Yasuhisa Mizutani

List of Publications by Year
in descending order

95 papers	2,429 citations	172457 29 h-index	243625 44 g-index
96 all docs	96 docs citations	96 times ranked	1912 citing authors

#	Article	IF	Citations
1	Monomeric Carboxylate Ferrous Complexes as Models for the Dioxygen Binding Sites in Non-Heme Iron Proteins. The Reversible Formation and Characterization of .mu.-Peroxo Diferric Complexes. Journal of the American Chemical Society, 1994, 116, 9071-9085.	13.7	151
2	Photoinduced Dynamics of TiO₂ Doped with Cr and Sb. Journal of Physical Chemistry C, 2008, 112, 1167-1173.	3.1	109
3	Synthesis, Characterization, and Reversible Oxygenation of .mu.-Alkoxo Diiron(II) Complexes with the Dinucleating Ligand N,N,N',N'-Tetrakis{(6-methyl-2-pyridyl)methyl}-1,3-diamino- propan-2-olate. Journal of the American Chemical Society, 1995, 117, 11220-11229.	13.7	100
4	Primary protein response after ligand photodissociation in carbonmonoxy myoglobin. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9627-9632.	7.1	81
5	Synthetic model for dioxygen binding sites of non-heme iron proteins. X-ray structure of Fe(OBz)(MeCN)[HB(3,5-iso-Pr2pz)3] [HB(3,5-iso-Pr2pz)3 = hydrotris(3,5-diisopropyl-1-pyrazolyl)borate] and resonance Raman evidence for reversible formation of a peroxo adduct. Journal of the American Chemical Society, 1990, 112, 6402-6403.	13.7	78
6	Ultrafast Structural Relaxation of Myoglobin Following Photodissociation of Carbon Monoxide Probed by Time-Resolved Resonance Raman Spectroscopy. Journal of Physical Chemistry B, 2001, 105, 10992-10999.	2.6	71
7	Resonance Raman characterization of ferric and ferryl porphyrin .pi. cation radicals and the FeIV:O stretching frequency. Journal of the American Chemical Society, 1991, 113, 6542-6549.	13.7	66
8	Ultrafast dynamics of myoglobin probed by time-resolved resonance Raman spectroscopy. Chemical Record, 2001, 1, 258-275.	5.8	66
9	Identification of Histidine 77 as the Axial Heme Ligand of Carbonmonoxy CooA by Picosecond Time-Resolved Resonance Raman Spectroscopy. Biochemistry, 2000, 39, 12747-12752.	2.5	65
10	Structural Characterization of the Proximal and Distal Histidine Environment of Cytoglobin and Neuroglobin. Biochemistry, 2005, 44, 13257-13265.	2.5	62
11	Intramolecular vibrational energy redistribution and intermolecular energy transfer in the (d,â€Šd) excited state of nickel octaethylporphyrin. Journal of Chemical Physics, 1999, 111, 8950-8962.	3.0	59
12	Demonstration of a Light-Driven SO₄^{2â€“} Transporter and Its Spectroscopic Characteristics. Journal of the American Chemical Society, 2017, 139, 4376-4389.	13.7	56
13	Observing Vibrational Energy Flow in a Protein with the Spatial Resolution of a Single Amino Acid Residue. Journal of Physical Chemistry Letters, 2014, 5, 3269-3273.	4.6	53
14	Stationary and Time-resolved Resonance Raman Spectra of His77 and Met95 Mutants of the Isolated Heme Domain of a Direct Oxygen Sensor from Escherichia coli. Journal of Biological Chemistry, 2002, 277, 32650-32658.	3.4	51
15	Picosecond Structural Dynamics of Myoglobin following Photodissociation of Carbon Monoxide As Revealed by Ultraviolet Time-Resolved Resonance Raman Spectroscopy. Biochemistry, 2005, 44, 14709-14714.	2.5	41
16	Direct Observation of Vibrational Energy Flow in Cytochrome <i>c</i>. Journal of Physical Chemistry B, 2011, 115, 13057-13064.	2.6	41
