Satoshi Murakami

List of Publications by Year
in descending order

117 papers	4,560 citations	159585 30 h-index	110387 64 g-index
123 all docs	123 docs citations	123 times ranked	3505 citing authors

#	Article	IF	Citations
1	Crystal structure of bacterial multidrug efflux transporter AcrB. Nature, 2002, 419, 587-593.	27.8	893
2	Crystal structures of a multidrug transporter reveal a functionally rotating mechanism. Nature, 2006, 443, 173-179.	27.8	684
3	Crystal Structure of the DsbB-DsbA Complex Reveals a Mechanism of Disulfide Bond Generation. Cell, 2006, 127, 789-801.	28.9	233
4	Structural and functional diversity calls for a new classification of ABC transporters. FEBS Letters, 2020, 594, 3767-3775.	2.8	169
5	Structure of the MacABâ€“TolC ABC-type tripartite multidrug efflux pump. Nature Microbiology, 2017, 2, 17070.	13.3	140
6	Structure, mechanism and cooperation of bacterial multidrug transporters. Current Opinion in Structural Biology, 2015, 33, 76-91.	5.7	129
7	RND Efflux Pumps: Structural Information Translated into Function and Inhibition Mechanisms. Current Topics in Medicinal Chemistry, 2013, 13, 3079-3100.	2.1	122
8	Multidrug efflux transporter, AcrBâ€”the pumping mechanism. Current Opinion in Structural Biology, 2008, 18, 459-465.	5.7	110
9	Direct Interaction of Multidrug Efflux Transporter AcrB and Outer Membrane Channel TolC Detected via Site-Directed Disulfide Cross-Linkingâ€. Biochemistry, 2005, 44, 11115-11121.	2.5	104
10	Conformational plasticity of RNA for target recognition as revealed by the 2.15â€‰Ã… crystal structure of a human IgGâ€“aptamer complex. Nucleic Acids Research, 2010, 38, 7822-7829.	14.5	98
11	Multidrug-exporting secondary transporters. Current Opinion in Structural Biology, 2003, 13, 443-452.	5.7	83
12	Drug export and allosteric coupling in a multidrug transporter revealed by molecular simulations. Nature Communications, 2010, 1, 117.	12.8	82
13	Dynamic nature of disulphide bond formation catalysts revealed by crystal structures of DsbB. EMBO Journal, 2009, 28, 779-791.	7.8	74
14	Crystal structure of tripartite-type ABC transporter MacB from Acinetobacter baumannii. Nature Communications, 2017, 8, 1336.	12.8	74
15	Î²-Lactam Selectivity of Multidrug Transporters AcrB and AcrD Resides in the Proximal Binding Pocket. Journal of Biological Chemistry, 2014, 289, 10680-10690.	3.4	66
16	Mutation of the Mg2+ Transporter SLC41A1 Results in a Nephronophthisis-Like Phenotype. Journal of the American Society of Nephrology: JASN, 2013, 24, 967-977.	6.1	63
17	Extramembrane Central Pore of Multidrug Exporter AcrB in Escherichia coli Plays an Important Role in Drug Transport. Journal of Biological Chemistry, 2004, 279, 3743-3748.	3.4	54
18	Laser ablation for protein crystal nucleation and seeding. Chemical Society Reviews, 2014, 43, 2147-2158.	38.1	54

