Rikiya Watanabe

List of Publications by Year
in descending order

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59	1,196	394421	395702
papers	citations	19	33
		h-index	g-index

63	63	63	1024
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Automated amplification-free digital RNA detection platform for rapid and sensitive SARS-CoV-2 diagnosis. Communications Biology, 2022, 5, .	4.4	28
2	Amplification-free RNA detection with CRISPRâ€“Cas13. Communications Biology, 2021, 4, 476.	4.4	119
3	Microsystem for the single molecule analysis of membrane transport proteins. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129330.	2.4	5
4	Monodisperse Liposomes with Femtoliter Volume Enable Quantitative Digital Bioassays of Membrane Transporters and Cell-Free Gene Expression. ACS Nano, 2020, 14, 11700-11711.	14.6	17
5	Multiplexed single-molecule enzyme activity analysis for counting disease-related proteins in biological samples. Science Advances, 2020, 6, eaay0888.	10.3	44
6	Effects of non-equilibrium angle fluctuation on F₁-ATPase kinetics induced by temperature increase. Physical Chemistry Chemical Physics, 2018, 20, 1872-1880.	2.8	5
7	Grip and slip of L1-CAM on adhesive substrates direct growth cone haptotaxis. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2764-2769.	7.1	34
8	Essential Role of the Îµ Subunit for Reversible Chemo-Mechanical Coupling in F1-ATPase. Biophysical Journal, 2018, 114, 178-187.	0.5	6
9	Single-molecule analysis of phospholipid scrambling by TMEM16F. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3066-3071.	7.1	68
10	Single-Molecule Analysis of Membrane Transporter Activity by Means of a Microsystem. Methods in Molecular Biology, 2018, 1700, 321-330.	0.9	3
11	Single-Molecule Analysis of Phospholipid Scrambling by TMEM16F. Biophysical Journal, 2018, 114, 558a.	0.5	1
12	Hybrid cell reactor system from Escherichia coli protoplast cells and arrayed lipid bilayer chamber device. Scientific Reports, 2018, 8, 11757.	3.3	7
13	High-throughput single-molecule bioassay using micro-reactor arrays with a concentration gradient of target molecules. Lab on A Chip, 2018, 18, 2849-2853.	6.0	16
14	Gradient-reading and mechano-effector machinery for netrin-1-induced axon guidance. ELife, 2018, 7, .	6.0	32
15	High Throughput Analysis of Membrane Transport by using Arrayed Water-In-Oil Droplet Bilayers. Biophysical Journal, 2017, 112, 275a.	0.5	0
16	Novel Microsystem to Measure Voltage-Driven Membrane Transporter Activity. Biophysical Journal, 2016, 110, 653a.	0.5	0
17	Biophysical Characterization of a Thermoalkaliphilic Molecular Motor with a High Stepping Torque Gives Insight into Evolutionary ATP Synthase Adaptation. Journal of Biological Chemistry, 2016, 291, 23965-23977.	3.4	21
18	Novel Nano-Device to Measure Voltage-Driven Membrane Transporter Activity. IEEE Nanotechnology Magazine, 2016, 15, 70-73.	2.0	5

