

Ryota Iino

List of Publications by Year in descending order

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111
papers

6,668
citations

87888

38
h-index

64796

79
g-index

117
all docs

117
docs citations

117
times ranked

7510
citing authors

#	ARTICLE	IF	CITATIONS
1	Visualization of ATP levels inside single living cells with fluorescence resonance energy transfer-based genetically encoded indicators. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15651-15656.	7.1	884
2	High-Speed Atomic Force Microscopy Reveals Rotary Catalysis of Rotorless F ₁ -ATPase. Science, 2011, 333, 755-758.	12.6	420
3	Ultrafine Membrane Compartments for Molecular Diffusion as Revealed by Single Molecule Techniques. Biophysical Journal, 2004, 86, 4075-4093.	0.5	400
4	Single-molecule imaging analysis of Ras activation in living cells. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7317-7322.	7.1	359
5	Accumulation of anchored proteins forms membrane diffusion barriers during neuronal polarization. Nature Cell Biology, 2003, 5, 626-632.	10.3	324
6	Single Molecule Imaging of Green Fluorescent Proteins in Living Cells: E-Cadherin Forms Oligomers on the Free Cell Surface. Biophysical Journal, 2001, 80, 2667-2677.	0.5	300
7	GPI-anchored receptor clusters transiently recruit Lyn and G $\beta\gamma$ for temporary cluster immobilization and Lyn activation: single-molecule tracking study 1. Journal of Cell Biology, 2007, 177, 717-730.	5.2	292
8	The fence and picket structure of the plasma membrane of live cells as revealed by single molecule techniques (Review). Molecular Membrane Biology, 2003, 20, 13-18.	2.0	187
9	A single-molecule enzymatic assay in a directly accessible femtoliter droplet array. Lab on A Chip, 2010, 10, 3355.	6.0	186
10	Large-scale femtoliter droplet array for digital counting of single biomolecules. Lab on A Chip, 2012, 12, 4986.	6.0	185
11	Rotation and structure of FoF ₁ -ATP synthase. Journal of Biochemistry, 2011, 149, 655-664.	1.7	184
12	Fluorescence Imaging for Monitoring the Colocalization of Two Single Molecules in Living Cells. Biophysical Journal, 2005, 88, 2126-2136.	0.5	154
13	Simple Dark-Field Microscopy with Nanometer Spatial Precision and Microsecond Temporal Resolution. Biophysical Journal, 2010, 98, 2014-2023.	0.5	150
14	Phosphate release in F ₁ -ATPase catalytic cycle follows ADP release. Nature Chemical Biology, 2010, 6, 814-820.	8.0	146
15	Fluctuation Theorem Applied to F_1 -ATPase. Physical Review Letters, 2010, 104, 218103.	7.8	146
16	F ₀ F ₁ -ATPase/Synthase Is Geared to the Synthesis Mode by Conformational Rearrangement of β Subunit in Response to Proton Motive Force and ADP/ATP Balance. Journal of Biological Chemistry, 2003, 278, 46840-46846.	3.4	144
17	Direct observation of intermediate states during the stepping motion of kinesin-1. Nature Chemical Biology, 2016, 12, 290-297.	8.0	119
18	Evaluation of Multidrug Efflux Pump Inhibitors by a New Method Using Microfluidic Channels. PLoS ONE, 2011, 6, e18547.	2.5	95

