Jens Bredenbeck

List of Publications by Year
in descending order

42 papers	1,653 citations	361413 20 h-index	289244 40 g-index
48 all docs	48 docs citations	48 times ranked	1422 citing authors

#	Article	IF	Citations
1	Vibrational Spectroscopic Map, Vibrational Spectroscopy, and Intermolecular Interaction. Chemical Reviews, 2020, 120, 7152-7218.	47.7	205
2	Â-Helix formation in a photoswitchable peptide tracked from picoseconds to microseconds by time-resolved IR spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 2379-2384.	7.1	186
3	Picosecond conformational transition and equilibration of a cyclic peptide. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6452-6457.	7.1	156
4	Labeling Vibrations by Light:â€‰ Ultrafast Transient 2D-IR Spectroscopy Tracks Vibrational Modes during Photoinduced Charge Transfer. Journal of the American Chemical Society, 2004, 126, 990-991.	13.7	137
5	Vibrational dynamics and solvatochromism of the label SCN in various solvents and hemoglobin by time dependent IR and 2D-IR spectroscopy. Physical Chemistry Chemical Physics, 2014, 16, 19643-19653.	2.8	93
6	Protein ligand migration mapped by nonequilibrium 2D-IR exchange spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14243-14248.	7.1	91
7	Continuous scanning from picoseconds to microseconds in time resolved linear and nonlinear spectroscopy. Review of Scientific Instruments, 2004, 75, 4462-4466.	1.3	74
8	Versatile small volume closed-cycle flow cell system for transient spectroscopy at high repetition rates. Review of Scientific Instruments, 2003, 74, 3188-3189.	1.3	68
9	Siteâ€Resolved Observation of Vibrational Energy Transfer Using a Genetically Encoded Ultrafast Heater. Angewandte Chemie - International Edition, 2019, 58, 2899-2903.	13.8	57
10	Transient two-dimensional infrared spectroscopy: Exploring the polarization dependence. Journal of Chemical Physics, 2004, 121, 5943-5957.	3.0	55
11	A donorâ€“acceptor pair for the real time study of vibrational energy transfer in proteins. Physical Chemistry Chemical Physics, 2014, 16, 3261.	2.8	52
12	Ultrafast Hopping from Band to Band: Assigning Infrared Spectra based on Vibrational Energy Transfer. Angewandte Chemie - International Edition, 2013, 52, 6214-6217.	13.8	44
13	Mixed IR/Vis Twoâ€Dimensional Spectroscopy: Chemical Exchange beyond the Vibrational Lifetime and Subâ€ensemble Selective Photochemistry. Angewandte Chemie - International Edition, 2014, 53, 2667-2672.	13.8	37
14	Vibrationally resolved electronic spectra including vibrational pre-excitation: Theory and application to VIPER spectroscopy. Journal of Chemical Physics, 2017, 147, 164116.	3.0	29
15	Cyano-tryptophans as dual infrared and fluorescence spectroscopic labels to assess structural dynamics in proteins. Physical Chemistry Chemical Physics, 2018, 20, 19906-19915.	2.8	28
16	Through bonds or contacts? Mapping protein vibrational energy transfer using non-canonical amino acids. Nature Communications, 2021, 12, 3284.	12.8	28
17	From Ultrafast Structure Determination to Steering Reactions: Mixed IR/Nonâ€IR Multidimensional Vibrational Spectroscopies. Angewandte Chemie - International Edition, 2015, 54, 11624-11640.	13.8	27
18	Ultrafast 2D-IR spectroelectrochemistry of flavin mononucleotide. Journal of Chemical Physics, 2015, 142, 212416.	3.0	26

