

Satoshi Murakami

List of Publications by Year in descending order

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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	Engineered MATE multidrug transporters reveal two functionally distinct ion-coupling pathways in NorM from <i>Vibrio cholerae</i> . <i>Communications Biology</i> , 2021, 4, 558.	4.4	3
2	Structure and function relationship of OqxB efflux pump from <i>Klebsiella pneumoniae</i> . <i>Nature Communications</i> , 2021, 12, 5400.	12.8	22
3	Structural and functional diversity calls for a new classification of ABC transporters. <i>FEBS Letters</i> , 2020, 594, 3767-3775.	2.8	169
4	Tripartite transporters as mechanotransmitters in periplasmic alternating access mechanisms. <i>FEBS Letters</i> , 2020, 594, 3908-3919.	2.8	9
5	The $\hat{2}$ -hairpin region of the cyanobacterial F1-ATPase $\hat{3}$ -subunit plays a regulatory role in the enzyme activity. <i>Biochemical Journal</i> , 2019, 476, 1771-1780.	3.7	5
6	Crystallization of aspirin form II by femtosecond laser irradiation. <i>Applied Physics Express</i> , 2019, 12, 015507.	2.4	15
7	Improvement of metastable crystal of acetaminophen via control of crystal growth rate. <i>Applied Physics Express</i> , 2018, 11, 035501.	2.4	9
8	BpeB, a major resistance-nodulation-cell division transporter from <i>Burkholderia cenocepacia</i> : construct design, crystallization and preliminary structural analysis. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2018, 74, 710-716.	0.8	1
9	Powering the ABC multidrug exporter LmrA: How nucleotides embrace the ion-motive force. <i>Science Advances</i> , 2018, 4, eaas9365.	10.3	17
10	Atomic-Scale Imaging of Surface and Hydration Structures of Stable and Metastable Acetaminophen Crystals by Frequency Modulation Atomic Force Microscopy. <i>Journal of Physical Chemistry C</i> , 2018, 122, 21983-21990.	3.1	4
11	Growth of high-quality metastable crystal of acetaminophen using solution-mediated phase transformation at low supersaturation. <i>Journal of Crystal Growth</i> , 2018, 502, 76-82.	1.5	12
12	Energetics and conformational pathways of functional rotation in the multidrug transporter AcrB. <i>ELife</i> , 2018, 7, .	6.0	32
13	Structure of the $\hat{3}$ - $\hat{1}$ complex of cyanobacterial F1-ATPase reveals a suppression mechanism of the $\hat{3}$ subunit on ATP hydrolysis in phototrophs. <i>Biochemical Journal</i> , 2018, 475, 2925-2939.	3.7	13
14	Structure of the MacAB-TolC ABC-type tripartite multidrug efflux pump. <i>Nature Microbiology</i> , 2017, 2, 17070.	13.3	140
15	Crystal structure of tripartite-type ABC transporter MacB from <i>Acinetobacter baumannii</i> . <i>Nature Communications</i> , 2017, 8, 1336.	12.8	74
16	Crystallization of acetaminophen form II by plastic-ball-assisted ultrasonic irradiation. <i>Applied Physics Express</i> , 2017, 10, 025501.	2.4	11
17	Metastable crystal growth of acetaminophen using solution-mediated phase transformation. <i>Applied Physics Express</i> , 2017, 10, 015501.	2.4	14
18	Protein crystallization with paper. <i>Japanese Journal of Applied Physics</i> , 2016, 55, 050302.	1.5	3