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19	Molecular Mechanism of ATP Hydrolysis in F ₁ -ATPase Revealed by Molecular Simulations and Single-Molecule Observations. <i>Journal of the American Chemical Society</i> , 2012, 134, 8447-8454.	13.7	95
20	Mechanical modulation of catalytic power on F1-ATPase. <i>Nature Chemical Biology</i> , 2012, 8, 86-92.	8.0	94
21	Mechanism of Inhibition by C-terminal α -Helices of the β Subunit of Escherichia coli FoF1-ATP Synthase. <i>Journal of Biological Chemistry</i> , 2009, 284, 17457-17464.	3.4	77
22	Correlation between the conformational states of F ₁ -ATPase as determined from its crystal structure and single-molecule rotation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20722-20727.	7.1	71
23	High-speed atomic force microscope combined with single-molecule fluorescence microscope. <i>Review of Scientific Instruments</i> , 2013, 84, 073706.	1.3	65
24	Real-time Monitoring of Conformational Dynamics of the β Subunit in F1-ATPase. <i>Journal of Biological Chemistry</i> , 2005, 280, 40130-40134.	3.4	64
25	Mechanism of Lck Recruitment to the T-Cell Receptor Cluster as Studied by Single-Molecule-Fluorescence Video Imaging. <i>ChemPhysChem</i> , 2003, 4, 620-626.	2.1	63
26	Dynamic structural states of ClpB involved in its disaggregation function. <i>Nature Communications</i> , 2018, 9, 2147.	12.8	55
27	A Microfluidic Channel Method for Rapid Drug-Susceptibility Testing of <i>Pseudomonas aeruginosa</i> . <i>PLoS ONE</i> , 2016, 11, e0148797.	2.5	54
28	Structure of a central stalk subunit F of prokaryotic V-type ATPase/synthase from <i>Thermus thermophilus</i> . <i>EMBO Journal</i> , 2005, 24, 3974-3983.	7.8	53
29	Introduction: Molecular Motors. <i>Chemical Reviews</i> , 2020, 120, 1-4.	47.7	53
30	Basic Properties of Rotary Dynamics of the Molecular Motor <i>Enterococcus hirae</i> V1-ATPase. <i>Journal of Biological Chemistry</i> , 2013, 288, 32700-32707.	3.4	51
31	Single-molecule Imaging Analysis of Elementary Reaction Steps of <i>Trichoderma reesei</i> Cellobiohydrolase I (Cel7A) Hydrolyzing Crystalline Cellulose II \pm and III. <i>Journal of Biological Chemistry</i> , 2014, 289, 14056-14065.	3.4	50
32	Processive chitinase is Brownian monorail operated by fast catalysis after peeling rail from crystalline chitin. <i>Nature Communications</i> , 2018, 9, 3814.	12.8	50
33	A single-cell drug efflux assay in bacteria by using a directly accessible femtoliter droplet array. <i>Lab on A Chip</i> , 2012, 12, 3923.	6.0	48
34	Accurate high-throughput screening based on digital protein synthesis in a massively parallel femtoliter droplet array. <i>Science Advances</i> , 2019, 5, eaav8185.	10.3	48
35	Temperature-sensitive reaction intermediate of F ₁ -ATPase. <i>EMBO Reports</i> , 2008, 9, 84-90.	4.5	46
36	A single-molecule digital enzyme assay using alkaline phosphatase with a coumarin-based fluorogenic substrate. <i>Analyst</i> , 2015, 140, 5065-5073.	3.5	45