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19	Impact of Azidohomoalanine Incorporation on Protein Structure and Ligand Binding. ChemBioChem, 2017, 18, 2340-2350.	2.6	21
20	Exploring the 2D-IR repertoire of the â€“SCN label to study site-resolved dynamics and solvation in the calcium sensor protein calmodulin. Physical Chemistry Chemical Physics, 2020, 22, 5463-5475.	2.8	21
21	Exploring photochemistry of p-bromophenylsulfonyl, p-tolylsulfonyl and methylsulfonyl azides by ultrafast UV-pumpâ€“IR-probe spectroscopy and computations. Physical Chemistry Chemical Physics, 2016, 18, 8662-8672.	2.8	17
22	Vibrational Lifetime of the SCN Protein Label in H₂O and D₂O Reports Site-Specific Solvation and Structure Changes During PYPâ€™s Photocycle. Analytical Chemistry, 2020, 92, 1024-1032.	6.5	17
23	A spectroelectrochemical cell for ultrafast two-dimensional infrared spectroscopy. Review of Scientific Instruments, 2015, 86, 083102.	1.3	16
24	Following local light-induced structure changes and dynamics of the photoreceptor PYP with the thiocyanate IR label. Physical Chemistry Chemical Physics, 2019, 21, 6622-6634.	2.8	15
25	Picosecond activation of the DEACM photocage unravelled by VIS-pump-IR-probe spectroscopy. Physical Chemistry Chemical Physics, 2017, 19, 6487-6496.	2.8	13
26	Photochemical mechanism of DEACM uncaging: a combined time-resolved spectroscopic and computational study. Physical Chemistry Chemical Physics, 2020, 22, 13418-13430.	2.8	13
27	Controlling Photochemistry via Isotopomers and IR Pre-excitation. Journal of the American Chemical Society, 2018, 140, 926-931.	13.7	11
28	OrtsaufgelÃ¶ste Beobachtung von Schwingungsenergietransfer durch ein genetisch codiertes ultraschnelles Heizelement. Angewandte Chemie, 2019, 131, 2925-2930.	2.0	10
29	Note: An automatic liquid nitrogen refilling system for small (detector) Dewar vessels. Review of Scientific Instruments, 2018, 89, 116101.	1.3	9
30	Local dynamics of the photo-switchable protein PYP in ground and signalling state probed by 2D-IR spectroscopy of â€“SCN labels. Physical Chemistry Chemical Physics, 2020, 22, 22963-22972.	2.8	9
31	Ultrafast Lightâ€Driven Substrate Expulsion from the Active Site of a Photoswitchable Catalyst. Angewandte Chemie - International Edition, 2017, 56, 12092-12096.	13.8	8
32	Lessons from combined experimental and theoretical examination of the FTIR and 2D-IR spectroelectrochemistry of the amide I region of cytochrome c. Journal of Chemical Physics, 2021, 154, 124201.	3.0	8
33	High-precision background correction and artifact suppression for ultrafast spectroscopy by quasi-simultaneous measurements in a split-sample cell. Review of Scientific Instruments, 2022, 93, 033001.	1.3	7
34	Versatile Vibrational Energy Sensors for Proteins. Angewandte Chemie - International Edition, 2022, 61, .	13.8	7
35	Femtosecond-to-millisecond mid-IR spectroscopy of photoactive yellow protein uncovers structural micro-transitions of the chromophoreâ€™s protonation mechanism. Journal of Chemical Physics, 2022, 156, .	3.0	6
36	Ultrafast Photoconversion Dynamics of the Knotless Phytochrome SynCph2. International Journal of Molecular Sciences, 2021, 22, 10690.	4.1	5

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37	Versatile Vibrational Energy Sensors for Proteins. Angewandte Chemie, 0, , .	2.0	5
38	Ultrafast Lightâ€Driven Substrate Expulsion from the Active Site of a Photoswitchable Catalyst. Angewandte Chemie, 2017, 129, 12260-12264.	2.0	3
39	Temperature-Dependent Low-Frequency Modes in the Active Site of Bovine Carbonic Anhydrase II Probed by 2D-IR Spectroscopy. Journal of Physical Chemistry Letters, 2021, 12, 7777-7782.	4.6	3
40	Infrared pre-excitation grants isotopomer-specific photochemistry. EPJ Web of Conferences, 2019, 205, 03001.	0.3	0
41	RÃ¼cktitelbild: OrtsaufgelÃ¶ste Beobachtung von Schwingungsenergietransfer durch ein genetisch codiertes ultraschnelles Heizelement (Angew. Chem. 9/2019). Angewandte Chemie, 2019, 131, 2932-2932.	2.0	0
42	Titelbild: Versatile Vibrational Energy Sensors for Proteins (Angew. Chem. 21/2022). Angewandte Chemie, 2022, 134, .	2.0	0