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19	Structures and Transport Mechanisms of RND Efflux Pumps. , 2016, , 3-28.		8
20	Promotion of protein crystal growth by actively switching crystal growth mode via femtosecond laser ablation. Nature Photonics, 2016, 10, 723-726.	31.4	40
21	Molecular mechanism underlying promiscuous polyamine recognition by spermidine acetyltransferase. International Journal of Biochemistry and Cell Biology, 2016, 76, 87-97.	2.8	9
22	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
23	Growth of high-strength protein crystals with nanofibers. Applied Physics Express, 2016, 9, 035503.	2.4	2
24	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
25	Selective crystallization of metastable phase of acetaminophen by ultrasonic irradiation. Applied Physics Express, 2015, 8, 065501.	2.4	31
26	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
27	Water-Mediated Recognition of Simple Alkyl Chains by Heart-Type Fatty Acid-Binding Protein. Angewandte Chemie - International Edition, 2015, 54, 1508-1511.	13.8	41
28	Development of protein seed crystals reinforced with high-strength hydrogels. CrystEngComm, 2015, 17, 8064-8071.	2.6	10
29	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
30	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
31	Structure, mechanism and cooperation of bacterial multidrug transporters. Current Opinion in Structural Biology, 2015, 33, 76-91.	5.7	129
32	¹² -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
33	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
34	Crystallization and preliminary crystallographic studies of PotA, a membrane-associated ATPase of the spermidine-preferential uptake system in <i>Thermotoga maritima</i> . Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 738-741.	0.8	3
35	Laser ablation for protein crystal nucleation and seeding. Chemical Society Reviews, 2014, 43, 2147-2158.	38.1	54
36	Effect of Gel-Solution Interface on Femtosecond Laser-Induced Nucleation of Protein. Crystal Growth and Design, 2013, 13, 1491-1496.	3.0	13

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37	Functional Rotation Induced by Alternating Protonation States in the Multidrug Transporter AcrB: All-Atom Molecular Dynamics Simulations. <i>Biochemistry</i> , 2013, 52, 7648-7658.	2.5	35
38	Crystal structure of AcrB complexed with linezolid at 3.5Å resolution. <i>Journal of Structural and Functional Genomics</i> , 2013, 14, 71-75.	1.2	38
39	A Novel Approach for Protein Crystallization by a Synthetic Hydrogel with Thermoreversible Gelation Polymer. <i>Crystal Growth and Design</i> , 2013, 13, 1899-1904.	3.0	16
40	Drug Uptake Pathways of Multidrug Transporter AcrB Studied by Molecular Simulations and Site-Directed Mutagenesis Experiments. <i>Journal of the American Chemical Society</i> , 2013, 135, 7474-7485.	13.7	53
41	Mutation of the Mg ²⁺ Transporter SLC41A1 Results in a Nephronophthisis-Like Phenotype. <i>Journal of the American Society of Nephrology: JASN</i> , 2013, 24, 967-977.	6.1	63
42	Expression, purification, crystallization and preliminary crystallographic analysis of spermidine acetyltransferase from <i>Escherichia coli</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2013, 69, 884-887.	0.7	2
43	Structure of the human-heart fatty-acid-binding protein 3 in complex with the fluorescent probe 1-anilinonaphthalene-8-sulphonic acid. <i>Journal of Synchrotron Radiation</i> , 2013, 20, 923-928.	2.4	22
44	2P105 Motion Tree analysis of the multidrug transporter AcrB(03. Membrane proteins,Poster). <i>Seibutsu Butsuri</i> , 2013, 53, S176.	0.1	0
45	RND Efflux Pumps: Structural Information Translated into Function and Inhibition Mechanisms. <i>Current Topics in Medicinal Chemistry</i> , 2013, 13, 3079-3100.	2.1	122
46	Spatially Precise, Soft Microseeding of Single Protein Crystals by Femtosecond Laser Ablation. <i>Crystal Growth and Design</i> , 2012, 12, 4334-4339.	3.0	16
47	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. <i>Crystal Growth and Design</i> , 2012, 12, 2856-2863.	3.0	23
48	Growth of Protein Crystals in Hydrogels Prevents Osmotic Shock. <i>Journal of the American Chemical Society</i> , 2012, 134, 5786-5789.	13.7	53
49	Growth of Protein Crystals in Hydrogels with High Strength. <i>Nihon Kessho Gakkaishi</i> , 2012, 54, 300-303.	0.0	0
50	Growth of Protein Crystals by Syringe-Type Top-Seeded Solution Growth. <i>Crystal Growth and Design</i> , 2011, 11, 1486-1492.	3.0	7
51	Influence of energy and wavelength on femtosecond laser-induced nucleation of protein. <i>Chemical Physics Letters</i> , 2011, 510, 139-142.	2.6	16
52	Laser-induced nucleation in protein crystallization: Local increase in protein concentration induced by femtosecond laser irradiation. <i>Journal of Crystal Growth</i> , 2011, 318, 741-744.	1.5	26
53	Approach for growth of high-quality and large protein crystals. <i>Journal of Synchrotron Radiation</i> , 2011, 18, 16-19.	2.4	15
54	Crystallization and preliminary X-ray crystallographic analysis of a helicase-like domain from a tomato mosaic virus replication protein. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2011, 67, 1649-1652.	0.7	3

