Hiroshi Sugimoto

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Crystal structure of human indoleamine 2,3-dioxygenase: Catalytic mechanism of O2 incorporation by a heme-containing dioxygenase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2611-2616.	3.3	389
2	Structural Basis of Biological N ₂ O Generation by Bacterial Nitric Oxide Reductase. Science, 2010, 330, 1666-1670.	6.0	292
3	Determination of damage-free crystal structure of an X-ray–sensitive protein using an XFEL. Nature Methods, 2014, 11, 734-736.	9.0	237
4	Substrate Recognition and Molecular Mechanism of Fatty Acid Hydroxylation by Cytochrome P450 from Bacillus subtilis. Journal of Biological Chemistry, 2003, 278, 9761-9767.	1.6	198
5	Crystal structure of the macrophage migration inhibitory factor from rat liver. Nature Structural Biology, 1996, 3, 259-266.	9.7	173
6	Crystal Structure of Humand-Dopachrome Tautomerase, a Homologue of Macrophage Migration Inhibitory Factor, at 1.54 à Resolutionâ€,‡. Biochemistry, 1999, 38, 3268-3279.	1.2	117
7	Crystal structures and catalytic mechanism of cytochrome P450 StaP that produces the indolocarbazole skeleton. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11591-11596.	3.3	108
8	Structural Basis of Human Cytoglobin for Ligand Binding. Journal of Molecular Biology, 2004, 339, 873-885.	2.0	106
9	Crystal structure of quinol-dependent nitric oxide reductase from Geobacillus stearothermophilus. Nature Structural and Molecular Biology, 2012, 19, 238-245.	3.6	106
10	Crystal Structure of H2O2-dependent Cytochrome P450SPα with Its Bound Fatty Acid Substrate. Journal of Biological Chemistry, 2011, 286, 29941-29950.	1.6	103
11	Structure of PAS-Linked Histidine Kinase and the Response Regulator Complex. Structure, 2009, 17, 1333-1344.	1.6	93
12	Ice-binding site of snow mold fungus antifreeze protein deviates from structural regularity and high conservation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9360-9365.	3.3	92
13	Crystal Structure and Peroxidase Activity of Myoglobin Reconstituted with Iron Porphycene. Inorganic Chemistry, 2006, 45, 10530-10536.	1.9	89
14	Density Functional Theory Study on a Missing Piece in Understanding of Heme Chemistry: The Reaction Mechanism for Indoleamine 2,3-Dioxygenase and Tryptophan 2,3-Dioxygenase. Journal of the American Chemical Society, 2008, 130, 12299-12309.	6.6	80
15	Crystal Structure of CYP105A1 (P450SU-1) in Complex with 1α,25-Dihydroxyvitamin D ₃ [,] . Biochemistry, 2008, 47, 4017-4027.	1.2	78
16	ONIOM Study on a Missing Piece in Our Understanding of Heme Chemistry: Bacterial Tryptophan 2,3-Dioxygenase with Dual Oxidants. Journal of the American Chemical Society, 2010, 132, 11993-12005.	6.6	74
17	Capturing an initial intermediate during the P450nor enzymatic reaction using time-resolved XFEL crystallography and caged-substrate. Nature Communications, 2017, 8, 1585.	5.8	74
18	Activation of Wild-Type Cytochrome P450BM3 by the Next Generation of Decoy Molecules: Enhanced Hydroxylation of Gaseous Alkanes and Crystallographic Evidence. ACS Catalysis, 2015, 5, 150-156.	5.5	73

#	Article	IF	CITATIONS
19	Numerical analysis of steady flows of a gas evaporating from its cylindrical condensed phase on the basis of kinetic theory. Physics of Fluids A, Fluid Dynamics, 1992, 4, 419-440.	1.6	69
