Dongping Zhong

List of Publications by Year
in descending order

123 papers	6,880 citations	44069 48 h-index	62596 80 g-index
124 all docs	124 docs citations	124 times ranked	5178 citing authors

#	Article	IF	Citations
1	Dynamics and mechanism of dimer dissociation of photoreceptor UVR8. Nature Communications, 2022, 13, 93.	12.8	9
2	Frontispiz: Direct Observation of Ultrafast Proton Rocking in the BLUF Domain. Angewandte Chemie, 2022, 134, .	2.0	0
3	Ultrafast Dynamics of Nonequilibrium Short-Range Electron Transfer in Semiquinone Flavodoxin. Journal of Physical Chemistry Letters, 2022, 13, 3202-3208.	4.6	5
4	The nature of proton-coupled electron transfer in a blue light using flavin domain. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	12
5	Slowdown of Water Dynamics from the Top to the Bottom of the GroEL Cavity. Journal of Physical Chemistry Letters, 2021, 12, 5723-5730.	4.6	10
6	Activation mechanism of Drosophila cryptochrome through an allosteric switch. Science Advances, 2021, 7, .	10.3	14
7	Exact eigenenergies of a model of vibronically coupled electron transfer reactions. Chemical Physics, 2021, 548, 111224.	1.9	1
8	Mapping the structural dynamics of water dissociation. Science, 2021, 374, 34-35.	12.6	3
9	Probing Intermolecular Interactions of Amyloidogenic Fragments of SOD1 by Site-Specific Tryptophan and Its Noncanonical Derivative. Journal of Physical Chemistry B, 2021, 125, 13088-13098.	2.6	4
10	Ultrafast nonequilibrium dynamics of short-range protein electron transfer in flavodoxin. Physical Chemistry Chemical Physics, 2021, 24, 382-391.	2.8	4
11	Effects of nonequilibrium fluctuations on ultrafast short-range electron transfer dynamics. Nature Communications, 2020, 11, 2822.	12.8	19
12	Dynamics and mechanism of light harvesting in UV photoreceptor UVR8. Chemical Science, 2020, 11, 12553-12569.	7.4	3
13	Revealing the origin of multiphasic dynamic behaviors in cyanobacteriochrome. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19731-19736.	7.1	10
14	Elucidating Ultrafast Multiphasic Dynamics in the Photoisomerization of Cyanobacteriochrome. Journal of Physical Chemistry Letters, 2020, 11, 8819-8824.	4.6	12
15	A leap in quantum efficiency through light harvesting in photoreceptor UVR8. Nature Communications, 2020, 11, 4316.	12.8	20
16	Visualizing the Redox Reaction Dynamics of Perovskite Nanocrystals in Real and Reciprocal Space. Journal of Physical Chemistry Letters, 2020, 11, 2550-2558.	4.6	7
17	The Origin of Ultrafast Multiphasic Dynamics in Photoisomerization of Bacteriophytochrome. Journal of Physical Chemistry Letters, 2020, 11, 5913-5919.	4.6	17
18	Ultrafast Dynamics of Waterâ€“Protein Coupled Motions around the Surface of Eye Crystallin. Journal of the American Chemical Society, 2020, 142, 3997-4007.	13.7	15

