Yasushi Imamoto

List of Publications by Year
in descending order

113 papers	3,101 citations	126907 33 h-index	175258 52 g-index
116 all docs	116 docs citations	116 times ranked	1844 citing authors

#	Article	IF	Citations
1	Amino acid residue at position 188 determines the UV-sensitive bistable property of vertebrate non-visual opsin Opn5. Communications Biology, 2022, 5, 63.	4.4	5
2	Creation of photocyclic vertebrate rhodopsin by single amino acid substitution. ELife, 2022, 11, .	6.0	11
3	Evolutionary adaptation of visual pigments in geckos for their photic environment. Science Advances, 2021, 7, eabj1316.	10.3	7
4	Rapid Oxidation Following Photoreduction in the Avian Cryptochrome4 Photocycle. Biochemistry, 2020, 59, 3615-3625.	2.5	8
5	Synthesis of One Double Bond-Inserted Retinal Analogs and Their Binding Experiments with Opsins: Preparation of Novel Red-Shifted Channelrhodopsin Variants. Chemical and Pharmaceutical Bulletin, 2020, 68, 265-272.	1.3	4
6	Regulation of Photocycle Kinetics of Photoactive Yellow Protein by Modulating Flexibility of the Î²-Turn. Journal of Physical Chemistry B, 2020, 124, 1452-1459.	2.6	0
7	Conformational Differences among Metarhodopsin I, Metarhodopsin II, and Opsin Probed by Wide-Angle X-ray Scattering. Journal of Physical Chemistry B, 2019, 123, 9134-9142.	2.6	1
8	Shift in Conformational Equilibrium Induces Constitutive Activity of G-Protein-Coupled Receptor, Rhodopsin. Journal of Physical Chemistry B, 2018, 122, 4838-4843.	2.6	9
9	Opn5L1 is a retinal receptor that behaves as a reverse and self-regenerating photoreceptor. Nature Communications, 2018, 9, 1255.	12.8	29
10	Red-Tuning of the Channelrhodopsin Spectrum Using Long Conjugated Retinal Analogues. Biochemistry, 2018, 57, 5544-5556.	2.5	10
11	Adaptation of cone pigments found in green rods for scotopic vision through a single amino acid mutation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5437-5442.	7.1	32
12	Evolutionary steps involving counterion displacement in a tunicate opsin. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6028-6033.	7.1	29
13	Alternative Formation of Red-Shifted Channelrhodopsins: Noncovalent Incorporation with Retinal-Based Enamine-Type Schiff Bases and Mutated Channelopsin. Chemical and Pharmaceutical Bulletin, 2017, 65, 356-358.	1.3	3
14	Origin of the low thermal isomerization rate of rhodopsin chromophore. Scientific Reports, 2015, 5, 11081.	3.3	45
15	Foreword to a Special Issue of â€œLight to Maintain Life and Light to Observe Life: Seven-colored Light Illuminating Biophysicsâ€• Seibutsu Butsuri, 2015, 55, 289-290.	0.1	0
16	Diversity of Active States in TMT Opsins. PLoS ONE, 2015, 10, e0141238.	2.5	19
17	Helical rearrangement of photoactivated rhodopsin in monomeric and dimeric forms probed by high-angle X-ray scattering. Photochemical and Photobiological Sciences, 2015, 14, 1965-1973.	2.9	10
18	Intramolecular Interactions That Induce Helical Rearrangement upon Rhodopsin Activation. Journal of Biological Chemistry, 2014, 289, 13792-13800.	3.4	11