17	Nanosecond Temperature Jump and Time-Resolved Raman Study of Thermal Unfolding of Ribonuclease A. Biophysical Journal, 2000, 79, 485-495.	0.5	40
18	Ultraviolet Resonance Raman Studies of Quaternary Structure of Hemoglobin Using a Tryptophan Î²37 Mutant. Journal of Biological Chemistry, 1995, 270, 1636-1642.	3.4	37

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19	Distortion and a Strong Hydrogen Bond in the Retinal Chromophore Enable Sodium-Ion Transport by the Sodium-Ion Pump KR2. Journal of Physical Chemistry B, 2019, 123, 3430-3440.	2.6	36
20	Importance of Atomic Contacts in Vibrational Energy Flow in Proteins. Journal of Physical Chemistry Letters, 2016, 7, 1950-1954.	4.6	35
21	Time-resolved Raman evidence for energy â€˜funnelingâ€™ through propionate side chains in heme â€˜coolingâ€™ upon photolysis of carbonmonoxy myoglobin. Chemical Physics Letters, 2006, 429, 239-243.	2.6	34
22	Time-Resolved Resonance Raman Study of the Exciplex Formed between Excited Cuâˆ'Porphyrin and DNA. Journal of Physical Chemistry B, 2001, 105, 5018-5031.	2.6	33
23	Picosecond Protein Response to the Chromophore Isomerization of Photoactive Yellow Protein:â€‰ Selective Observation of Tyrosine and Tryptophan Residues by Time-Resolved Ultraviolet Resonance Raman Spectroscopy. Journal of Physical Chemistry B, 2007, 111, 6293-6296.	2.6	33
24	Resonance Raman Investigation of the Chromophore Structure of Heliorhodopsins. Journal of Physical Chemistry Letters, 2018, 9, 6431-6436.	4.6	33
25	Soft chromophore featured liquid porphyrins and their utilization toward liquid electret applications. Nature Communications, 2019, 10, 4210.	12.8	32
26	Role of heme propionates of myoglobin in vibrational energy relaxation. Chemical Physics Letters, 2006, 430, 404-408.	2.6	31
27	Developments of widely tunable light sources for picosecond time-resolved resonance Raman spectroscopy. Review of Scientific Instruments, 1997, 68, 4001-4008.	1.3	30
28	Vibrational Energy Relaxation of Metalloporphyrins in a Condensed Phase Probed by Time-Resolved Resonance Raman Spectroscopy. Bulletin of the Chemical Society of Japan, 2002, 75, 623-639.	3.2	30
29	Vibrational Energy Transfer from Heme through Atomic Contacts in Proteins. Journal of Physical Chemistry B, 2018, 122, 5877-5884.	2.6	30
30	Time-resolved resonance Raman study of the primary photoprocesses of nickel(II) octaethylporphyrin in solution. Chemical Physics Letters, 1997, 266, 283-289.	2.6	29
31	Time-Resolved Resonance Raman Spectroscopy and Application to Studies on Ultrafast Protein Dynamics. Bulletin of the Chemical Society of Japan, 2017, 90, 1344-1371.	3.2	29
32	Opn5L1 is a retinal receptor that behaves as a reverse and self-regenerating photoreceptor. Nature Communications, 2018, 9, 1255.	12.8	29
33	Resonance Raman spectra of large pea phytochrome at ambient temperature. FEBS Letters, 1990, 269, 341-344.	2.8	26
34	Picosecond Time-Resolved Ultraviolet Resonance Raman Spectroscopy of Bacteriorhodopsin: Primary Protein Response to the Photoisomerization of Retinal. Journal of Physical Chemistry B, 2009, 113, 12121-12128.	2.6	26
35	Changes in the Hydrogen-Bond Network around the Chromophore of Photoactive Yellow Protein in the Ground and Excited States. Journal of Physical Chemistry B, 2011, 115, 9306-9310.	2.6	26
36	Evidence for Displacements of the C-helix by CO Ligation and DNA Binding to CooA Revealed by UV Resonance Raman Spectroscopy. Journal of Biological Chemistry, 2006, 281, 11271-11278.	3.4	25