20	Kinetic theory analysis of steady evaporating flows from a spherical condensed phase into a vacuum. Physics of Fluids A, Fluid Dynamics, 1993, 5, 1491-1511.	1.6	66
21	Crystal Structure and Mutational Analysis of Ca2+-Independent Type II Antifreeze Protein from Longsnout Poacher, Brachyopsis rostratus. Journal of Molecular Biology, 2008, 382, 734-746.	2.0	66
22	Dose-resolved serial synchrotron and XFEL structures of radiation-sensitive metalloproteins. IUCrJ, 2019, 6, 543-551.	1.0	65
23	Numerical analysis of steady flows of a gas condensing on or evaporating from its plane condensed phase on the basis of kinetic theory: Effect of gas motion along the condensed phase. Physics of Fluids A, Fluid Dynamics, 1991, 3, 2260-2275.	1.6	63
24	Structural Characterization of the Proximal and Distal Histidine Environment of Cytoglobin and Neuroglobin. Biochemistry, 2005, 44, 13257-13265.	1.2	62
25	Direct Hydroxylation of Benzene to Phenol by Cytochrome P450BM3 Triggered by Amino Acid Derivatives. Angewandte Chemie - International Edition, 2017, 56, 10324-10329.	7.2	62
26	Manganese(V) Porphycene Complex Responsible for Inert C–H Bond Hydroxylation in a Myoglobin Matrix. Journal of the American Chemical Society, 2017, 139, 18460-18463.	6.6	60
27	Crystal structure of macrophage migration inhibitory factor from human à lymphocyte at 2.1 Ã resolution. FEBS Letters, 1996, 389, 145-148.	1.3	57
28	X-ray Crystal Structure of Michaelis Complex of Aldoxime Dehydratase. Journal of Biological Chemistry, 2009, 284, 32089-32096.	1.6	55
29	Structural Basis for the Transcriptional Regulation of Heme Homeostasis in Lactococcus lactis. Journal of Biological Chemistry, 2012, 287, 30755-30768.	1.6	55
30	Crystal Structure of 1-Aminocyclopropane-1-carboxylate Deaminase from Hansenula saturnus. Journal of Biological Chemistry, 2000, 275, 34557-34565.	1.6	52
31	The Structural Basis for the Exo-mode of Action in CH74 Oligoxyloglucan Reducing End-specific Cellobiohydrolase. Journal of Molecular Biology, 2007, 370, 53-62.	2.0	52
32	Molecular structure and function of bacterial nitric oxide reductase. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 680-687.	0.5	52
33	A substrate-binding-state mimic of H ₂ O ₂ -dependent cytochrome P450 produced by one-point mutagenesis and peroxygenation of non-native substrates. Catalysis Science and Technology, 2016, 6, 5806-5811.	2.1	49
34	Structural basis for nitrous oxide generation by bacterial nitric oxide reductases. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 1195-1203.	1.8	47
35	Structure-Based Design of a Highly Active Vitamin D Hydroxylase from Streptomyces griseolus CYP105A1. Biochemistry, 2008, 47, 11964-11972.	1.2	46
36	Molecular Cloning of Humand-Dopachrome Tautomerase cDNA: N-terminal Proline Is Essential for Enzyme Activation. Biochemical and Biophysical Research Communications, 1998, 243, 538-544.	1.0	44

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37	Palladium-Nanoparticle-Catalyzed 1,7-Palladium Migration Involving C–H Activation, Followed by Intramolecular Amination: Regioselective Synthesis of N1-Arylbenzotriazoles and an Evaluation of Their Inhibitory Activity toward Indoleamine 2,3-Dioxygenase. Journal of Organic Chemistry, 2014, 79, 6366-6371.	1.7	43
38	Structure and Ligand Binding Properties of Myoglobins Reconstituted with Monodepropionated Heme: Functional Role of Each Heme Propionate Side Chain,. Biochemistry, 2007, 46, 9406-9416.	1.2	42