#	Article	IF	Citations
19	Nonequilibrium dynamics of photoinduced forward and backward electron transfer reactions. Journal of Chemical Physics, 2020, 152, 065102.	3.0	5
20	Elucidating the Molecular Mechanism of Ultrafast Pfr-State Photoisomerization in Bathy Bacteriophytochrome PaBphP. Journal of Physical Chemistry Letters, 2019, 10, 6197-6201.	4.6	16
21	Understanding Short-Range Electron-Transfer Dynamics in Proteins. Journal of Physical Chemistry Letters, 2019, 10, 346-351.	4.6	14
22	A Compass at Weak Magnetic Fields Using Thymine Dimer Repair. ACS Central Science, 2018, 4, 405-412.	11.3	18
23	Short-Range Electron Transfer in Reduced Flavodoxin: Ultrafast Nonequilibrium Dynamics Coupled with Protein Fluctuations. Journal of Physical Chemistry Letters, 2018, 9, 2782-2790.	4.6	31
24	Excited State Decay Pathways of 2â€²-Deoxy-5-methylcytidine and Deoxycytidine Revisited in Solution: A Comprehensive Kinetic Study by Femtosecond Transient Absorption. Journal of Physical Chemistry B, 2018, 122, 7027-7037.	2.6	35
25	Observation of the Global Dynamic Collectivity of a Hydration Shell around Apomyoglobin. Journal of Physical Chemistry Letters, 2017, 8, 1124-1131.	4.6	16
26	Mapping Hydration Dynamics around a Î²-Barrel Protein. Journal of the American Chemical Society, 2017, 139, 4399-4408.	13.7	44
27	Dynamics of hydration water and coupled protein sidechains around a polymerase protein surface. Chemical Physics Letters, 2017, 683, 658-665.	2.6	5
28	Introduction. Photochemistry and Photobiology, 2017, 93, 5-6.	2.5	1
29	Photolyase: Dynamics and Mechanisms of Repair of Sunâ€Induced DNA Damage. Photochemistry and Photobiology, 2017, 93, 78-92.	2.5	52
30	Photolyase: Dynamics and electron-transfer mechanisms of DNA repair. Archives of Biochemistry and Biophysics, 2017, 632, 158-174.	3.0	75
31	Chapter 3 Dynamics and Mechanisms of Ultraviolet-Damaged DNA Repair by Photolyases. , 2017, , 91-216.		0
32	Characterization of the Intermediate in and Identification of the Repair Mechanism of (6â€4) Photolesions by Photolyases. Angewandte Chemie - International Edition, 2016, 55, 5175-5178.	13.8	20
33	Characterization of the Intermediate in and Identification of the Repair Mechanism of (6â€4) Photolesions by Photolyases. Angewandte Chemie, 2016, 128, 5261-5264.	2.0	2
34	Molecular Origin of Ultrafast Waterâ€“Protein Coupled Interactions. Journal of Physical Chemistry Letters, 2016, 7, 4171-4177.	4.6	29
35	NMR Structures and Dynamics in a Prohead RNA Loop that Binds Metal Ions. Journal of Physical Chemistry Letters, 2016, 7, 3841-3846.	4.6	4
36	Bifurcating electron-transfer pathways in DNA photolyases determine the repair quantum yield. Science, 2016, 354, 209-213.	12.6	47

#	Article	IF	Citations
37	Dynamics and mechanism of ultrafast waterâ€“protein interactions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8424-8429.	7.1	118
38	The molecular origin of high DNA-repair efficiency by photolyase. Nature Communications, 2015, 6, 7302.	12.8	59
39	Determination of Protein Surface Hydration by Systematic Charge Mutations. Journal of Physical Chemistry Letters, 2015, 6, 5100-5105.	4.6	23
40	Dynamics and Mechanism of UV-Damaged DNA Repair in Indoleâ€“Thymine Dimer Adduct: Molecular Origin of Low Repair Quantum Efficiency. Journal of Physical Chemistry B, 2015, 119, 3446-3455.	2.6	6
41	Trp triad-dependent rapid photoreduction is not required for the function of Arabidopsis CRY1. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9135-9140.	7.1	57
42	Picosecond time-resolved fluorescent spectroscopy of 1-anilino-8-naphthalene sulfonate binding with staphylococcal nuclease in the native and molten globule states. Journal of Photochemistry and Photobiology B: Biology, 2015, 145, 60-65.	3.8	4
43	Dynamics and mechanisms of DNA repair by photolyase. Physical Chemistry Chemical Physics, 2015, 17, 11933-11949.	2.8	75
44	Electron Transfer Mechanisms of DNA Repair by Photolyase. Annual Review of Physical Chemistry, 2015, 66, 691-715.	10.8	80
45	Study of solvation dynamics in the interior of staphylococcal nuclease (SNase) using picosecond-resolved emission spectra of tryptophan. , 2014, , .		0
46	Direct Determination of Resonance Energy Transfer in Photolyase: Structural Alignment for the Functional State. Journal of Physical Chemistry A, 2014, 118, 10522-10530.	2.5	21
47	Ultrafast Water Dynamics at the Interface of the Polymeraseâ€“DNA Binding Complex. Biochemistry, 2014, 53, 5405-5413.	2.5	32
48	Dynamic Determination of Active-Site Reactivity in Semiquinone Photolyase by the Cofactor Photoreduction. Journal of Physical Chemistry Letters, 2014, 5, 820-825.	4.6	18
49	Mechanism of Photosignaling by Drosophila Cryptochrome. Journal of Biological Chemistry, 2014, 289, 4634-4642.	3.4	54
50	Quenching Dynamics of Ultraviolet-Light Perception by UVR8 Photoreceptor. Journal of Physical Chemistry Letters, 2014, 5, 69-72.	4.6	24
51	Direct Probing of Solvent Accessibility and Mobility at the Binding Interface of Polymerase (Dpo4)-DNA Complex. Journal of Physical Chemistry A, 2013, 117, 13926-13934.	2.5	22
52	Femtosecond Dynamics of Short-Range Protein Electron Transfer in Flavodoxin. Biochemistry, 2013, 52, 9120-9128.	2.5	33
53	Dynamic determination of the functional state in photolyase and the implication for cryptochrome. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12972-12977.	7.1	46
54	Determining complete electron flow in the cofactor photoreduction of oxidized photolyase. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12966-12971.	7.1	83