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37	Single-molecule Imaging Analysis of Binding, Processive Movement, and Dissociation of Cellobiohydrolase <i>Trichoderma reesei</i> Cel6A and Its Domains on Crystalline Cellulose. <i>Journal of Biological Chemistry</i> , 2016, 291, 22404-22413.	3.4	45
38	Biased Brownian stepping rotation of FoF1-ATP synthase driven by proton motive force. <i>Nature Communications</i> , 2013, 4, 1631.	12.8	41
39	Positive Charge Introduction on the Surface of Thermostabilized PET Hydrolase Facilitates PET Binding and Degradation. <i>ACS Catalysis</i> , 2021, 11, 8550-8564.	11.2	39
40	Stiffness of $\hat{\Gamma}^3$ subunit of F1-ATPase. <i>European Biophysics Journal</i> , 2010, 39, 1589-1596.	2.2	38
41	Label-Free Single-Particle Imaging of the Influenza Virus by Objective-Type Total Internal Reflection Dark-Field Microscopy. <i>PLoS ONE</i> , 2012, 7, e49208.	2.5	38
42	Design of a large-scale femtoliter droplet array for single-cell analysis of drug-tolerant and drug-resistant bacteria. <i>Frontiers in Microbiology</i> , 2013, 4, 300.	3.5	38
43	Principal Role of the Arginine Finger in Rotary Catalysis of F1-ATPase. <i>Journal of Biological Chemistry</i> , 2012, 287, 15134-15142.	3.4	37
44	Activation and Stiffness of the Inhibited States of F1-ATPase Probed by Single-molecule Manipulation. <i>Journal of Biological Chemistry</i> , 2010, 285, 11411-11417.	3.4	30
45	High-Speed Angle-Resolved Imaging of a Single Gold Nanorod with Microsecond Temporal Resolution and One-Degree Angle Precision. <i>Analytical Chemistry</i> , 2015, 87, 2079-2086.	6.5	29
46	Single-molecule analysis reveals rotational substeps and chemo-mechanical coupling scheme of <i>Enterococcus hirae</i> V1-ATPase. <i>Journal of Biological Chemistry</i> , 2019, 294, 17017-17030.	3.4	29
47	Single-Nanoparticle Tracking with Angstrom Localization Precision and Microsecond Time Resolution. <i>Biophysical Journal</i> , 2018, 115, 2413-2427.	0.5	28
48	Torque Generation of <i>Enterococcus hirae</i> V-ATPase. <i>Journal of Biological Chemistry</i> , 2014, 289, 31212-31223.	3.4	27
49	Operation mechanism of F _o F ₁ -adenosine triphosphate synthase revealed by its structure and dynamics. <i>IUBMB Life</i> , 2013, 65, 238-246.	3.4	25
50	High-speed near-field fluorescence microscopy combined with high-speed atomic force microscopy for biological studies. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2020, 1864, 129325.	2.4	25
51	Rate constants, processivity, and productive binding ratio of chitinase A revealed by single-molecule analysis. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 3010-3018.	2.8	24
52	Single-Fluorophore Dynamic Imaging in Living Cells. <i>Journal of Fluorescence</i> , 2001, 11, 187-195.	2.5	23
53	Single-molecule Study on the Temperature-sensitive Reaction of F1-ATPase with a Hybrid F1 Carrying a Single $\hat{\Gamma}^2$ (E190D). <i>Journal of Biological Chemistry</i> , 2009, 284, 23169-23176.	3.4	23
54	A Microfluidic Device for Simple and Rapid Evaluation of Multidrug Efflux Pump Inhibitors. <i>Frontiers in Microbiology</i> , 2012, 3, 40.	3.5	21

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55	A CMOS image sensor with stacked photodiodes for lensless observation system of digital enzyme-linked immunosorbent assay. <i>Japanese Journal of Applied Physics</i> , 2014, 53, 04EL02.	1.5	18
56	Multicolor High-Speed Tracking of Single Biomolecules with Silver, Gold, and Silver-Gold Alloy Nanoparticles. <i>ACS Photonics</i> , 2019, 6, 2870-2883.	6.6	17
57	Rotational mechanism of <i>Enterococcus hirae</i> V1-ATPase by crystal-structure and single-molecule analyses. <i>Current Opinion in Structural Biology</i> , 2015, 31, 49-56.	5.7	16
58	Highly sensitive restriction enzyme assay and analysis: a review. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 391, 2423-2432.	3.7	15
59	Intersubunit coordination and cooperativity in ring-shaped NTPases. <i>Current Opinion in Structural Biology</i> , 2013, 23, 229-234.	5.7	15
60	Rotary catalysis of the stator ring of F1-ATPase. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1732-1739.	1.0	14
61	Motion Capture and Manipulation of a Single Synthetic Molecular Rotor by Optical Microscopy. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 10082-10085.	13.8	14
62	Key Chemical Factors of Arginine Finger Catalysis of F ₁ -ATPase Clarified by an Unnatural Amino Acid Mutation. <i>Biochemistry</i> , 2015, 54, 472-480.	2.5	14
63	Simultaneous Observation of Kinesin-Driven Microtubule Motility and Binding of Adenosine Triphosphate Using Linear Zero-Mode Waveguides. <i>ACS Nano</i> , 2018, 12, 11975-11985.	14.6	14
64	Rotation of artificial rotor axles in rotary molecular motors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11214-11219.	7.1	13
65	Winding single-molecule double-stranded DNA on a nanometer-sized reel. <i>Nucleic Acids Research</i> , 2012, 40, e151-e151.	14.5	12
66	Complementary Metal-Oxide-Semiconductor Image Sensor with Microchamber Array for Fluorescent Bead Counting. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 02BL01.	1.5	12
67	Single-molecule imaging and manipulation of biomolecular machines and systems. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2018, 1862, 241-252.	2.4	12
68	Single-molecule imaging analysis reveals the mechanism of a high-catalytic-activity mutant of chitinase A from <i>Serratia marcescens</i> . <i>Journal of Biological Chemistry</i> , 2020, 295, 1915-1925.	3.4	12
69	Complementary Metal-Oxide-Semiconductor Image Sensor with Microchamber Array for Fluorescent Bead Counting. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 02BL01.	1.5	12
70	Chemomechanical Coupling in Single-Molecule F-Type ATP Synthase. <i>Journal of Bioenergetics and Biomembranes</i> , 2005, 37, 451-454.	2.3	11
71	Subunit rotation in a single F _o F ₁ -ATP synthase in a living bacterium monitored by FRET. , 2011, , .		11
72	Domain architecture divergence leads to functional divergence in binding and catalytic domains of bacterial and fungal cellobiohydrolases. <i>Journal of Biological Chemistry</i> , 2020, 295, 14606-14617.	3.4	11

