

Rikiya Watanabe

List of Publications by Year in descending order

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Version: 2024-02-01

59
papers

1,196
citations

394421

19
h-index

395702

33
g-index

63
all docs

63
docs citations

63
times ranked

1024
citing authors

#	ARTICLE	IF	CITATIONS
1	Phosphate release in F1-ATPase catalytic cycle follows ADP release. <i>Nature Chemical Biology</i> , 2010, 6, 814-820.	8.0	146
2	Amplification-free RNA detection with CRISPR-Cas13. <i>Communications Biology</i> , 2021, 4, 476.	4.4	119
3	Arrayed lipid bilayer chambers allow single-molecule analysis of membrane transporter activity. <i>Nature Communications</i> , 2014, 5, 4519.	12.8	101
4	Mechanical modulation of catalytic power on F1-ATPase. <i>Nature Chemical Biology</i> , 2012, 8, 86-92.	8.0	94
5	Single-molecule analysis of phospholipid scrambling by TMEM16F. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 3066-3071.	7.1	68
6	Role of the DELSEED Loop in Torque Transmission of F1-ATPase. <i>Biophysical Journal</i> , 2012, 103, 970-978.	0.5	47
7	Timing of inorganic phosphate release modulates the catalytic activity of ATP-driven rotary motor protein. <i>Nature Communications</i> , 2014, 5, 3486.	12.8	47
8	Temperature-sensitive reaction intermediate of F ₁ -ATPase. <i>EMBO Reports</i> , 2008, 9, 84-90.	4.5	46
9	Multiplexed single-molecule enzyme activity analysis for counting disease-related proteins in biological samples. <i>Science Advances</i> , 2020, 6, eaay0888.	10.3	44
10	Biased Brownian stepping rotation of FoF1-ATP synthase driven by proton motive force. <i>Nature Communications</i> , 2013, 4, 1631.	12.8	41
11	Chemomechanical coupling mechanism of F ₁ -ATPase: Catalysis and torque generation. <i>FEBS Letters</i> , 2013, 587, 1030-1035.	2.8	37
12	Grip and slip of L1-CAM on adhesive substrates direct growth cone haptotaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 2764-2769.	7.1	34
13	Gradient-reading and mechano-effector machinery for netrin-1-induced axon guidance. <i>ELife</i> , 2018, 7, .	6.0	32
14	High-throughput formation of lipid bilayer membrane arrays with an asymmetric lipid composition. <i>Scientific Reports</i> , 2014, 4, 7076.	3.3	30
15	Attolitre-sized lipid bilayer chamber array for rapid detection of single transporters. <i>Scientific Reports</i> , 2015, 5, 11025.	3.3	30
16	Automated amplification-free digital RNA detection platform for rapid and sensitive SARS-CoV-2 diagnosis. <i>Communications Biology</i> , 2022, 5, .	4.4	28
17	Catalysis-Enhancement via Rotary Fluctuation of F1-ATPase. <i>Biophysical Journal</i> , 2013, 105, 2385-2391.	0.5	24
18	Single-molecule Study on the Temperature-sensitive Reaction of F1-ATPase with a Hybrid F1 Carrying a Single β (E190D). <i>Journal of Biological Chemistry</i> , 2009, 284, 23169-23176.	3.4	23

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19	ATP hydrolysis assists phosphate release and promotes reaction ordering in F1-ATPase. <i>Nature Communications</i> , 2015, 6, 10223.	12.8	23
20	Biophysical Characterization of a Thermoalkaliphilic Molecular Motor with a High Stepping Torque Gives Insight into Evolutionary ATP Synthase Adaptation. <i>Journal of Biological Chemistry</i> , 2016, 291, 23965-23977.	3.4	21
21	Monodisperse Liposomes with Femtoliter Volume Enable Quantitative Digital Bioassays of Membrane Transporters and Cell-Free Gene Expression. <i>ACS Nano</i> , 2020, 14, 11700-11711.	14.6	17
22	High-throughput single-molecule bioassay using micro-reactor arrays with a concentration gradient of target molecules. <i>Lab on A Chip</i> , 2018, 18, 2849-2853.	6.0	16
23	Torque Transmission Mechanism via DELSEED Loop of F1-ATPase. <i>Biophysical Journal</i> , 2015, 108, 1144-1152.	0.5	15
24	Torque Generation Mechanism of F1-ATPase upon NTP Binding. <i>Biophysical Journal</i> , 2014, 107, 156-164.	0.5	14
25	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
26	Winding single-molecule double-stranded DNA on a nanometer-sized reel. <i>Nucleic Acids Research</i> , 2012, 40, e151-e151.	14.5	12
27	Characterization of the temperature-sensitive reaction of F1-ATPase by using single-molecule manipulation. <i>Scientific Reports</i> , 2014, 4, 4962.	3.3	12
28	Thermodynamic analysis of F ₁ -ATPase rotary catalysis using high-speed imaging. <i>Protein Science</i> , 2014, 23, 1773-1779.	7.6	11
29	Robustness of the Rotary Catalysis Mechanism of F1-ATPase. <i>Journal of Biological Chemistry</i> , 2014, 289, 19331-19340.	3.4	10
30	Hybrid cell reactor system from <i>Escherichia coli</i> protoplast cells and arrayed lipid bilayer chamber device. <i>Scientific Reports</i> , 2018, 8, 11757.	3.3	7
31	Essential Role of the $\hat{\mu}$ Subunit for Reversible Chemo-Mechanical Coupling in F1-ATPase. <i>Biophysical Journal</i> , 2018, 114, 178-187.	0.5	6
32	Novel Nano-Device to Measure Voltage-Driven Membrane Transporter Activity. <i>IEEE Nanotechnology Magazine</i> , 2016, 15, 70-73.	2.0	5
33	Effects of non-equilibrium angle fluctuation on F ₁ -ATPase kinetics induced by temperature increase. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 1872-1880.	2.8	5
34	Microsystem for the single molecule analysis of membrane transport proteins. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2020, 1864, 129330.	2.4	5
35	Rotary catalysis of F ₁ -ATP synthase. <i>Biophysics (Nagoya-shi, Japan)</i> , 2013, 9, 51-56.	0.4	4
36	Single-Molecule Analysis of Membrane Transporter Activity by Means of a Microsystem. <i>Methods in Molecular Biology</i> , 2018, 1700, 321-330.	0.9	3