39	Crystal structure of bacterial haem importer complex in the inward-facing conformation. Nature Communications, 2016, 7, 13411.	5.8	40
40	Diversity and Substrate Specificity in the Structures of Steroidogenic Cytochrome P450 Enzymes. Biological and Pharmaceutical Bulletin, 2012, 35, 818-823.	0.6	39
41	The Bénard problem for a rarefied gas: Formation of steady flow patterns and stability of array of rolls. Physics of Fluids, 1997, 9, 3898-3914.	1.6	38
42	Hemozoin produced by mammals confers heme tolerance. ELife, 2019, 8, .	2.8	38
43	High-throughput structures of protein–ligand complexes at room temperature using serial femtosecond crystallography. IUCrJ, 2019, 6, 1074-1085.	1.0	36
44	Dynamics of nitric oxide controlled by protein complex in bacterial system. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9888-9893.	3.3	35
45	Inhibition of Heme Uptake in <i>Pseudomonas aeruginosa</i> by its Hemophore (HasA _p) Bound to Synthetic Metal Complexes. Angewandte Chemie - International Edition, 2014, 53, 2862-2866.	7.2	34
46	Threeâ€step hydroxylation of vitamin D ₃ by a genetically engineered CYP105A1. FEBS Journal, 2010, 277, 3999-4009.	2.2	33
47	Bioconversion of vitamin D to its active form by bacterial or mammalian cytochrome P450. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2011, 1814, 249-256.	1.1	30
48	Control of stereoselectivity of benzylic hydroxylation catalysed by wild-type cytochrome P450BM3 using decoy molecules. Catalysis Science and Technology, 2017, 7, 3332-3338.	2.1	30
49	Structural basis for promotion of duodenal iron absorption by enteric ferric reductase with ascorbate. Communications Biology, 2018, 1, 120.	2.0	30
50	Identification of the Fe–O2 and the Fe=O Heme Species for Indoleamine 2,3-Dioxygenase during Catalytic Turnover. Chemistry Letters, 2010, 39, 36-37.	0.7	29
51	Structural basis for oxygen sensing and signal transduction of the heme-based sensor protein Aer2 from Pseudomonas aeruginosa. Chemical Communications, 2012, 48, 6523.	2.2	29
52	Structures of reduced and ligandâ€bound nitric oxide reductase provide insights into functional differences in respiratory enzymes. Proteins: Structure, Function and Bioinformatics, 2014, 82, 1258-1271.	1.5	29
53	High-resolution structure of human cytoglobin: identification of extra N- and C-termini and a new dimerization mode. Acta Crystallographica Section D: Biological Crystallography, 2006, 62, 671-677.	2.5	28
54	The Signaling Pathway in Histidine Kinase and the Response Regulator Complex Revealed by X-ray Crystallography and Solution Scattering. Journal of Molecular Biology, 2006, 362, 123-139.	2.0	27

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55	α-Oxidative decarboxylation of fatty acids catalysed by cytochrome P450 peroxygenases yielding shorter-alkyl-chain fatty acids. Catalysis Science and Technology, 2018, 8, 434-442.	2.1	27
56	Hijacking the Heme Acquisition System of Pseudomonas aeruginosa for the Delivery of Phthalocyanine as an Antimicrobial. ACS Chemical Biology, 2019, 14, 1637-1642.	1.6	27
57	Evaporation of a rarefied gas from a cylindrical condensed phase into a vacuum. Physics of Fluids, 1995, 7, 2072-2085.	1.6	26
58	Chiralâ€Substrateâ€Assisted Stereoselective Epoxidation Catalyzed by H ₂ O ₂ â€Dependent Cytochrome P450 _{SPα} . Chemistry - an Asian Journal, 2012, 7, 2286-2293.	1.7	26