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73	Small stepping motion of processive dynein revealed by load-free high-speed single-particle tracking. <i>Scientific Reports</i> , 2020, 10, 1080.	3.3	10
74	Off-axis rotor in <i>Enterococcus hirae</i> V-ATPase visualized by Zernike phase plate single-particle cryo-electron microscopy. <i>Scientific Reports</i> , 2018, 8, 15632.	3.3	9
75	F1-ATPase: a highly coupled reversible rotary motor. <i>Biochemical Society Transactions</i> , 2006, 34, 993-996.	3.4	8
76	Dual-mode lensless imaging device for digital enzyme linked immunosorbent assay. , 2014, , .		8
77	Single Cell Array Enclosed with a Photodegradable Hydrogel in Microwells for Image-Based Cell Classification and Selective Photorelease of Cells. <i>ACS Applied Bio Materials</i> , 2020, 3, 5887-5895.	4.6	8
78	Real-time fluorescence visualization of slow tautomerization of single free-base phthalocyanines under ambient conditions. <i>Chemical Communications</i> , 2014, 50, 9443.	4.1	7
79	Plasmid-Based One-Pot Saturation Mutagenesis and Robot-Based Automated Screening for Protein Engineering. <i>ACS Omega</i> , 2018, 3, 7715-7726.	3.5	7
80	Motion Capture and Manipulation of a Single Synthetic Molecular Rotor by Optical Microscopy. <i>Angewandte Chemie</i> , 2014, 126, 10246-10249.	2.0	6
81	Molecular structure and rotary dynamics of <i>Enterococcus hirae</i> V-ATPase. <i>IUBMB Life</i> , 2014, 66, 624-630.	3.4	6
82	Crystalline chitin hydrolase is a burnt-bridge Brownian motor. <i>Biophysics and Physicobiology</i> , 2020, 17, 51-58.	1.0	5
83	Single-Molecule Assay of Biological Reaction in Femtoliter Chamber Array. <i>Japanese Journal of Applied Physics</i> , 2009, 48, 08JA04.	1.5	4
84	Large-Scale Femtoliter Droplet Array for Single Cell Efflux Assay of Bacteria. <i>Methods in Molecular Biology</i> , 2018, 1700, 331-341.	0.9	4
85	Label-free monitoring of crystalline chitin hydrolysis by chitinase based on Raman spectroscopy. <i>Analyst</i> , 2021, 146, 4087-4094.	3.5	4
86	Combined Approach to Engineer a Highly Active Mutant of Processive Chitinase Hydrolyzing Crystalline Chitin. <i>ACS Omega</i> , 2020, 5, 26807-26816.	3.5	3
87	Chemical-State-Dependent Free Energy Profile from Single-Molecule Trajectories of Biomolecular Motors: Application to Processive Chitinase. <i>Journal of Physical Chemistry B</i> , 2020, 124, 6475-6487.	2.6	3
88	Single-molecule fluorescence imaging of kinesin using linear zero-mode waveguides. , 2016, , .		2
89	Single-Cell Detection and Collection of Persister Bacteria in a Directly Accessible Femtoliter Droplet Array. <i>Methods in Molecular Biology</i> , 2016, 1333, 101-109.	0.9	2
90	Visualization of Functional Structure and Kinetic Dynamics of Cellulases. <i>Advances in Experimental Medicine and Biology</i> , 2018, 1104, 201-217.	1.6	2