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55	Effect of Evaporation on Protein Crystals Grown in Semi-Solid Agarose Hydrogel. Japanese Journal of Applied Physics, 2011, 50, 025502.	1.5	4
56	Effect of Evaporation on Protein Crystals Grown in Semi-Solid Agarose Hydrogel. Japanese Journal of Applied Physics, 2011, 50, 025502.	1.5	6
57	Molecular Mechanism of Multi-drug Efflux Transporter Revealed by the Crystal Structures. Membrane, 2010, 35, 72-79.	0.0	0
58	Estimated effects of silicone glue on protein crystal growth. Journal of Crystal Growth, 2010, 312, 2771-2774.	1.5	7
59	Growth of large protein crystals by a large-scale hanging-drop method. Journal of Applied Crystallography, 2010, 43, 937-939.	4.5	4
60	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 Butsurei, 2010, 50, S83.	0.1	0
61	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
62	Enhancement of femtosecond laser-induced nucleation of protein in a gel solution. Applied Physics Letters, 2010, 96, .	3.3	45
63	Drug export and allosteric coupling in a multidrug transporter revealed by molecular simulations. Nature Communications, 2010, 1, 117.	12.8	82
64	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
65	Crystal Growth Procedure of HIV-1 Protease-Inhibitor KNI-272 Complex for Neutron Structural Analysis at 1.9 Å... Resolution. Crystal Growth and Design, 2010, 10, 2990-2994.	3.0	11
66	Conformational plasticity of RNA for target recognition as revealed by the 2.15 Å... crystal structure of a human IgG aptamer complex. Nucleic Acids Research, 2010, 38, 7822-7829.	14.5	98
67	Introduction: Applications. Nihon Kessho Gakkaishi, 2010, 52, s14.	0.0	0
68	Introduction: Applications. Nihon Kessho Gakkaishi, 2010, 52, 68.	0.0	0
69	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
70	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
71	A Manipulating Tool for Protein Microcrystals in Solution Using Adhesive Materials. Japanese Journal of Applied Physics, 2009, 48, 118001.	1.5	6
72	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

