast study. Soft Matter, 2022, 18, 1793-1800.	1.2	4
3	Origin of thiocyanate spectral shifts in water and organic solvents. Journal of Chemical Physics, 2022, 156, 104106.	1.2	6
4	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie - International Edition, 2022, 61, .	7.2	4
5	Generative Adversarial Neural Networks for Denoising Coherent Multidimensional Spectra. Journal of Physical Chemistry A, 2022, 126, 3816-3825.	1.1	8
6	Lanthanide-dependent coordination interactions in lanmodulin: a 2D IR and molecular dynamics simulations study. Physical Chemistry Chemical Physics, 2021, 23, 21690-21700.	1.3	8
7	Viewpoint on ACS PHYS Division Sponsored Virtual Seminars. Journal of Physical Chemistry C, 2021, 125, 4342-4342.	1.5	0
8	Interfacial Dynamics in Lipid Membranes: The Effects of Headgroup Structures. Journal of Physical Chemistry B, 2021, 125, 1343-1350.	1.2	23
9	Bursting the bubble: A molecular understanding of surfactant-water interfaces. Journal of Chemical Physics, 2021, 154, 170901.	1.2	7
10	Short- and long-range crowding effects on waterâ€™s hydrogen bond networks. Cell Reports Physical Science, 2021, 2, 100419.	2.8	15
11	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.	1.1	15
12	Molecular Mechanism of Cell Membrane Protection by Sugars: A Study of Interfacial H-Bond Networks. Journal of Physical Chemistry Letters, 2021, 12, 9602-9607.	2.1	17
13	Proton-modulated interactions of ions with transport sites of prokaryotic and eukaryotic NCX prototypes. Cell Calcium, 2021, 99, 102476.	1.1	2
14	Infrared spectroscopy probes ion binding geometries. Methods in Enzymology, 2021, 651, 157-191.	0.4	5
15	Viewpoint on ACS PHYS Division Sponsored Virtual Seminars. Journal of Physical Chemistry A, 2021, 125, 1680-1680.	1.1	0
16	Viewpoint on ACS PHYS Division Sponsored Virtual Seminars. Journal of Physical Chemistry B, 2021, 125, 1973-1973.	1.2	0
17	Fast Dynamics of Lipid Mixtures Investigated with Vibrational Spectroscopy. Biophysical Journal, 2020, 118, 85a.	0.2	0
18	Ultrafast Dynamics at Lipidâ€“Water Interfaces. Accounts of Chemical Research, 2020, 53, 1860-1868.	7.6	30

#	Article	IF	Citations
19	Ions Slow Water Dynamics at Nonionic Surfactant Interfaces. Journal of Physical Chemistry B, 2020, 124, 11895-11900.	1.2	8
20	Ultrafast Spectroscopy of Lipidâ€“Water Interfaces: Transmembrane Crowding Drives H-Bond Dynamics. Journal of Physical Chemistry Letters, 2020, 11, 4093-4098.	2.1	22
21	Ultrafast Dynamics at the Lipidâ€“Water Interface: DMSO Modulates H-Bond Lifetimes. Langmuir, 2020, 36, 6502-6511.	1.6	27
22	Molecular heterogeneity in aqueous cosolvent systems. Journal of Chemical Physics, 2020, 152, 190901.	1.2	17
23	Phase Transition in a Heterogeneous Membrane: Atomically Detailed Picture. Journal of Physical Chemistry Letters, 2020, 11, 5263-5267.	2.1	5
24	Vibrational Spectroscopic Map, Vibrational Spectroscopy, and Intermolecular Interaction. Chemical Reviews, 2020, 120, 7152-7218.	23.0	205
25	Calcium-Lipid Interactions Observed with Isotope-Edited Infrared Spectroscopy. Biophysical Journal, 2020, 118, 2694-2702.	0.2	9
26	Liquidâ€“Liquid Phase Separation Produces Fast H-Bond Dynamics in DMSOâ€“Water Mixtures. Journal of Physical Chemistry Letters, 2020, 11, 1903-1908.	2.1	28
27	Spatial Control of the Self-assembled Block Copolymer Domain Orientation and Alignment on Photopatterned Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 23399-23409.	4.0	7
28	Slow Oil, Slow Water: Long-Range Dynamic Coupling across a Liquidâ€“Liquid Interface. Journal of the American Chemical Society, 2020, 142, 8063-8067.	6.6	18
29	Interactive Tools for Teaching Fourier Transforms. The Biophysicist, 2020, 1, .	0.1	2
30	Interfacial H-Bond Dynamics in Reverse Micelles: The Role of Surfactant Heterogeneity. Langmuir, 2019, 35, 11463-11470.	1.6	23
31	Non-Additive Effects of Binding Site Mutations in Calmodulin. Biochemistry, 2019, 58, 2730-2739.	1.2	10
32	Site-Specific Peptide Probes Detect Buried Water in a Lipid Membrane. Biophysical Journal, 2019, 116, 1692-1700.	0.2	13
33	Empirical S=O stretch vibrational frequency map. Journal of Chemical Physics, 2019, 151, 234107.	1.2	16
34	Ultrafast pH-jump two-dimensional infrared spectroscopy. Optics Letters, 2019, 44, 4937.	1.7	5
35	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.	3.3	90
36	Physiological Calcium Concentrations Slow Dynamics at the Lipid-Water Interface. Biophysical Journal, 2018, 115, 1541-1551.	0.2	30