59	Synthesis and biological activity of 1-methyl-tryptophan-tirapazamine hybrids as hypoxia-targeting indoleamine 2,3-dioxygenase inhibitors. Bioorganic and Medicinal Chemistry, 2008, 16, 8661-8669.	1.4	24
60	The crystal structure of a xyloglucanâ€specific endoâ€Î²â€1,4â€glucanase from <i>Geotrichum</i> sp. M128 xyloglucanase reveals a key amino acid residue for substrate specificity. FEBS Journal, 2009, 276, 5094-5100.	2.2	24
61	Serial Femtosecond Zero Dose Crystallography Captures a Waterâ€Free Distal Heme Site in a Dyeâ€Decolorising Peroxidase to Reveal a Catalytic Role for an Arginine in Fe ^{IV} =O Formation. Angewandte Chemie - International Edition, 2020, 59, 21656-21662.	7.2	24
62	Direct Hydroxylation of Benzene to Phenol by Cytochrome P450BM3 Triggered by Amino Acid Derivatives. Angewandte Chemie, 2017, 129, 10460-10465.	1.6	23
63	Reconstitution of full-length P450BM3 with an artificial metal complex by utilising the transpeptidase Sortase A. Chemical Communications, 2018, 54, 7892-7895.	2.2	23
64	Time-resolved studies of metalloproteins using X-ray free electron laser radiation at SACLA. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129466.	1.1	23
65	Crystallization of Rat Liver Macrophage Migration Inhibitory Factor for MAD Analysis. Journal of Structural Biology, 1995, 115, 331-334.	1.3	22
66	The behavior of a gas in the continuum limit in the light of kinetic theory: The case of cylindrical Couette flows with evaporation and condensation. Physics of Fluids, 1996, 8, 3403-3413.	1.6	22
67	Cylindrical Couette flows of a rarefied gas with evaporation and condensation: Reversal and bifurcation of flows. Physics of Fluids, 1999, 11, 476-490.	1.6	22
68	Crystal structure of the carbon monoxide complex of human cytoglobin. Proteins: Structure, Function and Bioinformatics, 2011, 79, 1143-1153.	1.5	22
69	Systematic Evolution of Decoy Molecules for the Highly Efficient Hydroxylation of Benzene and Small Alkanes Catalyzed by Wild-Type Cytochrome P450BM3. ACS Catalysis, 2020, 10, 9136-9144.	5.5	22
70	Short-lived intermediate in N ₂ O generation by P450 NO reductase captured by time-resolved IR spectroscopy and XFEL crystallography. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
71	Crystal Structure and Spectroscopic Studies of a Stable Mixed-Valent State of the Hemerythrin-like Domain of a Bacterial Chemotaxis Protein. Inorganic Chemistry, 2011, 50, 4892-4899.	1.9	20
72	Cooperative Binding of l-Trp to Human Tryptophan 2,3-Dioxygenase: Resonance Raman Spectroscopic Analysis. Journal of Biochemistry, 2009, 145, 505-515.	0.9	18

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73	XFEL Crystal Structures of Peroxidase Compound II. Angewandte Chemie - International Edition, 2021, 60, 14578-14585.	7.2	18
74	Resonance Raman study on the oxygenated and the ferryl-oxo species of indoleamine 2,3-dioxygenase during catalytic turnover. Faraday Discussions, 2011, 148, 239-247.	1.6	17
75	Crystallization and Preliminary X-Ray Analysis of Humand-Dopachrome Tautomerase. Journal of Structural Biology, 1997, 120, 105-108.	1.3	16
76	Protein engineering of CYP105s for their industrial uses. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2018, 1866, 23-31.	1.1	16
77	Identification of an internal cavity in the PhoQ sensor domain for PhoQ activity and SafA-mediated control. Bioscience, Biotechnology and Biochemistry, 2019, 83, 684-694.	0.6	16