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19	Growth of Protein Crystals in Hydrogels Prevents Osmotic Shock. Journal of the American Chemical Society, 2012, 134, 5786-5789.	13.7	53
20	Drug Uptake Pathways of Multidrug Transporter AcrB Studied by Molecular Simulations and Site-Directed Mutagenesis Experiments. Journal of the American Chemical Society, 2013, 135, 7474-7485.	13.7	53
21	Femtosecond laser-induced nucleation of protein in agarose gel. Journal of Crystal Growth, 2009, 311, 956-959.	1.5	51
22	Enhancement of femtosecond laser-induced nucleation of protein in a gel solution. Applied Physics Letters, 2010, 96, .	3.3	45
23	Waterâ€Mediated Recognition of Simple Alkyl Chains by Heartâ€Type Fattyâ€Acidâ€Binding Protein. Angewandte Chemie - International Edition, 2015, 54, 1508-1511.	13.8	41
24	Promotion of protein crystal growth by actively switching crystal growth mode via femtosecond laser ablation. Nature Photonics, 2016, 10, 723-726.	31.4	40
25	Crystal structure of AcrB complexed with linezolid at 3.5ÂÃ... resolution. Journal of Structural and Functional Genomics, 2013, 14, 71-75.	1.2	38
26	Membrane Protein Crystallization Using Laser Irradiation. Japanese Journal of Applied Physics, 2004, 43, L1376-L1378.	1.5	36
27	Functional Role of Transmembrane Helix 6 in Drug Binding and Transport by the ABC Transporter MsbA. Biochemistry, 2008, 47, 10904-10914.	2.5	36
28	Effect of ultrasonic irradiation on protein crystallization. Journal of Crystal Growth, 2006, 292, 437-440.	1.5	35
29	Functional Rotation Induced by Alternating Protonation States in the Multidrug Transporter AcrB: All-Atom Molecular Dynamics Simulations. Biochemistry, 2013, 52, 7648-7658.	2.5	35
30	Energetics and conformational pathways of functional rotation in the multidrug transporter AcrB. ELife, 2018, 7, .	6.0	32
31	Selective crystallization of metastable phase of acetaminophen by ultrasonic irradiation. Applied Physics Express, 2015, 8, 065501.	2.4	31
32	Laser-induced nucleation in protein crystallization: Local increase in protein concentration induced by femtosecond laser irradiation. Journal of Crystal Growth, 2011, 318, 741-744.	1.5	26
33	Selective crystallization of the metastable phase of indomethacin at the interface of liquid/air bubble induced by femtosecond laser irradiation. Applied Physics Express, 2015, 8, 045501.	2.4	26
34	Promotion of Crystal Nucleation of Protein by Semi-Solid Agarose Gel. Applied Physics Express, 2009, 2, 125501.	2.4	25
35	Laser energy dependence on femtosecond laser-induced nucleation of protein. Applied Physics A: Materials Science and Processing, 2008, 93, 911-915.	2.3	24
36	Femtosecond laser processing of protein crystals grown in agarose gel. Journal of Crystal Growth, 2009, 312, 73-78.	1.5	24

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37	Effects of a Forced Solution Flow on the Step Advancement on {110} Faces of Tetragonal Lysozyme Crystals: Direct Visualization of Individual Steps under a Forced Solution Flow. Crystal Growth and Design, 2012, 12, 2856-2863.	3.0	23
38	Purification, crystallization and preliminary X-ray diffraction of SecDF, a translocon-associated membrane protein, fromThermus thermophilus. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 376-380.	0.7	22
39	Protein Crystallization in Agarose Gel with High Strength: Developing an Automated System for Protein Crystallographic Processes. Japanese Journal of Applied Physics, 2009, 48, 075502.	1.5	22
40	Structure of the human-heart fatty-acid-binding protein 3 in complex with the fluorescent probe 1-anilinonaphthalene-8-sulphonic acid. Journal of Synchrotron Radiation, 2013, 20, 923-928.	2.4	22
41	Structure and function relationship of OqxB efflux pump from Klebsiella pneumoniae. Nature Communications, 2021, 12, 5400.	12.8	22
42	Crystallization and preliminary X-ray analysis of the tRNA thiolation enzyme MnmA fromEscherichia colicomplexed with tRNAGlu. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 368-371.	0.7	19
43	Molecular resolution investigation of tetragonal lysozyme (110) face in liquid by frequency-modulation atomic force microscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C4C11-C4C14.	1.2	18
44	Crystallization and preliminary neutron diffraction studies of HIV-1 protease cocrystallized with inhibitor KNI-272. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 1003-1006.	0.7	17
45	Powering the ABC multidrug exporter LmrA: How nucleotides embrace the ion-motive force. Science Advances, 2018, 4, eaas9365.	10.3	17
46	Comparison of the envelope architecture of E. coli using two methods: CEMOVIS and cryo-electron tomography. Journal of Electron Microscopy, 2010, 59, 419-426.	0.9	16
47	Influence of energy and wavelength on femtosecond laser-induced nucleation of protein. Chemical Physics Letters, 2011, 510, 139-142.	2.6	16
48	Spatially Precise, Soft Microseeding of Single Protein Crystals by Femtosecond Laser Ablation. Crystal Growth and Design, 2012, 12, 4334-4339.	3.0	16
49	A Novel Approach for Protein Crystallization by a Synthetic Hydrogel with Thermoreversible Gelation Polymer. Crystal Growth and Design, 2013, 13, 1899-1904.	3.0	16
50	New Technique of Manipulating a Protein Crystal Using Adhesive Material. Applied Physics Express, 0, 1, 037002.	2.4	15
51	Growth of Large Protein Crystals by Top-Seeded Solution Growth Together with the Floating and Solution-Stirring Technique. Crystal Growth and Design, 2009, 9, 5227-5232.	3.0	15
52	Approach for growth of high-quality and large protein crystals. Journal of Synchrotron Radiation, 2011, 18, 16-19.	2.4	15
53	Crystallization of aspirin form II by femtosecond laser irradiation. Applied Physics Express, 2019, 12, 015507.	2.4	15
54	Protein Cryocrystallography Using Laser-Processed Crystal. Japanese Journal of Applied Physics, 2005, 44, L54-L56.	1.5	14