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37	Ultrafast Dynamics of Heliorhodopsins. Journal of Physical Chemistry B, 2019, 123, 2507-2512.	2.6	24
38	Resonance Raman Observation of the Structural Dynamics of FixL on Signal Transduction and Ligand Discrimination. Biochemistry, 2007, 46, 6086-6096.	2.5	23
39	Photoinduced electron transfer in glucose oxidase: a picosecond timeâ€resolved ultraviolet resonance Raman study. Journal of Raman Spectroscopy, 2008, 39, 1600-1605.	2.5	23
40	Identification of Essential Histidine Residues Involved in Heme Binding and Hemozoin Formation in Heme Detoxification Protein from Plasmodium falciparum. Scientific Reports, 2015, 4, 6137.	3.3	22
41	A role of solvent in vibrational energy relaxation of metalloporphyrins. Journal of Molecular Liquids, 2001, 90, 233-242.	4.9	21
42	Structural Evolution of a Retinal Chromophore in the Photocycle of Halorhodopsin from <i>Natronobacterium pharaonis</i>. Journal of Physical Chemistry A, 2018, 122, 2411-2423.	2.5	21
43	Heme-binding properties of heme detoxification protein from Plasmodium falciparum. Biochemical and Biophysical Research Communications, 2013, 439, 477-480.	2.1	20
44	Intersubunit Communication via Changes in Hemoglobin Quaternary Structures Revealed by Time-Resolved Resonance Raman Spectroscopy: Direct Observation of the Perutz Mechanism. Journal of Physical Chemistry B, 2013, 117, 12461-12468.	2.6	20
45	The Early Steps in the Photocycle of a Photosensor Protein Sensory Rhodopsin I from Salinibacter ruber. Journal of Physical Chemistry B, 2014, 118, 1510-1518.	2.6	20
46	Resonance Raman Characterization of Iron(III) Porphyrin N-Oxide: Evidence for an Fe-O-N Bridged Structure. Journal of the American Chemical Society, 1994, 116, 3439-3441.	13.7	19
47	Ultraviolet resonance Raman spectra and ab initio vibrational analyses of 1,4-benzoquinone: reassignments of the Î½22 and Î½23 bands. Chemical Physics Letters, 1996, 262, 643-648.	2.6	19
48	Photoinduced Solvent Ligation to Nickel(II) Octaethylporphyrin Probed by Picosecond Time-Resolved Resonance Raman Spectroscopy. Journal of Physical Chemistry A, 1998, 102, 5809-5815.	2.5	18
49	Quaternary Structures of Intermediately Ligated Human Hemoglobin A and Influences from Strong Allosteric Effectors: Resonance Raman Investigation. Biophysical Journal, 2005, 89, 1203-1213.	0.5	18
50	Protein Dynamics of Isolated Chains of Recombinant Human Hemoglobin Elucidated by Time-Resolved Resonance Raman Spectroscopy. Journal of Physical Chemistry B, 2012, 116, 1992-1998.	2.6	18
51	The formation of hydrogen bond in the proximal heme pocket of HemAT-Bs upon ligand binding. Biochemical and Biophysical Research Communications, 2007, 357, 1053-1057.	2.1	16
52	Ultrafast protein dynamics of hemoglobin as studied by picosecond time-resolved resonance Raman spectroscopy. Chemical Physics, 2012, 396, 45-52.	1.9	16
53	High Thermal Stability of Oligomeric Assemblies of Thermophilic Rhodopsin in a Lipid Environment. Journal of Physical Chemistry B, 2018, 122, 6945-6953.	2.6	16
54	Direct Observation of the Structural Change of Tyr174 in the Primary Reaction of Sensory Rhodopsin II. Biochemistry, 2011, 50, 3170-3180.	2.5	15

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55	Allosteric Communication with the Retinal Chromophore upon Ion Binding in a Light-Driven Sodium Ion-Pumping Rhodopsin. Biochemistry, 2020, 59, 520-529.	2.5	15