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73	Dynamic nature of disulphide bond formation catalysts revealed by crystal structures of DsbB. EMBO Journal, 2009, 28, 779-791.	7.8	74
74	Femtosecond laser-induced nucleation of protein in agarose gel. Journal of Crystal Growth, 2009, 311, 956-959.	1.5	51
75	Femtosecond laser processing of protein crystals grown in agarose gel. Journal of Crystal Growth, 2009, 312, 73-78.	1.5	24
76	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
77	Promotion of Crystal Nucleation of Protein by Semi-Solid Agarose Gel. Applied Physics Express, 2009, 2, 125501.	2.4	25
78	Laser energy dependence on femtosecond laser-induced nucleation of protein. Applied Physics A: Materials Science and Processing, 2008, 93, 911-915.	2.3	24
79	Protein crystallization in a 100 nl solution with new stirring equipment. Journal of Synchrotron Radiation, 2008, 15, 269-272.	2.4	4
80	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
81	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
82	Crystallization and preliminary X-ray crystallographic analysis of Ca ²⁺ -free primary Ca ²⁺ -sensor of Na ⁺ /Ca ²⁺ exchanger. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 1125-1127.	0.7	3
83	Effect of solution flow produced by rotary shaker on protein crystallization. Journal of Crystal Growth, 2008, 310, 2168-2172.	1.5	12
84	Multidrug efflux transporter, AcrB's pumping mechanism. Current Opinion in Structural Biology, 2008, 18, 459-465.	5.7	110
85	Functional Role of Transmembrane Helix 6 in Drug Binding and Transport by the ABC Transporter MsbA. Biochemistry, 2008, 47, 10904-10914.	2.5	36
86	Evaluation and Improvement of a Technique to Manipulate Protein Crystals in Solution. Japanese Journal of Applied Physics, 2008, 47, 8995-8997.	1.5	7
87	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
88	Development of protein crystallization and processing: femtosecond laser, all solid-state 193 nm laser, and solution stirring techniques. , 2007, , .		5
89	Crystal Structure of a Multi-Drug Efflux Transporter Reveal a Functionally Rotating Mechanism. Seibutsu Butsuru, 2007, 47, 309-316.	0.1	2
90	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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91	Femtosecond laser-induced cleaving of protein crystal in water solution. <i>Applied Surface Science</i> , 2007, 253, 6447-6450.	6.1	8
92	Crystal Structure of the DsbB-DsbA Complex Reveals a Mechanism of Disulfide Bond Generation. <i>Cell</i> , 2006, 127, 789-801.	28.9	233
93	Solution-stirring method improves crystal quality of human triosephosphate isomerase. <i>Journal of Bioscience and Bioengineering</i> , 2006, 101, 83-86.	2.2	11
94	Application of femtosecond laser ablation for detaching grown protein crystals from glass capillary tube. <i>Journal of Bioscience and Bioengineering</i> , 2006, 102, 372-374.	2.2	3
95	Crystallization and preliminary X-ray analysis of the tRNA thiolation enzyme MnmA from <i>Escherichia coli</i> complexed with tRNA ^{Glu} . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 368-371.	0.7	19
96	Purification, crystallization and preliminary X-ray diffraction of SecDF, a translocon-associated membrane protein, from <i>Thermus thermophilus</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 376-380.	0.7	22
97	Crystallization and preliminary crystallographic analysis of orotidine 5'-monophosphate decarboxylase from the human malaria parasite <i>Plasmodium falciparum</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 542-545.	0.7	9
98	Crystal structures of a multidrug transporter reveal a functionally rotating mechanism. <i>Nature</i> , 2006, 443, 173-179.	27.8	684
99	Cooling-rate screening system for determining protein crystal growth conditions. <i>Journal of Crystal Growth</i> , 2006, 292, 433-436.	1.5	7
100	Effect of ultrasonic irradiation on protein crystallization. <i>Journal of Crystal Growth</i> , 2006, 292, 437-440.	1.5	35
101	Femtosecond Laser Processing of Protein Crystals in Crystallization Drop. <i>Japanese Journal of Applied Physics</i> , 2005, 44, L873-L875.	1.5	10
102	Protein Cryocrystallography Using Laser-Processed Crystal. <i>Japanese Journal of Applied Physics</i> , 2005, 44, L54-L56.	1.5	14
103	Protein Crystal Growth Using Laser-Processed Seed Crystals. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 3177-3179.	1.5	4
104	Effect of Laser Irradiation on Enzyme Activity. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 8216-8218.	1.5	2
105	Protein Crystallization by Combining Laser Irradiation and Solution-Stirring Techniques. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 1365-1366.	1.5	10
106	Semiautomatic Protein Crystallization System Featuring Crystallization Solution Preparation Function. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 6302-6303.	1.5	1
107	Temperature-Screening System for Determining Protein Crystallization Conditions. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 4080-4083.	1.5	9
108	Direct Interaction of Multidrug Efflux Transporter AcrB and Outer Membrane Channel TolC Detected via Site-Directed Disulfide Cross-Linking. <i>Biochemistry</i> , 2005, 44, 11115-11121.	2.5	104

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109	Processing of membrane protein crystal using ultraviolet laser irradiation. Journal of Bioscience and Bioengineering, 2005, 100, 50-53.	2.2	12
110	Membrane Protein Crystallization Using Laser Irradiation. Japanese Journal of Applied Physics, 2004, 43, L1376-L1378.	1.5	36
111	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
112	âššè...èĒâššâ%æž'â†°âf^âf ©âf³â,¹âfâf¼â,jâf¼ââ©çue™âĒ-â*æš'éĒæ©ÿèf¼èšĒæž. Nihon Kessho Gakkaishi, 2004, 46, 17-17.		
113	Multidrug-exporting secondary transporters. Current Opinion in Structural Biology, 2003, 13, 443-452.	5.7	83
114	Crystal Structure of Bacterial Multi-Drug Efflux Transporter AcrB. Nihon Kessho Gakkaishi, 2003, 45, 256-261.	0.0	2
115	Crystal structure of bacterial multidrug efflux transporter AcrB. Nature, 2002, 419, 587-593.	27.8	893
116	Crystals of bovine heart ubiquinolâ€cytochrome c reductase diffracting X-rays up to 2.8â€... resolution at 276â€...K. Acta Crystallographica Section D: Biological Crystallography, 1998, 54, 146-147.	2.5	5
117	New Technique of Manipulating a Protein Crystal Using Adhesive Material. Applied Physics Express, 0, 1, 037002.	2.4	15