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55	Metastable crystal growth of acetaminophen using solution-mediated phase transformation. Applied Physics Express, 2017, 10, 015501.	2.4	14
56	Effect of Gelâ€“Solution Interface on Femtosecond Laser-Induced Nucleation of Protein. Crystal Growth and Design, 2013, 13, 1491-1496.	3.0	13
57	Structure of the Î³â€“Îµ complex of cyanobacterial F1-ATPase reveals a suppression mechanism of the Î³ subunit on ATP hydrolysis in phototrophs. Biochemical Journal, 2018, 475, 2925-2939.	3.7	13
58	Processing of membrane protein crystal using ultraviolet laser irradiation. Journal of Bioscience and Bioengineering, 2005, 100, 50-53.	2.2	12
59	Effect of solution flow produced by rotary shaker on protein crystallization. Journal of Crystal Growth, 2008, 310, 2168-2172.	1.5	12
60	Femtosecond Laser Processing of Agarose Gel Surrounding Protein Crystals for Development of an Automated Crystal Capturing System. Japanese Journal of Applied Physics, 2009, 48, 105502.	1.5	12
61	Spiral Growth Can Enhance Both the Normal Growth Rate and Quality of Tetragonal Lysozyme Crystals Grown under a Forced Solution Flow. Crystal Growth and Design, 2015, 15, 2137-2143.	3.0	12
62	Growth of high-quality metastable crystal of acetaminophen using solution-mediated phase transformation at low supersaturation. Journal of Crystal Growth, 2018, 502, 76-82.	1.5	12
63	Solution-stirring method improves crystal quality of human triosephosphate isomerase. Journal of Bioscience and Bioengineering, 2006, 101, 83-86.	2.2	11
64	Crystal Growth Procedure of HIV-1 Protease-Inhibitor KNI-272 Complex for Neutron Structural Analysis at 1.9 Ã... Resolution. Crystal Growth and Design, 2010, 10, 2990-2994.	3.0	11
65	Crystallization of acetaminophen form II by plastic-ball-assisted ultrasonic irradiation. Applied Physics Express, 2017, 10, 025501.	2.4	11
66	Femtosecond Laser Processing of Protein Crystals in Crystallization Drop. Japanese Journal of Applied Physics, 2005, 44, L873-L875.	1.5	10
67	Protein Crystallization by Combining Laser Irradiation and Solution-Stirring Techniques. Japanese Journal of Applied Physics, 2005, 44, 1365-1366.	1.5	10
68	Development of protein seed crystals reinforced with high-strength hydrogels. CrystEngComm, 2015, 17, 8064-8071.	2.6	10
69	Temperature-Screening System for Determining Protein Crystallization Conditions. Japanese Journal of Applied Physics, 2005, 44, 4080-4083.	1.5	9
70	Crystallization and preliminary crystallographic analysis of orotidine 5â€²-monophosphate decarboxylase from the human malaria parasitePlasmodium falciparum. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 542-545.	0.7	9
71	Crystallization and preliminary X-ray diffraction studies of an RNA aptamer in complex with the human IgG Fc fragment. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 942-944.	0.7	9
72	Molecular mechanism underlying promiscuous polyamine recognition by spermidine acetyltransferase. International Journal of Biochemistry and Cell Biology, 2016, 76, 87-97.	2.8	9