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19	Rod Visual Pigment Optimizes Active State to Achieve Efficient G Protein Activation as Compared with Cone Visual Pigments. Journal of Biological Chemistry, 2014, 289, 5061-5073.	3.4	29
20	Evolution of Mammalian Opn5 as a Specialized UV-absorbing Pigment by a Single Amino Acid Mutation. Journal of Biological Chemistry, 2014, 289, 3991-4000.	3.4	63
21	Mapping of the local environmental changes in proteins by cysteine scanning. Biophysics (Nagoya-shi,) Tj ETQq1 1 0.784314 rgBT /Ov	0.4	5
22	Cone visual pigments. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 664-673.	1.0	69
23	Single-Molecule Observation of the Ligand-Induced Population Shift of Rhodopsin, A G-Protein-Coupled Receptor. Biophysical Journal, 2014, 106, 915-924.	0.5	16
24	Ultrafast Carbonyl Motion of the Photoactive Yellow Protein Chromophore Probed by Femtosecond Circular Dichroism. Journal of the American Chemical Society, 2013, 135, 14637-14643.	13.7	25
25	Ultrafast Time-Resolved Pumpâ€"Probe Spectroscopy of PYP by a Sub-8 fs Pulse Laser at 400 nm. Journal of Physical Chemistry B, 2013, 117, 4818-4826.	2.6	12
26	Efficiencies of Activation of Transducin by Cone and Rod Visual Pigments. Biochemistry, 2013, 52, 3010-3018.	2.5	26
27	3P246 Single-molecule analyses of the activation mechanisms of G proteins in constitutively active mutant of G protein-coupled receptor(18A. Photobiology: Vision & Photoreception,Poster). Seibutsu Butsuri, 2013, 53, S252.	0.1	0
28	Photochemical Properties of Mammalian Melanopsin. Biochemistry, 2012, 51, 5454-5462.	2.5	94
29	Photochemical Nature of Parietopsin. Biochemistry, 2012, 51, 1933-1941.	2.5	19
30	Comparative Studies on the Late Bleaching Processes of Four Kinds of Cone Visual Pigments and Rod Visual Pigment. Biochemistry, 2012, 51, 4300-4308.	2.5	16
31	1Q1448 P65 Analysis of photobleaching processes of rhodopsin and cone pigments in nanodiscs(Photobiology: Vision & Photoreception 1,The 49th Annual Meeting of the Biophysical) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
32	1Q1424 Single-molecule detection of conformational equilibria in rhodopsin(Photobiology: Vision &) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 51, S70.	0.1	0
33	1Q1436 Exploring the molecular function of Parietopsin(Photobiology: Vision & Photoreception) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
34	2P275 1A1450 Single-molecule detection of rhodopsin activation(The 48th Annual Meeting of the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.1	0
35	3P280 Direct interlink between the C-terminus of alpha subunit and the nucleotide binding site in G protein activation by rhodopsin(Photobiology: Vision & Photoreception,The 48th Annual Meeting of) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
36	Functional analysis of the second extracellular loop of rhodopsin by characterizing split variants. Photochemical and Photobiological Sciences, 2010, 9, 1490-1497.	2.9	9

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37	2TA2-02 The role of C terminus of alpha subunit in the GDP-GTP exchange reaction on G protein.(The) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
38	Structural Effects on the Ultrafast Photoisomerization of Photoactive Yellow Protein. Transient Absorption Spectroscopy of Two Point Mutants. Journal of Physical Chemistry C, 2009, 113, 11605-11613.	3.1	41
39	2TA2-01 Detection of the binding of activated rhodopsin and transducin by using fluorescence resonance energy transfer(FRET)(The 47th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2009, 49, S40.	0.1	0
40	1P-225 Exploring Molecular Functions of Parietopsin(Photobiology:Vision & Photoreception, The 47th) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.1	0
41	1TP2-06 Exploring Molecular Functions of Parietopsin(The 47th Annual Meeting of the Biophysical) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
42	3TA2-04 Functional analysis of all-trans-retinal-containing opsin peropsin(The 47th Annual Meeting of) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.1	0
43	Thermal Recovery of Iodopsin from Photobleaching Intermediates^{â€}. Photochemistry and Photobiology, 2008, 84, 941-948.	2.5	10
44	Lowâ€temperature Spectroscopy of Met100Ala Mutant of Photoactive Yellow Protein^{â€â€¡}. Photochemistry and Photobiology, 2008, 84, 970-976.	2.5	4
45	Interaction Between Nâ€terminal Loop and <i>Î²</i>â€Scaffold of Photoactive Yellow Protein^{â€,â€¡}. Photochemistry and Photobiology, 2008, 84, 1031-1037.	2.5	9
46	Conformational Changes in the N-Terminal Region of Photoactive Yellow Protein: A Time-Resolved Diffusion Study. Biophysical Journal, 2008, 94, 2187-2193.	0.5	33
47	Diverse Roles of Glycine Residues Conserved in Photoactive Yellow Proteins. Biophysical Journal, 2008, 94, 3620-3628.	0.5	10
48	1P-272 Photoreaction of parietopsin(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S64.	0.1	0
49	2S4-6 Protein structural changes : tertiary-structure-based model and real reaction(2S4 What protein) Tj ETQq1 1 0.784314 rgBT /Overl Butsuri, 2008, 48, S10.	0.1	0
50	1P-271 Analysis of transducin activation efficiencies of cone visual pigments(The 46th Annual Meeting) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
51	1P-273 Analysis of the regions in the C-terminus of G protein alpha subunit controlling the binding and activation efficiency by rhodopsin(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S64.	0.1	0
52	1P-276 Comparative studies of the photoreactions of all-trans-retinal-containing opsins, peropsin and retinochrome(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S65.	0.1	0
53	2P343 Construction and expression of rhodopsin mutants for analyzing the function of the second extracellular loop(Photobiology-vision and photoreception,Poster Presentations). Seibutsu Butsuri, 2007, 47, S198.	0.1	0
54	Novel Photochromic Molecules Based on 4,5-Dithienyl Thiazole with Fast Thermal Bleaching Rate. Chemistry of Materials, 2007, 19, 3479-3483.	6.7	148