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37	Chemomechanical coupling of F ₁ -ATPase under hydrolysis conditions. Biophysics (Nagoya-shi, Japan), 2012, 8, 73-78.	0.4	2
38	Effects of an ATP analogue, adenosine 5'-[γ-thio]-triphosphate, on F ₁ -ATPase rotary catalysis, torque generation, and inhibited intermediated formation. Biochemical and Biophysical Research Communications, 2015, 458, 515-519.	2.1	2
39	Single-Molecule Analysis of Phospholipid Scrambling by TMEM16F. Biophysical Journal, 2018, 114, 558a.	0.5	1
40	2P211 Mechanical Modulation of ATP binding affinity and ATP hydrolysis/synthesis equilibrium of F ₁ -ATPase(37. Molecular motor (II),Poster Session,Abstract,Meeting Program of EABS & BSJ 2006). Seibutsu Butsuri, 2006, 46, S348.	0.1	0
41	Ligation of DNA Based on Single-Molecule Manipulation. , 2007, , .		0
42	The Role of Pi-Release as the Main Torque Generating Step of F ₁ -Atpase. Biophysical Journal, 2010, 98, 187a.	0.5	0
43	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). Seibutsu Butsuri, 2011, 51, S34.	0.1	0
44	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 50 2	0.1	0
45	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). Seibutsu Butsuri, 2012, 52, S157-S158.	0.1	0
46	3A1010 The role of DELSEED loop in torque-transmission of F ₁ -ATPase(Molecular Motors III:F1 ATPase) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	0.1	0
47	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 50 2	0.1	0
48	Rotary Motion of FOF ₁ -ATP Synthase in the Presence of pmf. Biophysical Journal, 2012, 102, 246a-247a.	0.5	0
49	Direct Observation of the Rotary Motion of FOF ₁ -ATP Synthase Driven by Proton Motive Force. Biophysical Journal, 2013, 104, 277a.	0.5	0
50	3P221 Lipid bilayer chamber array system for massive measurement of transporter activity(13D.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	0.1	0
51	Novel Method for High throughput Formation of Lipid Membrane Arrays. Biophysical Journal, 2014, 106, 622a.	0.5	0
52	Robustness of Rotary Catalysis Mechanism of F ₁ -ATPase. Biophysical Journal, 2014, 106, 25a.	0.5	0
53	Single Molecule Observation of F ₁ -ATPase using Artificial Substrate and Amino Acid. Biophysical Journal, 2014, 106, 254a.	0.5	0
54	3P265 Toward reproduction of a bacterium from hybrid chamber cells(20. Origin of life & ;) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	0.1	0

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55	Arrayed Lipid Membranes on Femtoliter Chambers Allow Highly Sensitive Detection of Ion Translocation Catalyzed by Transporter Protein. <i>Biophysical Journal</i> , 2015, 108, 143a-144a.	0.5	0
56	Novel Microsystem to Measure Voltage-Driven Membrane Transporter Activity. <i>Biophysical Journal</i> , 2016, 110, 653a.	0.5	0
57	High Throughput Analysis of Membrane Transport by using Arrayed Water-In-Oil Droplet Bilayers. <i>Biophysical Journal</i> , 2017, 112, 275a.	0.5	0
58	New Understanding of Chemomechanical Coupling Mechanism of F ₁ . <i>Seibutsu Butsuri</i> , 2012, 52, 014-017.	0.1	0
59	Direct Observation of Proton-driven Rotation of F ₁ oF ₁ 1-ATP Synthase. <i>Seibutsu Butsuri</i> , 2013, 53, 214-215.	0.1	0