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73	A crystallization technique for obtaining large protein crystals with increased mechanical stability using agarose gel combined with a stirring technique. Journal of Crystal Growth, 2016, 452, 172-178.	1.5	9
74	Improvement of metastable crystal of acetaminophen via control of crystal growth rate. Applied Physics Express, 2018, 11, 035501.	2.4	9
75	Tripartite transporters as mechanotransmitters in periplasmic alternatingâ€access mechanisms. FEBS Letters, 2020, 594, 3908-3919.	2.8	9
76	Femtosecond laser-induced cleaving of protein crystal in water solution. Applied Surface Science, 2007, 253, 6447-6450.	6.1	8
77	Structures and Transport Mechanisms of RND Efflux Pumps. , 2016, , 3-28.		8
78	Cooling-rate screening system for determining protein crystal growth conditions. Journal of Crystal Growth, 2006, 292, 433-436.	1.5	7
79	Evaluation and Improvement of a Technique to Manipulate Protein Crystals in Solution. Japanese Journal of Applied Physics, 2008, 47, 8995-8997.	1.5	7
80	Estimated effects of silicone glue on protein crystal growth. Journal of Crystal Growth, 2010, 312, 2771-2774.	1.5	7
81	Growth of Protein Crystals by Syringe-Type Top-Seeded Solution Growth. Crystal Growth and Design, 2011, 11, 1486-1492.	3.0	7
82	A Manipulating Tool for Protein Microcrystals in Solution Using Adhesive Materials. Japanese Journal of Applied Physics, 2009, 48, 118001.	1.5	6
83	Effect of Evaporation on Protein Crystals Grown in Semi-Solid Agarose Hydrogel. Japanese Journal of Applied Physics, 2011, 50, 025502.	1.5	6
84	Crystals of bovine heart ubiquinolâ€“cytochrome c reductase diffracting X-rays up to 2.8â€…Ã… resolution at 276â€…K. Acta Crystallographica Section D: Biological Crystallography, 1998, 54, 146-147.	2.5	5
85	Development of protein crystallization and processing: femtosecond laser, all solid-state 193 nm laser, and solution stirring techniques. , 2007, , .		5
86	The Î²-hairpin region of the cyanobacterial F1-ATPase Î³-subunit plays a regulatory role in the enzyme activity. Biochemical Journal, 2019, 476, 1771-1780.	3.7	5
87	Protein Crystal Growth Using Laser-Processed Seed Crystals. Japanese Journal of Applied Physics, 2005, 44, 3177-3179.	1.5	4
88	Protein crystallization in a 100 nl solution with new stirring equipment. Journal of Synchrotron Radiation, 2008, 15, 269-272.	2.4	4
89	Growth of large protein crystals by a large-scale hanging-drop method. Journal of Applied Crystallography, 2010, 43, 937-939.	4.5	4
90	Effect of Evaporation on Protein Crystals Grown in Semi-Solid Agarose Hydrogel. Japanese Journal of Applied Physics, 2011, 50, 025502.	1.5	4