78	Structures of the Heme Acquisition Protein HasA with Iron(III)â€5,15â€Diphenylporphyrin and Derivatives Thereof as an Artificial Prosthetic Group. Angewandte Chemie - International Edition, 2017, 56, 15279-15283.	7.2	15
79	Production of an active form of vitamin D 2 by genetically engineered CYP105A1. Biochemical and Biophysical Research Communications, 2017, 486, 336-341.	1.0	13
80	Highly malleable haem-binding site of the haemoprotein HasA permits stable accommodation of bulky tetraphenylporphycenes. RSC Advances, 2019, 9, 18697-18702.	1.7	13
81	Crystals in Minutes: Instant Onâ€6ite Microcrystallisation of Various Flavours of the CYP102A1 (P450BM3) Haem Domain. Angewandte Chemie - International Edition, 2020, 59, 7611-7618.	7.2	13
82	Crystal Structure, Exogenous Ligand Binding, and Redox Properties of an Engineered Diiron Active Site in a Bacterial Hemerythrin. Inorganic Chemistry, 2013, 52, 13014-13020.	1.9	10
83	H ₂ O ₂ -dependent substrate oxidation by an engineered diiron site in a bacterial hemerythrin. Chemical Communications, 2014, 50, 3421-3423.	2.2	9
84	BIFURCATION STUDIES OF FLOWS OF A GAS BETWEEN ROTATING COAXIAL CIRCULAR CYLINDERS WITH EVAPORATION AND CONDENSATION BY THE BOLTZMANN SYSTEM. Transport Theory and Statistical Physics, 2002, 31, 299-332.	0.4	8
85	Crystallization and preliminary crystallographic studies of human indoleamine 2,3-dioxygenase. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 221-223.	0.7	8
86	Heme controls the structural rearrangement of its sensor protein mediating the hemolytic bacterial survival. Communications Biology, 2021, 4, 467.	2.0	8
87	Strong evaporation from a plane condensed phase Shinku/Journal of the Vacuum Society of Japan, 1988, 31, 420-423.	0.2	8
88	Crystallization and preliminary X-ray crystallographic analysis of Ca2+-independent and Ca2+-dependent species of the type II antifreeze protein. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 538-541.	0.7	7
89	A Specific Interaction ofl-Tryptophan with CO of CO-Bound Indoleamine 2,3-Dioxygenase Identified by Resonance Raman Spectroscopy. Biochemistry, 2010, 49, 10081-10088.	1.2	6
90	Structural basis for binding and transfer of heme in bacterial hemeâ€acquisition systems. Proteins: Structure, Function and Bioinformatics, 2017, 85, 2217-2230.	1.5	6

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91	Structures of the Heme Acquisition Protein HasA with Iron(III)â€5,15â€Diphenylporphyrin and Derivatives Thereof as an Artificial Prosthetic Group. Angewandte Chemie, 2017, 129, 15481-15485.	1.6	6
92	Chemo-Mechanical Coupling in the Transport Cycle of a Heme ABC Transporter. Journal of Physical Chemistry B, 2019, 123, 7270-7281.	1.2	6
93	X-ray Crystallography and Electron Paramagnetic Resonance Spectroscopy Reveal Active Site Rearrangement of Cold-Adapted Inorganic Pyrophosphatase. Scientific Reports, 2020, 10, 4368.	1.6	6
94	Kristalle in Minutenschnelle: Sofortige Mikrokristallisation verschiedenster Varianten der CYP102A1â€(P450BM3)â€Hädomäe. Angewandte Chemie, 2020, 132, 7681-7689.	1.6	6
95	Strong evaporation from a plane condensed phase. II Shinku/Journal of the Vacuum Society of Japan, 1989, 32, 214-218.	0.2	6
96	A Hemeâ€Acquisition Protein Reconstructed with a Cobalt 5â€Oxaporphyrinium Cation and Its Growthâ€Inhibition Activity Toward Multidrugâ€Resistant Pseudomonas aeruginosa. Angewandte Chemie - International Edition, 2022, 61, e202112456.	7.2	6