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19	Arrayed Lipid Membranes on Femtoliter Chambers Allow Highly Sensitive Detection of Ion Translocation Catalyzed by Transporter Protein. Biophysical Journal, 2015, 108, 143a-144a.	0.5	0
20	ATP hydrolysis assists phosphate release and promotes reaction ordering in F1-ATPase. Nature Communications, 2015, 6, 10223.	12.8	23
21	Key Chemical Factors of Arginine Finger Catalysis of F₁-ATPase Clarified by an Unnatural Amino Acid Mutation. Biochemistry, 2015, 54, 472-480.	2.5	14
22	Attolitre-sized lipid bilayer chamber array for rapid detection of single transporters. Scientific Reports, 2015, 5, 11025.	3.3	30
23	Torque Transmission Mechanism via DELSEED Loop of F1-ATPase. Biophysical Journal, 2015, 108, 1144-1152.	0.5	15
24	Effects of an ATP analogue, adenosine 5â€²-[Î±-thio]-triphosphate, on F1-ATPase rotary catalysis, torque generation, and inhibited intermediated formation. Biochemical and Biophysical Research Communications, 2015, 458, 515-519.	2.1	2
25	Timing of inorganic phosphate release modulates the catalytic activity of ATP-driven rotary motor protein. Nature Communications, 2014, 5, 3486.	12.8	47
26	Thermodynamic analysis of <scp>F</scp>₁â€<scp>ATP</scp>ase rotary catalysis using highâ€speed imaging. Protein Science, 2014, 23, 1773-1779.	7.6	11
27	Arrayed lipid bilayer chambers allow single-molecule analysis of membrane transporter activity. Nature Communications, 2014, 5, 4519.	12.8	101
28	Novel Method for High throughput Formation of Lipid Membrane Arrays. Biophysical Journal, 2014, 106, 622a.	0.5	0
29	Torque Generation Mechanism of F1-ATPase upon NTP Binding. Biophysical Journal, 2014, 107, 156-164.	0.5	14
30	Robustness of the Rotary Catalysis Mechanism of F1-ATPase. Journal of Biological Chemistry, 2014, 289, 19331-19340.	3.4	10
31	Robustness of Rotary Catalysis Mechanism of F1-ATPase. Biophysical Journal, 2014, 106, 25a.	0.5	0
32	Single Molecule Observation of F1-ATPase using Artificial Substrate and Amino Acid. Biophysical Journal, 2014, 106, 254a.	0.5	0
33	3P265 Toward reproduction of a bacterium from hybrid chamber cells(20. Origin of life &) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Butsuri, 2014, 54, S293.	0.1	0
34	Characterization of the temperature-sensitive reaction of F1-ATPase by using single-molecule manipulation. Scientific Reports, 2014, 4, 4962.	3.3	12
35	High-throughput formation of lipid bilayer membrane arrays with an asymmetric lipid composition. Scientific Reports, 2014, 4, 7076.	3.3	30
36	Chemomechanical coupling mechanism of F₁â€ATPase: Catalysis and torque generation. FEBS Letters, 2013, 587, 1030-1035.	2.8	37

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37	Direct Observation of the Rotary Motion of FOF1-ATP Synthase Driven by Proton Motive Force. Biophysical Journal, 2013, 104, 277a.	0.5	0
38	Catalysis-Enhancement via Rotary Fluctuation of F1-ATPase. Biophysical Journal, 2013, 105, 2385-2391.	0.5	24
39	Biased Brownian stepping rotation of FoF1-ATP synthase driven by proton motive force. Nature Communications, 2013, 4, 1631.	12.8	41
40	Rotary catalysis of F_oF₁-ATP synthase. Biophysics (Nagoya-shi, Japan), 2013, 9, 51-56.	0.4	4
41	3P221 Lipid bilayer chamber array system for massive measurement of transporter activity(13D.) Tj ETQq1 1 0.784314 rgBT /Overlock	0.1	0
42	Direct Observation of Proton-driven Rotation of F_oF₁-ATP Synthase. Seibutsu Butsuri, 2013, 53, 214-215.	0.1	0
43	Chemomechanical coupling of F₁-ATPase under hydrolysis conditions. Biophysics (Nagoya-shi, Japan), 2012, 8, 73-78.	0.4	2
44	Winding single-molecule double-stranded DNA on a nanometer-sized reel. Nucleic Acids Research, 2012, 40, e151-e151.	14.5	12
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 Seibutsu Butsuri, 2012, 52, S56.	0.1	0
47	1PS033 Direct observation of H^+-driven rotation of F_0F_1-ATP synthase(The 50th Annual Meeting of) Tj ETQq1 1 0.784314 rgBT /O	0.1	0
48	Rotary Motion of FOF1-ATP Synthase in the Presence of pmf. Biophysical Journal, 2012, 102, 246a-247a.	0.5	0
49	Role of the DELSEED Loop in Torque Transmission of F1-ATPase. Biophysical Journal, 2012, 103, 970-978.	0.5	47
50	Mechanical modulation of catalytic power on F1-ATPase. Nature Chemical Biology, 2012, 8, 86-92.	8.0	94
51	New Understanding of Chemomechanical Coupling Mechanism of F1. Seibutsu Butsuri, 2012, 52, 014-017.	0.1	0
52	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
53	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 ETQq1 1 0.784314 rgBT /Ov	0.1	0
54	Phosphate release in F1-ATPase catalytic cycle follows ADP release. Nature Chemical Biology, 2010, 6, 814-820.	8.0	146

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55	The Role of Pi-Release as the Main Torque Generating Step of F1-Atpase. Biophysical Journal, 2010, 98, 187a.	0.5	0
56	Single-molecule Study on the Temperature-sensitive Reaction of F1-ATPase with a Hybrid F1 Carrying a Single Î²(E190D). Journal of Biological Chemistry, 2009, 284, 23169-23176.	3.4	23
57	Temperatureâ€sensitive reaction intermediate of F₁â€ATPase. EMBO Reports, 2008, 9, 84-90.	4.5	46
58	Ligation of DNA Based on Single-Molecule Manipulation. , 2007, , .		0
59	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