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91	Atomic-Scale Imaging of Surface and Hydration Structures of Stable and Metastable Acetaminophen Crystals by Frequency Modulation Atomic Force Microscopy. Journal of Physical Chemistry C, 2018, 122, 21983-21990.	3.1	4
92	Application of femtosecond laser ablation for detaching grown protein crystals from glass capillary tube. Journal of Bioscience and Bioengineering, 2006, 102, 372-374.	2.2	3
93	Crystallization and preliminary X-ray crystallographic analysis of Ca²⁺-free primary Ca²⁺-sensor of Na⁺/Ca²⁺exchanger. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 1125-1127.	0.7	3
94	Crystallization and preliminary X-ray crystallographic analysis of a helicase-like domain from a tomato mosaic virus replication protein. Acta Crystallographica Section F: Structural Biology Communications, 2011, 67, 1649-1652.	0.7	3
95	A new practical technique for high quality protein crystallization with the solution stirring technique at the interface between high-concentrated hydrogel and solution. Japanese Journal of Applied Physics, 2014, 53, 065502.	1.5	3
96	Crystallization and preliminary crystallographic studies of PotA, a membrane-associated ATPase of the spermidine-preferential uptake system inThermotoga maritima. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 738-741.	0.8	3
97	Preliminary X-ray analysis of the binding domain of the soybean vacuolar sorting receptor complexed with a sorting determinant of a seed storage protein. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 132-135.	0.8	3
98	Protein crystallization with paper. Japanese Journal of Applied Physics, 2016, 55, 050302.	1.5	3
99	Engineered MATE multidrug transporters reveal two functionally distinct ion-coupling pathways in NorM from Vibrio cholerae. Communications Biology, 2021, 4, 558.	4.4	3
100	Effect of Laser Irradiation on Enzyme Activity. Japanese Journal of Applied Physics, 2005, 44, 8216-8218.	1.5	2
101	Crystal Structure of a Multi-Drug Efflux Transporter Reveal a Functionally Rotating Mechanism. Seibutsu Butsuri, 2007, 47, 309-316.	0.1	2
102	Expression, purification, crystallization and preliminary crystallographic analysis of spermidine acetyltransferase fromEscherichia coli. Acta Crystallographica Section F: Structural Biology Communications, 2013, 69, 884-887.	0.7	2
103	Growth of high-strength protein crystals with nanofibers. Applied Physics Express, 2016, 9, 035503.	2.4	2
104	Crystal Structure of Bacterial Multi-Drug Efflux Transporter AcrB. Nihon Kessho Gakkaishi, 2003, 45, 256-261.	0.0	2
105	Semiautomatic Protein Crystallization System Featuring Crystallization Solution Preparation Function. Japanese Journal of Applied Physics, 2005, 44, 6302-6303.	1.5	1
106	Molecular Mechanism of Multi-drug Efflux Transporter, AcrB Revealed by the Synergy between Molecular Dynamics Simulation and Crystallography. Seibutsu Butsuri, 2015, 55, 027-030.	0.1	1
107	BpeB, a major resistance-nodulation-cell division transporter from Burkholderia cenocepacia: construct design, crystallization and preliminary structural analysis. Acta Crystallographica Section F, Structural Biology Communications, 2018, 74, 710-716.	0.8	1
108	Drug Development Value Chain Constructed by Collaboration Between The SOSHO Project and The NPO BIOGRID. AIP Conference Proceedings, 2007, , .	0.4	0

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109	2P-119 X-ray structure of RNA aptamer in complex with human immunoglobulin G(The 46th Annual) Tj ETQq1 1 0.784314 rgBT /Over	0.1	0
110	Molecular Mechanism of Multiâ€"drug Efflux Transporter Revealed by the Crystal Structures. Membrane, 2010, 35, 72-79.	0.0	0
111	2P007 Crystal structure of the Escherichia coli spermidine acetyl-transferase in complex with spermidine and coenzyme A(The 48th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2010, 50, S83.	0.1	0
112	2P105 Motion Tree analysis of the multidrug transporter AcrB(03. Membrane proteins,Poster). Seibutsu Butsuri, 2013, 53, S176.	0.1	0
113	å§è…¸èŒåšå‰‰æŽ'å‡ºãƒˆãƒ©ãƒ³ã‚¹ãƒãƒ¼ã‚¿ãƒ¼ã®çµæ™¶åŒ–ã¨æ§‹é€ æ©Ÿèƒ½è§£æž. Nihon Kessho Gakkaishi, 2004, 46, 17-17.	0.0	0
114	åŽŸåæ§‹é€ ã‹ã‚‰è¦‹ãŸãƒã‚¯ãƒ†ãƒªã‚¢ã®è–¬å‰¤æŽ'å‡ºæ©Ÿæ§‹. Nihon Kessho Gakkaishi, 2010, 52, s14.	0.0	0
115	Introduction: Applications. Nihon Kessho Gakkaishi, 2010, 52, 68.	0.0	0
116	The Trial of Drug Discovery using the In-Silico Screening Methods Developed by Pharmaceutical Innovation Value Chain. Nihon Kessho Gakkaishi, 2010, 52, 89-94.	0.0	0
117	Growth of Protein Crystals in Hydrogels with High Strength. Nihon Kessho Gakkaishi, 2012, 54, 300-303.	0.0	0