56	Evidence for Ï€âˆ’Ï€ Interactions in the S1State of Zinc Porphyrin Dimers Revealed by Picosecond Time-Resolved Resonance Raman Spectroscopy. Journal of Physical Chemistry A, 1999, 103, 9184-9189.	2.5	14
57	Construction of Novel Nanosecond Temperature Jump Apparatuses Applicable to Raman Measurements and Direct Observation of Transient Temperature. Applied Spectroscopy, 2000, 54, 1591-1604.	2.2	13
58	Isotope dilution effects on the hydroxyl-stretch bands of alcohols. Molecular Physics, 2005, 103, 37-44.	1.7	13
59	Differences between Protein Dynamics of Hemoglobin upon Dissociation of Oxygen and Carbon Monoxide. Journal of the American Chemical Society, 2012, 134, 1434-1437.	13.7	13
60	Structural dynamics of proximal heme pocket in HemAT-Bs associated with oxygen dissociation. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2012, 1824, 866-872.	2.3	13
61	Ultraviolet Resonance Raman Observations of the Structural Dynamics of Rhizobial Oxygen Sensor FixL on Ligand Recognition. Journal of Physical Chemistry B, 2013, 117, 15786-15791.	2.6	13
62	Role of atomic contacts in vibrational energy transfer in myoglobin. Biophysical Reviews, 2020, 12, 511-518.	3.2	13
63	Chromophore Structure of Photochromic Fluorescent Protein Dronpa: Acidâ€“Base Equilibrium of Two Cis Configurations. Journal of Physical Chemistry B, 2016, 120, 3353-3359.	2.6	12
64	Production of a Light-Gated Proton Channel by Replacing the Retinal Chromophore with Its Synthetic Vinylene Derivative. Journal of Physical Chemistry Letters, 2018, 9, 2857-2862.	4.6	12
65	Mode Dependence of Vibrational Energy Redistribution in Nickel Tetraphenylporphyrin Probed by Picosecond Time-Resolved Resonance Raman Spectroscopy: Slow IVR to Phenyl Peripherals. Bulletin of the Chemical Society of Japan, 2002, 75, 965-971.	3.2	11
66	Nonbonded Atomic Contacts Drive Ultrafast Helix Motions in Myoglobin. Journal of Physical Chemistry B, 2020, 124, 5407-5414.	2.6	10
67	Strongly Hydrogen-Bonded Schiff Base and Adjoining Polyene Twisting in the Retinal Chromophore of Schizorhodopsins. Biochemistry, 2021, 60, 3050-3057.	2.5	10
68	High suitability of tryptophan residues as a spectroscopic thermometer for local temperature in proteins under nonequilibrium conditions. Journal of Chemical Physics, 2022, 156, 075101.	3.0	10
69	Comment on â€œPolarization effects in time resolved incoherent anti-Stokes Raman spectroscopyâ€•[J. Chem. Phys. 105, 6141 (1996)]. Journal of Chemical Physics, 1998, 109, 9197-9198.	3.0	9
70	Regulatory Implications of Structural Changes in Tyr201 of the Oxygen Sensor Protein FixL. Biochemistry, 2016, 55, 4027-4035.	2.5	9
71	Resonance Raman Determination of Chromophore Structures of Heliorhodopsin Photointermediates. Journal of Physical Chemistry B, 2021, 125, 7155-7162.	2.6	9
72	<i>Cis</i>â€“<i>Trans</i> Reisomerization Precedes Reprotonation of the Retinal Chromophore in the Photocycle of Schizorhodopsin 4. Angewandte Chemie - International Edition, 2022, 61, .	13.8	9

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73	Effect of the N-terminal residues on the quaternary dynamics of human adult hemoglobin. Chemical Physics, 2016, 469-470, 31-37.	1.9	8
74	Protein dynamics of hemeâ€“heme oxygenaseâ€1 complex following carbon monoxide dissociation. Journal of Raman Spectroscopy, 2011, 42, 910-916.	2.5	7
75	Large Spectral Change due to Amide Modes of a Î²-Sheet upon the Formation of an Early Photointermediate of Middle Rhodopsin. Journal of Physical Chemistry B, 2013, 117, 3449-3458.	2.6	7
