

Hiromi Imamura

List of Publications by Year in descending order

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96
papers

6,170
citations

87888

38
h-index

74163

75
g-index

109
all docs

109
docs citations

109
times ranked

9379
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of PFKFB3-Driven Glycolysis in Vessel Sprouting. <i>Cell</i> , 2013, 154, 651-663.	28.9	1,117
2	Visualization of ATP levels inside single living cells with fluorescence resonance energy transfer-based genetically encoded indicators. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 15651-15656.	7.1	884
3	Diversity in ATP concentrations in a single bacterial cell population revealed by quantitative single-cell imaging. <i>Scientific Reports</i> , 2014, 4, 6522.	3.3	293
4	Genetically encoded fluorescent thermosensors visualize subcellular thermoregulation in living cells. <i>Nature Methods</i> , 2013, 10, 1232-1238.	19.0	207
5	Evidence for rotation of V1-ATPase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 2312-2315.	7.1	185
6	Cell competition with normal epithelial cells promotes apical extrusion of transformed cells through metabolic changes. <i>Nature Cell Biology</i> , 2017, 19, 530-541.	10.3	172
7	Ca ²⁺ Regulation of Mitochondrial ATP Synthesis Visualized at the Single Cell Level. <i>ACS Chemical Biology</i> , 2011, 6, 709-715.	3.4	140
8	Crystal structure of a central stalk subunit C and reversible association/dissociation of vacuole-type ATPase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 59-64.	7.1	130
9	A Transient Rise in Free Mg ²⁺ Ions Released from ATP-Mg Hydrolysis Contributes to Mitotic Chromosome Condensation. <i>Current Biology</i> , 2018, 28, 444-451.e6.	3.9	116
10	In Vivo Fluorescent Adenosine 5'-Triphosphate (ATP) Imaging of <i>Drosophila melanogaster</i> and <i>Caenorhabditis elegans</i> by Using a Genetically Encoded Fluorescent ATP Biosensor Optimized for Low Temperatures. <i>Analytical Chemistry</i> , 2013, 85, 7889-7896.	6.5	103
11	Monitoring ATP dynamics in electrically active white matter tracts. <i>ELife</i> , 2017, 6, .	6.0	102
12	Evaluation of intramitochondrial ATP levels identifies G0/G1 switch gene 2 as a positive regulator of oxidative phosphorylation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 273-278.	7.1	101
13	Reversible Dimerization of <i>Aequorea victoria</i> Fluorescent Proteins Increases the Dynamic Range of FRET-Based Indicators. <i>ACS Chemical Biology</i> , 2010, 5, 215-222.	3.4	99
14	NAD ⁺ consumption by PARP1 in response to DNA damage triggers metabolic shift critical for damaged cell survival. <i>Molecular Biology of the Cell</i> , 2019, 30, 2584-2597.	2.1	91
15	Visualization and Measurement of ATP Levels in Living Cells Replicating Hepatitis C Virus Genome RNA. <i>PLoS Pathogens</i> , 2012, 8, e1002561.	4.7	90
16	Leucine Zipper EF Hand-containing Transmembrane Protein 1 (Letm1) and Uncoupling Proteins 2 and 3 (UCP2/3) Contribute to Two Distinct Mitochondrial Ca ²⁺ Uptake Pathways. <i>Journal of Biological Chemistry</i> , 2011, 286, 28444-28455.	3.4	86
17	Rotation of the Proteolipid Ring in the V-ATPase. <i>Journal of Biological Chemistry</i> , 2003, 278, 24255-24258.	3.4	82
18	Crystal Structures of 4- β -Glucanotransferase from <i>Thermococcus litoralis</i> and Its Complex with an Inhibitor. <i>Journal of Biological Chemistry</i> , 2003, 278, 19378-19386.	3.4	82