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55	Characterization of the Solution Structure of the M Intermediate of Photoactive Yellow Protein Using High-Angle Solution X-Ray Scattering. Biophysical Journal, 2007, 92, 3633-3642.	0.5	20
56	Role of arginine 52 on the primary photoinduced events in the PYP photocycle. Chemical Physics Letters, 2007, 434, 320-325.	2.6	39
57	Attempt to simplify the amino-acid sequence of photoactive yellow protein with a set of simple rules. Proteins: Structure, Function and Bioinformatics, 2007, 67, 821-833.	2.6	6
58	Structure and Photoreaction of Photoactive Yellow Protein, a Structural Prototype of the PAS Domain Superfamilyâ€. Photochemistry and Photobiology, 2007, 83, 40-49.	2.5	95
59	Array of Aromatic Amino Acid Side Chains Located Near the Chromophore of Photoactive Yellow Proteinâ€. Photochemistry and Photobiology, 2007, 83, 280-286.	2.5	13
60	Preparation of Large Crystals of Photoactive Yellow Protein for Neutron Diffraction and High Resolution Crystal Structure Analysisâ€. Photochemistry and Photobiology, 2007, 83, 336-338.	2.5	10
61	Stilbene analogs in Hula-twist photoisomerization. Photochemical and Photobiological Sciences, 2006, 5, 874.	2.9	26
62	Conformational Changes of PYP Monitored by Diffusion Coefficient: Effect of N-Terminal Î±-Helices. Biophysical Journal, 2006, 90, 3686-3693.	0.5	40
63	A Single CH/Ï€ Weak Hydrogen Bond Governs Stability and the Photocycle of the Photoactive Yellow Protein. Journal of the American Chemical Society, 2006, 128, 10646-10647.	13.7	81
64	Time-Resolved Thermodynamics:Â Heat Capacity Change of Transient Species during Photoreaction of PYP. Journal of the American Chemical Society, 2006, 128, 1002-1008.	13.7	25
65	1P146 Attempt to understand the information encoded in the amino acid sequence of photoactive yellow protein by the simplification of sequence(4. Protein engineering,Poster) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 337 Td	0.1	0
66	1P110 Characterization of conformational rearrangement during the folding process of Staphylococcal nuclease(3. Protein folding and misfolding (I),Poster Session,Abstract,Meeting) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 29	0.1	0
67	2P092 Elucidation of the unfolding-state and the folding process of the disulfide-bond introduced mutant of Staphylococcal nuclease(31. Protein folding and misfolding (II),Poster) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 257 Td	0.1	0
68	2P342 The Photocycle of Met100Ala Mutant of Photoactive Yellow Protein Studied by Low-Temperature Spectroscopy(42. Sensory signal transduction,Poster Session,Abstract,Meeting Program of EABS &) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
69	2P343 Isolation of Photoactive Yellow Protein associated protein from Rhodobacter capsulatus(42.) Tj ETQq1 1 0.784314 rgBT /Overl Butsuri, 2006, 46, S381.	0.1	0
70	2P339 Neutron diffraction and high resolution X-ray crystal structure analysis of photoactive yellow protein(42. Sensory signal transduction,Poster Session,Abstract,Meeting Program of EABS & BSJ) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.1	0
71	pH-dependent Equilibrium between Long Lived Near-UV Intermediates of Photoactive Yellow Protein. Journal of Biological Chemistry, 2006, 281, 4318-4325.	3.4	29
72	A Biosensor in the Time Domain Based on the Diffusion Coefficient Measurement:â€‰ Intermolecular Interaction of an Intermediate of Photoactive Yellow Protein. Analytical Chemistry, 2005, 77, 6625-6629.	6.5	22