#	Article	IF	Citations
55	Reply to Brettel and Byrdin: On the efficiency of DNA repair by photolyase. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, .	7.1	11
56	Validation of Response Function Construction and Probing Heterogeneous Protein Hydration by Intrinsic Tryptophan. Journal of Physical Chemistry B, 2012, 116, 13320-13330.	2.6	21
57	Dynamics and Mechanism of DNA Repair in a Biomimetic System: Flavinâ€"Thymine Dimer Adduct. Journal of the American Chemical Society, 2012, 134, 1501-1503.	13.7	27
58	Electron Tunneling Pathways and Role of Adenine in Repair of Cyclobutane Pyrimidine Dimer by DNA Photolyase. Journal of the American Chemical Society, 2012, 134, 8104-8114.	13.7	59
59	Ultrafast Dynamics of Nonequilibrium Electron Transfer in Photoinduced Redox Cycle: Solvent Mediation and Conformation Flexibility. Journal of Physical Chemistry B, 2012, 116, 9130-9140.	2.6	31
60	Femtosecond Conical Intersection Dynamics of Tryptophan in Proteins and Validation of Slowdown of Hydration Layer Dynamics. Journal of the American Chemical Society, 2012, 134, 16460-16463.	13.7	35
61	Ultrafast Dynamics of Nonequilibrium Resonance Energy Transfer and Probing Globular Protein Flexibility of Myoglobin. Journal of Physical Chemistry A, 2012, 116, 2610-2619.	2.5	13
62	An AIMD Study of the CPD Repair Mechanism in Water: Reaction Free Energy Surface and Mechanistic Implications. Journal of Physical Chemistry B, 2011, 115, 3848-3859.	2.6	32
63	An AIMD Study of CPD Repair Mechanism in Water: Role of Solvent in Ring Splitting. Journal of Physical Chemistry B, 2011, 115, 3860-3871.	2.6	30
64	Biological water: A critique. Chemical Physics Letters, 2011, 503, 1-11.	2.6	259
65	Dynamics and mechanism of cyclobutane pyrimidine dimer repair by DNA photolyase. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14831-14836.	7.1	144
66	Reaction mechanism of Drosophila cryptochrome. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 516-521.	7.1	144
67	Arabidopsis cryptochrome 2 (CRY2) functions by the photoactivation mechanism distinct from the tryptophan (trp) triad-dependent photoreduction. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20844-20849.	7.1	94
68	From Femtochemistry to 4D Microscopy. Science China: Physics, Mechanics and Astronomy, 2010, 53, 977-986.	5.1	2
69	Searching for a photocycle of the cryptochrome photoreceptors. Current Opinion in Plant Biology, 2010, 13, 578-586.	7.1	144
70	Dynamics and mechanism of repair of ultraviolet-induced (6â€"4) photoproduct by photolyase. Nature, 2010, 466, 887-890.	27.8	186
71	Ultrafast solvation dynamics at binding and active sites of photolyases. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 2914-2919.	7.1	70
72	Ultrafast Dynamics of Resonance Energy Transfer in Myoglobin: Probing Local Conformation Fluctuations. Journal of Physical Chemistry B, 2010, 114, 1498-1505.	2.6	33