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91	The fence and picket structure of the plasma membrane of live cells as revealed by single molecule techniques (Review). <i>Molecular Membrane Biology</i> , 2003, 20, 13-18.	2.0	2
92	Lensless imaging device for digital counting of fluorescent micro-droplet chambers. , 2013, , .		1
93	A CMOS image sensor with low fixed pattern noise suitable for lensless observation system of digital enzyme-linked immunosorbent assay (ELISA). , 2013, , .		1
94	Linear zero mode waveguides for the study of chemo-mechanical coupling mechanism of kinesin. , 2017, , .		1
95	Two Rotary Motors of ATP Synthase. , 0, , 237-255.		0
96	1SM-03 Real-Time Single-Molecular Measurement of Artificial Molecular Rotor(1SM Interdisciplinary) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.1	0
97	1C1324 Flexural rigidity of dsDNA measured by winding single molecule on a nanometer size bearing(Nucleic acid,The 49th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2011, 51, S34.	0.1	0
98	1L1424 P10 1YE1115 Key mechanism for high efficiency and reversibility of chemomechanical coupling in F ₁ -ATPase revealed by single-molecule manipulation(Molecular motor 1,Early Research in Biophysics) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.1	0
99	1L1336 Detection of rotation of F1-ATPase using high-speed orientational detection of gold nanorod(Molecular motor 1,The 49th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2011, 51, S60.	0.1	0
100	3PT103 Bending stiffness of double-stranded DNA measured by winding single-molecule on a nanometer-sized reel(The 50th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2012, 52, S157-S158.	0.1	0
101	1PS033 Direct observation of H ⁺ -driven rotation of F ₁ -ATP synthase(The 50th Annual Meeting of) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	0.1	0
102	2P160 Single-Molecular Measurement of a Synthetic Molecular Bearing(11. Molecular motor,Poster). <i>Seibutsu Butsuri</i> , 2013, 53, S185.	0.1	0
103	3P321 Development of enzyme screening system for directed evolution based on enzymic activity(28.) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 <i>Seibutsu Butsuri</i> , 2014, 54, S302.	0.1	0
104	C3-O-03Single particle 3D reconstruction of <i>V</i> -ATPase by Zernike phase contrast cryo-electron microscopy equipped with a direct detector. <i>Microscopy (Oxford, England)</i> , 2015, 64, i68.1-i68.	1.5	0
105	GPI-anchored receptor clusters transiently recruit Lyn and C1± for temporary cluster immobilization and Lyn activation: single-molecule tracking study 1. <i>Journal of Experimental Medicine</i> , 2007, 204, i18-i18.	8.5	0
106	2SH-04 Single-molecule real-time imaging of ATP synthase in vitro and in living cells(2SH New) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147	0.1	0
107	Winding DNA on Molecular Reel Made of F ₁ -ATPase. <i>Seibutsu Butsuri</i> , 2013, 53, 160-161.	0.1	0
108	Design and Fabrication of Linear-shaped Zero Mode Waveguides for Single Molecule Observation of Kinesin and Fluorescent ATP. <i>IEEJ Transactions on Sensors and Micromachines</i> , 2017, 137, 159-164.	0.1	0

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109	Chitinase Moves on and Degradates Crystalline Chitin with Brownian Motion. <i>Seibutsu Butsuri</i> , 2019, 59, 330-333.	0.1	0
110	[Review] Moving Mechanism of Chitinase A from <i>Serratia marcescens</i> . <i>Bulletin of Applied Glycoscience</i> , 2020, 10, 89-95.	0.0	0
111	Linear-Zero Mode Waveguides for Single-Molecule Fluorescence Observation of Nucleotides in Kinesin-Microtubule Motility Assay. <i>Methods in Molecular Biology</i> , 2022, 2430, 121-131.	0.9	0