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73	Direct observation of the pH-dependent equilibrium between L-like and M intermediates of photoactive yellow protein. FEBS Letters, 2004, 577, 75-80.	2.8	19
74	Time and Frequency Domain Investigations on Ultrafast Photoreaction Dynamics of Photoactive Yellow Protein (PYP). The Review of Laser Engineering, 2004, 32, 114-120.	0.0	0
75	Photoisomerization by Hula Twist: 2,2â€²-Dimethylstilbene and a Ring-Fused Analogue. Angewandte Chemie - International Edition, 2003, 42, 3630-3633.	13.8	33
76	Concentration-Dependent Tetramerization of Bovine Visual Arrestin. Biophysical Journal, 2003, 85, 1186-1195.	0.5	52
77	Ultrafast photoreactions in protein nanospaces as revealed by fs fluorescence dynamics measurements on photoactive yellow protein and related systemsDedicated to Professor Dr Z. R. Grabowski and Professor Dr J. Wirz on the occasions of their 75th and 60th birthdays.. Physical Chemistry Chemical Physics, 2003, 5, 2454-2460.	2.8	57
78	Effect of Organic Anions on the Photoreaction of Photoactive Yellow Protein. Journal of Biochemistry, 2002, 132, 257-263.	1.7	15
79	Light-Induced Global Conformational Change of Photoactive Yellow Protein in Solution. Biochemistry, 2002, 41, 13595-13601.	2.5	66
80	Structural Change of Site-Directed Mutants of PYP: New Dynamics during pR State. Biophysical Journal, 2002, 83, 1567-1577.	0.5	61
81	Role of C-terminal region ofStaphylococcal nuclease for foldability, stability, and activity. Proteins: Structure, Function and Bioinformatics, 2002, 49, 255-265.	2.6	30
82	Ultrafast photoinduced reaction dynamics of photoactive yellow protein (PYP): observation of coherent oscillations in the femtosecond fluorescence decay dynamics. Chemical Physics Letters, 2002, 352, 220-225.	2.6	48
83	Mechanistic Pathways for the Photoisomerization Reaction of the Anchored, Tethered Chromophore of the Photoactive Yellow Protein and its MutantsÂ¶. Photochemistry and Photobiology, 2002, 76, 584-589.	2.5	0
84	Mechanistic Pathways for the Photoisomerization Reaction of the Anchored, Tethered Chromophore of the Photoactive Yellow Protein and its MutantsÂ¶. Photochemistry and Photobiology, 2002, 76, 584.	2.5	21
85	The Progress and Problem of X-ray Crystallography of Photocycle Intermediate of Photoactive Yellow Protein.. Seibutsu Butsuri, 2002, 42, 162-167.	0.1	1
86	Primary Photoreaction of Photoactive Yellow Protein Studied by Subpicosecondâˆ'Nanosecond Spectroscopy. Biochemistry, 2001, 40, 6047-6052.	2.5	78
87	Spectroscopic Characterization of the Photocycle Intermediates of Photoactive Yellow Proteinâ€. Biochemistry, 2001, 40, 14336-14343.	2.5	26
88	Light Induces Destabilization of Photoactive Yellow Proteinâ€. Biochemistry, 2001, 40, 2854-2859.	2.5	37
89	Roles of Amino Acid Residues near the Chromophore of Photoactive Yellow Proteinâ€. Biochemistry, 2001, 40, 4679-4685.	2.5	54
90	Low-Temperature Fourier Transform Infrared Spectroscopy of Photoactive Yellow Protein. Biochemistry, 2001, 40, 8997-9004.	2.5	73