#	Article	IF	Citations
73	Mapping Solvation Dynamics at the Function Site of Flavodoxin in Three Redox States. Journal of the American Chemical Society, 2010, 132, 12741-12747.	13.7	49
74	Comparative Photochemistry of Animal Type 1 and Type 4 Cryptochromes. Biochemistry, 2009, 48, 8585-8593.	2.5	62
75	Protein Hydration Dynamics and Molecular Mechanism of Coupled Waterâ^'Protein Fluctuations. Journal of the American Chemical Society, 2009, 131, 10677-10691.	13.7	182
76	Ultrafast Proteinquake Dynamics in Cytochromec. Journal of the American Chemical Society, 2009, 131, 2846-2852.	13.7	53
77	Ultrafast quenching of tryptophan fluorescence in proteins: Interresidue and intrahelical electron transfer. Chemical Physics, 2008, 350, 154-164.	1.9	76
78	Ultrafast Dynamics of Flavins in Five Redox States. Journal of the American Chemical Society, 2008, 130, 13132-13139.	13.7	206
79	Purification and Characterization of a Type III Photolyase from Caulobacter crescentus. Biochemistry, 2008, 47, 10255-10261.	2.5	44
80	Ultrafast Dynamics and Anionic Active States of the Flavin Cofactor in Cryptochrome and Photolyase. Journal of the American Chemical Society, 2008, 130, 7695-7701.	13.7	132
81	Mapping hydration dynamics around a protein surface. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18461-18466.	7.1	295
82	Formation and Function of Flavin Anion Radical in Cryptochrome 1 Blue-Light Photoreceptor of Monarch Butterfly. Journal of Biological Chemistry, 2007, 282, 17608-17612.	3.4	81
83	Dissection of complex protein dynamics in human thioredoxin. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5366-5371.	7.1	50
84	Hydration Dynamics and Time Scales of Coupled Waterâ^'Protein Fluctuations. Journal of the American Chemical Society, 2007, 129, 3376-3382.	13.7	232
85	Ultrafast catalytic processes in enzymes. Current Opinion in Chemical Biology, 2007, 11, 174-181.	6.1	55
86	Femtochemistry in enzyme catalysis: DNA photolyase. Cell Biochemistry and Biophysics, 2007, 48, 32-44.	1.8	38
87	Structure and Function of Animal Cryptochromes. Cold Spring Harbor Symposia on Quantitative Biology, 2007, 72, 119-131.	1.1	96
88	Ultrafast Hydration Dynamics in the Lipidic Cubic Phase:Â Discrete Water Structures in Nanochannels. Journal of Physical Chemistry B, 2006, 110, 21994-22000.	2.6	75
89	A Molecular Dynamics Study of Lys-Trp-Lys:Â Structure and Dynamics in Solution Following Photoexcitation. Journal of Physical Chemistry B, 2006, 110, 10497-10508.	2.6	46
90	Femtosecond Studies of Tryptophan Fluorescence Dynamics in Proteins:Â Local Solvation and Electronic Quenching. Journal of Physical Chemistry B, 2006, 110, 18097-18103.	2.6	89

#	Article	IF	Citations
91	Ultrafast Solvation Dynamics of Human Serum Albumin:Â Correlations with Conformational Transitions and Site-Selected Recognition. Journal of Physical Chemistry B, 2006, 110, 10540-10549.	2.6	148
92	Protein surface hydration mapped by site-specific mutations. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 13979-13984.	7.1	144
93	Ultrafast hydration dynamics in protein conformational transitions. , 2006, , 411-414.		0
94	Ultrafast protein dynamics. , 2006, , 346-356.		0
95	Direct observation of DNA repair by photolyase. , 2006, , 407-410.		1
96	Direct observation of thymine dimer repair in DNA by photolyase. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16128-16132.	7.1	233
97	Ultrafast Hydration Dynamics in Melittin Folding and Aggregation:â€‰ Helix Formation and Tetramer Self-Assembly. Journal of Physical Chemistry B, 2005, 109, 16901-16910.	2.6	70
98	Femtosecond Dynamics of Flavin Cofactor in DNA Photolyase:Â Radical Reduction, Local Solvation, and Charge Recombination. Journal of Physical Chemistry B, 2005, 109, 1329-1333.	2.6	43
99	Ultrafast Dynamics of Resonance Energy Transfer in Cryptochrome. Journal of the American Chemical Society, 2005, 127, 7984-7985.	13.7	44
100	Femtosecond studies of tryptophan solvation: correlation function and water dynamics at lipid surfaces. Chemical Physics Letters, 2004, 388, 120-126.	2.6	91
101	Femtosecond studies of crown ethers: supramolecular solvation, local solvent structure and cationâ€“Ï€ interaction. Chemical Physics Letters, 2004, 394, 415-422.	2.6	15
102	Femtosecond Dynamics of DNA Photolyase:Â Energy Transfer of Antenna Initiation and Electron Transfer of Cofactor Reduction. Journal of Physical Chemistry B, 2004, 108, 18026-18033.	2.6	76
103	Femtosecond dynamics of rubredoxin: Tryptophan solvation and resonance energy transfer in the protein. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 13-18.	7.1	193
104	Femtosecond Studies of Protein-DNA Binding and Dynamics: Histone I. ChemPhysChem, 2001, 2, 219-227.	2.1	84
105	Femtosecond dynamics of a drug-protein complex: Daunomycin with Apo riboflavin-binding protein. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 11873-11878.	7.1	41
106	The anticancer drug-DNA complex: Femtosecond primary dynamics for anthracycline antibiotics function. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 14212-14217.	7.1	78
107	Femtosecond dynamics of flavoproteins: Charge separation and recombination in riboflavine (vitamin) Tj ETQq1 1 0.784314 rgBT /Ov of the United States of America, 2001, 98, 11867-11872.	7.1	215
108	Femtosecond studies of protein-ligand hydrophobic binding and dynamics: Human serum albumin. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 14056-14061.	7.1	171