97	Structure of the response regulator ChrA in the haem-sensing two-component system of <i>Corynebacterium diphtheriae</i> . Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 966-971.	0.4	5
98	Design of Novel Hypoxia-Targeting IDO Hybrid Inhibitors Conjugated with an Unsubstituted L-TRP as an IDO Affinity Moiety. Advances in Experimental Medicine and Biology, 2010, 662, 415-421.	0.8	5
99	A nearly on-axis spectroscopic system for simultaneouslyÂmeasuring UV–visible absorption and X-ray diffraction in the SPring-8 structural genomics beamline. Journal of Synchrotron Radiation, 2016, 23, 334-338.	1.0	4
100	Serial Femtosecond Zero Dose Crystallography Captures a Waterâ€Free Distal Heme Site in a Dyeâ€Decolorising Peroxidase to Reveal a Catalytic Role for an Arginine in Fe ^{IV} =O Formation. Angewandte Chemie, 2020, 132, 21840-21846.	1.6	4
101	Tetraphenylporphyrin Enters the Ring: First Example of a Complex between Highly Bulky Porphyrins and a Protein**. ChemBioChem, 2022, 23, .	1.3	4
102	Quantitative numerical analysis of micro-thermal transpiration pump using kinetic theory of gases. Microfluidics and Nanofluidics, 2022, 26, 1.	1.0	3
103	Resonance Raman study on indoleamine 2,3-dioxygenase: Control of reactivity by substrate-binding. Chemical Physics, 2013, 419, 178-183.	0.9	1
104	UV Resonance Raman Characterization of a Substrate Bound to Human Indoleamine 2,3-Dioxygenase 1. Biophysical Journal, 2019, 117, 706-716.	0.2	1
105	Spatially restricted substrate-binding site of cortisol-synthesizing CYP11B1 limits multiple hydroxylations and hinders aldosterone synthesis. Current Research in Structural Biology, 2021, 3, 192-205.	1.1	1
106	A Hemeâ€Acquisition Protein Reconstructed with a Cobalt 5â€Oxaporphyrinium Cation and Its Growthâ€Inhibition Activity Toward Multidrugâ€Resistant Pseudomonas aeruginosa. Angewandte Chemie, 2022, 134, .	1.6	1
107	Metabolism of non-steroidal anti-inflammatory drugs (NSAIDs) by Streptomyces griseolus CYP105A1 and its variants. Drug Metabolism and Pharmacokinetics, 2022, 45, 100455.	1.1	1
108	X-ray structure and reaction mechanism of human indoleamine 2,3-dioxygenase. International Congress Series, 2007, 1304, 85-97.	0.2	0

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109	Innenrücktitelbild: Structures of the Heme Acquisition Protein HasA with Iron(III)â€5,15â€Ðiphenylporphyrin and Derivatives Thereof as an Artificial Prosthetic Group (Angew. Chem.) Tj E	TQna 1 0.1	78 4 314 rgB
110	Structure and Molecular Mechanism of the Bacterial Heme Transporter. Seibutsu Butsuri, 2018, 58, 022-023.	0.0	0
111	XFEL Crystal Structures of Peroxidase Compound II. Angewandte Chemie, 2021, 133, 14699-14706.	1.6	0
112	Strong evaporation from a cylindrical condensed phase Shinku/Journal of the Vacuum Society of Japan, 1991, 34, 387-389.	0.2	0
113	Kinetic Theory Analysis of Steady Evaporating Flows from a Cylindrical Condensed Phase into a Vacuum Shinku/Journal of the Vacuum Society of Japan, 1994, 37, 147-150.	0.2	Ο
114	Innenrücktitelbild: A Hemeâ€Acquisition Protein Reconstructed with a Cobalt 5â€Oxaporphyrinium Cation and Its Growthâ€Inhibition Activity Toward Multidrugâ€Resistant <i>Pseudomonas aeruginosa</i> (Angew. Chem. 7/2022). Angewandte Chemie, 2022, 134, .	1.6	0