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19	Rotation scheme of V1-motor is different from that of F1-motor. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 17929-17933.	7.1	75
20	BTeam, a Novel BRET-based Biosensor for the Accurate Quantification of ATP Concentration within Living Cells. Scientific Reports, 2016, 6, 39618.	3.3	75
21	Correlation between the conformational states of F ₁ -ATPase as determined from its crystal structure and single-molecule rotation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20722-20727.	7.1	71
22	Toll-like receptor 9 protects non-immune cells from stress by modulating mitochondrial ATP synthesis through the inhibition of SERCA 2. EMBO Reports, 2014, 15, 438-445.	4.5	66
23	ATP increases within the lumen of the endoplasmic reticulum upon intracellular Ca ²⁺ release. Molecular Biology of the Cell, 2014, 25, 368-379.	2.1	65
24	ATP Hydrolysis and Synthesis of a Rotary Motor V-ATPase from Thermus thermophilus. Journal of Biological Chemistry, 2008, 283, 20789-20796.	3.4	64
25	Rotation, Structure, and Classification of Prokaryotic V-ATPase. Journal of Bioenergetics and Biomembranes, 2005, 37, 405-410.	2.3	62
26	Shear stress augments mitochondrial ATP generation that triggers ATP release and Ca ²⁺ signaling in vascular endothelial cells. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 315, H1477-H1485.	3.2	62
27	Assessing Actual Contribution of IF1, Inhibitor of Mitochondrial FoF1, to ATP Homeostasis, Cell Growth, Mitochondrial Morphology, and Cell Viability. Journal of Biological Chemistry, 2012, 287, 18781-18787.	3.4	59
28	Associative Interactions in Crowded Solutions of Biopolymers Counteract Depletion Effects. Journal of the American Chemical Society, 2015, 137, 13041-13048.	13.7	55
29	ATP Maintenance via Two Types of ATP Regulators Mitigates Pathological Phenotypes in Mouse Models of Parkinson's Disease. EBioMedicine, 2017, 22, 225-241.	6.1	54
30	Structure of a central stalk subunit F of prokaryotic V-type ATPase/synthase from Thermus thermophilus. EMBO Journal, 2005, 24, 3974-3983.	7.8	53
31	Quantitative Glucose and ATP Sensing in Mammalian Cells. Pharmaceutical Research, 2011, 28, 2745-2757.	3.5	53
32	Glycolysis, but not Mitochondria, responsible for intracellular ATP distribution in cortical area of podocytes. Scientific Reports, 2016, 5, 18575.	3.3	53
33	Subunit Arrangement in V-ATPase from Thermus thermophilus. Journal of Biological Chemistry, 2003, 278, 42686-42691.	3.4	52
34	Mild Glucose Starvation Induces KDM2A-Mediated H3K36me2 Demethylation through AMPK To Reduce rRNA Transcription and Cell Proliferation. Molecular and Cellular Biology, 2015, 35, 4170-4184.	2.3	50
35	Mitochondrial dysfunction induces dendritic loss via eIF2 γ phosphorylation. Journal of Cell Biology, 2017, 216, 815-834.	5.2	47
36	RLR-mediated antiviral innate immunity requires oxidative phosphorylation activity. Scientific Reports, 2017, 7, 5379.	3.3	44