#	Article	IF	Citations
109	Femtosecond dynamics of dative bonding: Concepts of reversible and dissociative electron transfer reactions. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 2602-2607.	7.1	33
110	Femtosecond Real-Time Probing of Reactions. 24. Time, Velocity, and Orientation Mapping of the Dynamics of Dative Bonding in Bimolecular Electron Transfer Reactionsâ€. Journal of Physical Chemistry A, 1999, 103, 10093-10117.	2.5	32
111	Femtosecond dynamics of valence-bond isomers of azines: transition states and conical intersections. Chemical Physics Letters, 1998, 298, 129-140.	2.6	64
112	Femtosecond Real-Time Probing of Reactions. 23. Studies of Temporal, Velocity, Angular, and State Dynamics from Transition States to Final Products by Femtosecond-Resolved Mass Spectrometry. Journal of Physical Chemistry A, 1998, 102, 4031-4058.	2.5	134
113	Femtosecond Nucleophilic Substitution Reaction Dynamics. Journal of the American Chemical Society, 1997, 119, 2305-2306.	13.7	11
114	Femtosecond Elimination Reaction Dynamics. Journal of the American Chemical Society, 1997, 119, 5978-5979.	13.7	38
115	Bimolecular reactions observed by femtosecond detachment to aligned transition states: Inelastic and reactive dynamics. Journal of Chemical Physics, 1996, 105, 7864-7867.	3.0	66
116	Femtosecond realâ€time probing of reactions. XXI. Direct observation of transitionâ€state dynamics and structure in chargeâ€transfer reactions. Journal of Chemical Physics, 1996, 105, 6216-6248.	3.0	93
117	Conservation of the Kr+(2P1/2) state in the reactive quenching of Kr(5sâ€²[1/2]0) atoms by halogenâ€containing molecules. Journal of Chemical Physics, 1996, 105, 5020-5036.	3.0	14
118	Kinetic-energy, femtosecond resolved reaction dynamics. Modes of dissociation (in iodobenzene) from time-velocity correlations. Chemical Physics Letters, 1995, 237, 399-405.	2.6	95
119	Microscopic solvation and femtochemistry of charge-transfer reactions: the problem of benzene(s)-iodine binary complexes and their solvent structures. Chemical Physics Letters, 1995, 242, 369-379.	2.6	43
120	Excitation transfer from Kr(5sâ€™,3P0) and Kr(5s,3P2) atoms to 12CO and 13CO. Journal of Chemical Physics, 1995, 102, 2744-2759.	3.0	10
121	Transition states of chargeâ€transfer reactions: Femtosecond dynamics and the concept of harpooning in the bimolecular reaction of benzene with iodine. Journal of Chemical Physics, 1995, 103, 5153-5156.	3.0	37
122	Generation of Xe(6sâ€²3P0) atoms by optical pumping in a flow reactor. Reactions with N2 and halogen-containing molecules. Chemical Physics Letters, 1993, 207, 555-562.	2.6	8
123	Direct Observation of Ultrafast Proton Rocking in the BLUF Domain. Angewandte Chemie, 0, , .	2.0	0