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91	Temperature-Dependent Volume Change of the Initial Step of the Photoreaction of Photoactive Yellow Protein (PYP) Studied by Transient Grating. Journal of the American Chemical Society, 2000, 122, 8524-8528.	13.7	43
92	Light-Induced Conformational Changes of Rhodopsin Probed by Fluorescent Alexa594 Immobilized on the Cytoplasmic Surface. Biochemistry, 2000, 39, 15225-15233.	2.5	42
93	Effects of Modification of Protein Nanospace Structure and Change of Temperature on the Femtosecond to Picosecond Fluorescence Dynamics of Photoactive Yellow Protein. Journal of Physical Chemistry B, 2000, 104, 5191-5199.	2.6	65
94	Environmental Effects on the Femtosecondâ˘'Picosecond Fluorescence Dynamics of Photoactive Yellow Protein:Â Chromophores in Aqueous Solutions and in Protein Nanospaces Modified by Site-Directed Mutagenesis. Journal of Physical Chemistry B, 1998, 102, 7695-7698.	2.6	61
95	Evidence for Proton Transfer from Glu-46 to the Chromophore during the Photocycle of Photoactive Yellow Protein. Journal of Biological Chemistry, 1997, 272, 12905-12908.	3.4	88
96	The Last Phase of the Reprotonation Switch in Bacteriorhodopsin:â€‰ The Transition between the M-Type and the N-Type Protein Conformation Depends on Hydration. Biochemistry, 1997, 36, 12282-12287.	2.5	60
97	Photochemical and Biochemical Properties of Chicken Blue-Sensitive Cone Visual Pigment. Biochemistry, 1997, 36, 12773-12779.	2.5	71
98	Analysis of the Excited-State Dynamics of 13-trans-locked-Bacteriorhodopsin. Journal of Physical Chemistry A, 1997, 101, 412-417.	2.5	22
99	Presence of Two Rhodopsin Intermediates Responsible for Transducin Activationâ€. Biochemistry, 1997, 36, 14173-14180.	2.5	55
100	Femtosecond-picosecond fluorescence studies on excited state dynamics of photoactive yellow protein from Ectothiorhodospira halophila. Chemical Physics Letters, 1997, 270, 267-272.	2.6	104
101	Structure around C6â˘'C7Bond of the Chromophore in Bathorhodopsin:Â Low-Temperature Spectroscopy of 6s-cis-Locked Bicyclic Rhodopsin Analogsâ€. Biochemistry, 1996, 35, 6257-6262.	2.5	27
102	Photoreaction Cycle of Photoactive Yellow Protein fromEctothiorhodospira halophilaStudied by Low-Temperature Spectroscopyâ€. Biochemistry, 1996, 35, 14047-14053.	2.5	132
103	Structure and photobleaching process of chicken iodopsin. Biophysical Chemistry, 1995, 56, 57-62.	2.8	10
104	Reconstitution photoactive yellow protein from apoprotein and p -coumaric acid derivatives. FEBS Letters, 1995, 374, 157-160.	2.8	121
105	SHAPE OF THE CHROMOPHOIW BINDING SITE IN pharaonis PHOBORHODOPSIN FROM A STUDY USING RETINAL ANALOGS. Photochemistry and Photobiology, 1994, 60, 388-393.	2.5	27
106	Thermal recovery of iodopsin from its meta I-intermediate. FEBS Letters, 1994, 354, 165-168.	2.8	10
107	Direct observation of the thermal equilibria among lumirhodopsin, metarhodopsin I, and metarhodopsin II in chicken rhodopsin. Biochemistry, 1994, 33, 14351-14358.	2.5	38
108	A new rhodopsin analog involving 11Z-8,18-ethanoretinal as a chromophore.. Chemical and Pharmaceutical Bulletin, 1993, 41, 793-795.	1.3	5

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109	CONFORMATIONAL ANALYSIS OF THE RHODOPSIN CHROMOPHORE USING BICYCLIC RETINAL ANALOGUES. Photochemistry and Photobiology, 1992, 56, 915-919.	2.5	24
110	EXCITED STATE DYNAMICS OF RETINAL PROTEINS AS STUDIED BY FOURIER TRANSFORM OF OPTICAL ABSORPTION SPECTRUMâ€"I. DEVELOPMENT OF ANALYTICAL METHOD. Photochemistry and Photobiology, 1992, 56, 977-987.	2.5	14
111	NANOSECOND LASER PHOTOLYSIS OF PHOBORHODOPSIN: FROM <i>Natronobacterium pharaonis</i> APPEARANCE OF KL AND L INTERMEDIATES IN THE PHOTOCYCLE AT ROOM TEMPERATURE. Photochemistry and Photobiology, 1992, 56, 1129-1134.	2.5	43
112	The primary structure of iodopsin, a chicken red-sensitive cone pigment. FEBS Letters, 1990, 272, 128-132.	2.8	65
113	Low-temperature spectrophotometry of phoborhodopsin. FEBS Letters, 1988, 236, 333-336.	2.8	18