76	Protein Response to Chromophore Isomerization in Microbial Rhodopsins Revealed by Picosecond Time-Resolved Ultraviolet Resonance Raman Spectroscopy: A Review. ACS Symposium Series, 2015, , 329-353.	0.5	7
77	Carbon monoxide binding properties of domain-swapped dimeric myoglobin. Journal of Biological Inorganic Chemistry, 2015, 20, 523-530.	2.6	7
78	A Study of the Dynamics of the Heme Pocket and C-helix in CooA upon CO Dissociation Using Time-Resolved Visible and UV Resonance Raman Spectroscopy. Journal of Physical Chemistry B, 2016, 120, 7836-7843.	2.6	7
79	Force detection of high-frequency electron paramagnetic resonance spectroscopy of microliter solution sample. Applied Physics Letters, 2018, 113, .	3.3	7
80	Acceleration and Deceleration Factors on the Hydrolysis Reaction of 4,6-<i>O</i>-Benzylidene Acetal Group. Journal of Organic Chemistry, 2020, 85, 15849-15856.	3.2	7
81	Concerted Motions and Molecular Function: What Physical Chemistry We Can Learn from Light-Driven Ion-Pumping Rhodopsins. Journal of Physical Chemistry B, 2021, 125, 11812-11819.	2.6	7
82	Primary structural response in tryptophan residues of Anabaena sensory rhodopsin to photochromic reactions of the retinal chromophore. Chemical Physics, 2013, 419, 65-73.	1.9	6
83	Tertiary dynamics of human adult hemoglobin fixed in R and T quaternary structures. Physical Chemistry Chemical Physics, 2018, 20, 3363-3372.	2.8	6
84	Regulatory Switching by Concerted Motions on the Microsecond Time Scale of the Oxygen Sensor Protein FixL. Journal of Physical Chemistry B, 2021, 125, 6847-6856.	2.6	6
85	Unique Electronic Structures of the Highly Ruffled Hemes in Heme-Degrading Enzymes of <i>Staphylococcus aureus</i>, IsdG and IsdI, by Resonance Raman and Electron Paramagnetic Resonance Spectroscopies. Biochemistry, 2020, 59, 3918-3928.	2.5	5
86	Effect of a bound anion on the structure and dynamics of halorhodopsin from Natronomonas pharaonis. Structural Dynamics, 2019, 6, 054703.	2.3	4
87	Control of Photoinduced Electron Transfer Using Complex Formation of Water-Soluble Porphyrin and Polyvinylpyrrolidone. Polymers, 2022, 14, 1191.	4.5	3
88	Dependence of Vibrational Energy Transfer on Distance in a Four-Helix Bundle Protein: Equidistant Increments with the Periodicity of Î± Helices. Journal of Physical Chemistry B, 2022, 126, 3283-3290.	2.6	3
89	Functionally-Important Protein Dynamics of Hemoglobin and Myoglobin Revealed by Time-Resolved Resonance Raman Spectroscopy. Seibutsu Butsuri, 2007, 47, 288-294.	0.1	1
90	S05I4 Protein Dynamics Probed by Time-resolved Resonance Raman Spectroscopy(Vibrational) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62	0.1	0

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91	Primary Protein Responses to Chromophore Isomerization of Photosensary Proteins. , 2010, , .		0
92	Real-time Observation of the Perutz Mechanism in Hemoglobin Quaternary Revealed by Time-resolved Resonance Raman Spectroscopy. Seibutsu Butsuri, 2015, 55, 095-097.	0.1	0
93	Dynamics and allostery of human hemoglobin as elucidated by time-resolved resonance Raman spectroscopy. , 2020, , 461-483.		0
94	Protein Response to Photoreaction Probed by Picosecond Time-resolved Ultraviolet Resonance Raman Spectroscopy. Seibutsu Butsuri, 2011, 51, 010-013.	0.1	0
95	Cisâ€Trans Reisomerization Precedes Reprotonation of the Retinal Chromophore in the Photocycle of Schizorhodopsin 4. Angewandte Chemie, 0, , .	2.0	0