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37	Shear stress activates mitochondrial oxidative phosphorylation by reducing plasma membrane cholesterol in vascular endothelial cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 33660-33667.	7.1	44
38	Glucose-stimulated Single Pancreatic Islets Sustain Increased Cytosolic ATP Levels during Initial Ca ²⁺ Influx and Subsequent Ca ²⁺ Oscillations. <i>Journal of Biological Chemistry</i> , 2014, 289, 2205-2216.	3.4	43
39	Distinct intracellular Ca ²⁺ dynamics regulate apical constriction and differentially contribute to neural tube closure. <i>Development (Cambridge)</i> , 2017, 144, 1307-1316.	2.5	42
40	Lactate is an energy substrate for rodent cortical neurons and enhances their firing activity. <i>ELife</i> , 2021, 10, .	6.0	42
41	Spatiotemporal Correlations between Cytosolic and Mitochondrial Ca ²⁺ Signals Using a Novel Red-Shifted Mitochondrial Targeted Cameleon. <i>PLoS ONE</i> , 2012, 7, e45917.	2.5	41
42	Mitochondrial dysfunction in primary human fibroblasts triggers an adaptive cell survival program that requires AMPK- β . <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2015, 1852, 529-540.	3.8	40
43	Identification of the Catalytic Residue of <i>Thermococcus litoralis</i> α -Glucanotransferase through Mechanism-Based Labeling. <i>Biochemistry</i> , 2001, 40, 12400-12406.	2.5	38
44	Principal Role of the Arginine Finger in Rotary Catalysis of F ₁ -ATPase. <i>Journal of Biological Chemistry</i> , 2012, 287, 15134-15142.	3.4	37
45	General anesthetics cause mitochondrial dysfunction and reduction of intracellular ATP levels. <i>PLoS ONE</i> , 2018, 13, e0190213.	2.5	37
46	The Plasma Membrane Calcium Pump in Pancreatic Cancer Cells Exhibiting the Warburg Effect Relies on Glycolytic ATP. <i>Journal of Biological Chemistry</i> , 2015, 290, 24760-24771.	3.4	35
47	Single-cell dynamics of pannexin-1-facilitated programmed ATP loss during apoptosis. <i>ELife</i> , 2020, 9, .	6.0	34
48	Application of FRET-Based Biosensor α -Team for Visualization of ATP Levels in the Mitochondrial Matrix of Living Mammalian Cells. <i>Methods in Molecular Biology</i> , 2017, 1567, 231-243.	0.9	30
49	Reliable imaging of ATP in living budding and fission yeast. <i>Journal of Cell Science</i> , 2019, 132, .	2.0	30
50	Changes in Cytosolic ATP Levels and Intracellular Morphology during Bacteria-Induced Hypersensitive Cell Death as Revealed by Real-Time Fluorescence Microscopy Imaging. <i>Plant and Cell Physiology</i> , 2012, 53, 1768-1775.	3.1	29
51	Spatiotemporal ATP Dynamics during AKI Predict Renal Prognosis. <i>Journal of the American Society of Nephrology: JASN</i> , 2020, 31, 2855-2869.	6.1	29
52	Visualization of long-term Mg ²⁺ dynamics in apoptotic cells using a novel targetable fluorescent probe. <i>Chemical Science</i> , 2017, 8, 8255-8264.	7.4	28
53	Identification and Molecular Characterization of a Novel Type of β -galactosidase from <i>Pyrococcus furiosus</i> . <i>Biocatalysis and Biotransformation</i> , 2003, 21, 243-252.	2.0	27
54	Cloning of the Gene for Inorganic Pyrophosphatase from a Thermoacidophilic Archaeon, <i>Sulfolobus</i> sp. Strain 7, and Overproduction of the Enzyme by Coexpression of tRNA for Arginine Rare Codon. <i>Bioscience, Biotechnology and Biochemistry</i> , 1998, 62, 2408-2414.	1.3	26