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37	Vibrational Relaxation in EDTA Is Ion-Dependent. Journal of Physical Chemistry A, 2018, 122, 6585-6592.	1.1	11
38	Crowding Stabilizes DMSOâ€“Water Hydrogen-Bonding Interactions. Journal of Physical Chemistry B, 2018, 122, 5984-5990.	1.2	37
39	Quantifying Hydrogenâ€Bond Populations in Dimethyl Sulfoxide/Water Mixtures. Angewandte Chemie - International Edition, 2017, 56, 11375-11379.	7.2	94
40	Quantifying Hydrogenâ€Bond Populations in Dimethyl Sulfoxide/Water Mixtures. Angewandte Chemie, 2017, 129, 11533-11537.	1.6	25
41	Titelbild: Quantifying Hydrogenâ€Bond Populations in Dimethyl Sulfoxide/Water Mixtures (Angew.) Tj ETQq1 1 0.784314 rgBT /Overlock	1.6	0
42	An Empirical IR Frequency Map for Ester C═O Stretching Vibrations. Journal of Physical Chemistry A, 2016, 120, 3888-3896.	1.1	54
43	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.	1.2	42
44	Structural Disorder of Folded Proteins: Isotope-Edited 2D IR Spectroscopy and Markov State Modeling. Biophysical Journal, 2015, 108, 1747-1757.	0.2	23
45	Visualizing KcsA Conformational Changes upon Ion Binding by Infrared Spectroscopy and Atomistic Modeling. Journal of Physical Chemistry B, 2015, 119, 5824-5831.	1.2	25
46	Ultrafast 2D IR microscopy. Optics Express, 2014, 22, 18724.	1.7	69
47	A Molecular Interpretation of 2D IR Protein Folding Experiments with Markov State Models. Biophysical Journal, 2014, 106, 1359-1370.	0.2	48
48	Amide I Two-Dimensional Infrared Spectroscopy: Methods for Visualizing the Vibrational Structure of Large Proteins. Journal of Physical Chemistry A, 2013, 117, 5955-5961.	1.1	29
49	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.	3.3	50
50	Ultrafast equilibrium and non-equilibrium chemical reaction dynamics probed with multidimensional infrared spectroscopy. International Reviews in Physical Chemistry, 2012, 31, 367-419.	0.9	34
51	Coherent two-dimensional infrared spectroscopy: Quantitative analysis of protein secondary structure in solution. Analyst, The, 2012, 137, 1793.	1.7	65
52	Local-Mode Approach to Modeling Multidimensional Infrared Spectra of Metal Carbonyls. Journal of Physical Chemistry A, 2011, 115, 5354-5363.	1.1	24
53	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.	1.2	38
54	Ultrabroadband detection of a mid-IR continuum by chirped-pulse upconversion. Optics Letters, 2011, 36, 187.	1.7	99

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55	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.	6.6	27
56	Solvent-Dependent Spectral Diffusion in a Hydrogen Bonded â€œVibrational Aggregateâ€• Journal of Physical Chemistry A, 2010, 114, 10590-10604.	1.1	67
57	Transient Vibrational Echo versus Transient Absorption Spectroscopy: A Direct Experimental and Theoretical Comparison. Applied Spectroscopy, 2010, 64, 1037-1044.	1.2	5
58	Two-Dimensional Infrared Spectroscopy of Dimanganese Decacarbonyl and Its Photoproducts: An Ab Initio Study. Journal of Physical Chemistry A, 2009, 113, 9617-9623.	1.1	21
59	Orientational Dynamics of Transient Molecules Measured by Nonequilibrium Two-Dimensional Infrared Spectroscopy. Journal of Physical Chemistry A, 2009, 113, 8907-8916.	1.1	29
60	Beyond 7-Azaindole: Conjugation Effects on Intermolecular Double Hydrogen-Atom Transfer Reactions. Journal of Physical Chemistry A, 2009, 113, 4862-4867.	1.1	16
61	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.	6.6	32
62	Two-Dimensional Infrared Spectroscopy of Metal Carbonyls. Accounts of Chemical Research, 2009, 42, 1395-1404.	7.6	98
63	Ultrafast nonequilibrium Fourier-transform two-dimensional infrared spectroscopy. Optics Letters, 2008, 33, 2533.	1.7	50
64	Multilevel vibrational coherence transfer and wavepacket dynamics probed with multidimensional IR spectroscopy. Journal of Chemical Physics, 2008, 129, 084503.	1.2	67
65	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.	1.1	11
66	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie, 0, , .	1.6	0