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55	High level expression of <i>Thermococcus litoralis</i> 4- β -glucanotransferase in a soluble form in <i>Escherichia coli</i> with a novel expression system involving minor arginine tRNAs and GroELS. <i>FEBS Letters</i> , 1999, 457, 393-396.	2.8	26
56	Transglycosylation Activity of <i>Dictyoglomus thermophilum</i> Amylase A. <i>Bioscience, Biotechnology and Biochemistry</i> , 2004, 68, 2369-2373.	1.3	25
57	The F Subunit of <i>Thermus thermophilus</i> V1-ATPase Promotes ATPase Activity but Is Not Necessary for Rotation. <i>Journal of Biological Chemistry</i> , 2004, 279, 18085-18090.	3.4	24
58	Intracellular ATP levels in mouse cortical excitatory neurons varies with sleep/wake states. <i>Communications Biology</i> , 2020, 3, 491.	4.4	24
59	Unique metal dependency of cytosolic β -mannosidase from <i>Thermotoga maritima</i> , a hyperthermophilic bacterium. <i>Archives of Biochemistry and Biophysics</i> , 2003, 415, 87-93.	3.0	23
60	High and stable ATP levels prevent aberrant intracellular protein aggregation in yeast. <i>ELife</i> , 2022, 11, .	6.0	23
61	Direct perfluoroalkylation of non-activated aromatic C-H bonds of phenols. <i>Tetrahedron Letters</i> , 2008, 49, 4189-4191.	1.4	21
62	OLIVE: A Genetically Encoded Fluorescent Biosensor for Quantitative Imaging of Branched-Chain Amino Acid Levels inside Single Living Cells. <i>ACS Sensors</i> , 2019, 4, 3333-3342.	7.8	21
63	Molecular evolution of the ATPase subunit of three archaeal sugar ABC transporters. <i>Biochemical and Biophysical Research Communications</i> , 2004, 319, 230-234.	2.1	20
64	Visualization of NO ₃ ⁻ /NO ₂ ⁻ Dynamics in Living Cells by Fluorescence Resonance Energy Transfer (FRET) Imaging Employing a Rhizobial Two-component Regulatory System. <i>Journal of Biological Chemistry</i> , 2016, 291, 2260-2269.	3.4	17
65	Reconstitution in Vitro of V1 Complex of <i>Thermus thermophilus</i> V-ATPase Revealed That ATP Binding to the A Subunit Is Crucial for V1 Formation. <i>Journal of Biological Chemistry</i> , 2006, 281, 38582-38591.	3.4	16
66	Higd1a improves respiratory function in the models of mitochondrial disorder. <i>FASEB Journal</i> , 2020, 34, 1859-1871.	0.5	16
67	Human AK2 links intracellular bioenergetic redistribution to the fate of hematopoietic progenitors. <i>Biochemical and Biophysical Research Communications</i> , 2018, 497, 719-725.	2.1	15
68	A molecular triage process mediated by RING finger protein 126 and BCL2-associated athanogene 6 regulates degradation of G0/G1 switch gene 2. <i>Journal of Biological Chemistry</i> , 2019, 294, 14562-14573.	3.4	14
69	Fusion protein analysis reveals the precise regulation between Hsp70 and Hsp100 during protein disaggregation. <i>Scientific Reports</i> , 2017, 7, 8648.	3.3	13
70	Analysis of mitochondrial function in human induced pluripotent stem cells from patients with mitochondrial diabetes due to the A3243G mutation. <i>Scientific Reports</i> , 2018, 8, 949.	3.3	13
71	Measurement of ATP concentrations in mitochondria of living cells using luminescence and fluorescence approaches. <i>Methods in Cell Biology</i> , 2020, 155, 199-219.	1.1	13
72	A Trace Amount of Galactose, a Major Component of Milk Sugar, Allows Maturation of Glycoproteins during Sugar Starvation. <i>IScience</i> , 2018, 10, 211-221.	4.1	10

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73	In vivo real-time ATP imaging in zebrafish hearts reveals CO ₂ induces ischemic tolerance. <i>FASEB Journal</i> , 2020, 34, 2041-2054.	0.5	10
74	MRT letter: Expression of ATP sensor protein in <i>Caenorhabditis elegans</i> . <i>Microscopy Research and Technique</i> , 2012, 75, 15-19.	2.2	9
75	New Structural Insights on Carbohydrate-active Enzymes. <i>Journal of Applied Glycoscience</i> (1999), 2007, 54, 95-102.	0.7	7
76	Reaction Mechanism and Crystal Structure of 4-ALPHA.-Glucanotransferase from a Hyperthermophilic Archaeon, <i>Thermococcus litoralis</i> . <i>Journal of Applied Glycoscience</i> (1999), 2001, 48, 171-175.	0.7	7
77	Spindle pole body movement is affected by glucose and ammonium chloride in fission yeast. <i>Biochemical and Biophysical Research Communications</i> , 2019, 511, 820-825.	2.1	6
78	PPAR δ -Mediated Positive-Feedback Loop Contributes to Cold Exposure Memory. <i>Scientific Reports</i> , 2019, 9, 4538.	3.3	5
79	Monitoring and mathematical modeling of mitochondrial ATP in myotubes at single-cell level reveals two distinct population with different kinetics. <i>Quantitative Biology</i> , 2020, 8, 228-237.	0.5	4
80	Crystallization and preliminary X-ray analysis of cytosolic α -mannosidase from <i>Thermotoga maritima</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 104-105.	0.7	3
81	Automatic Quantitative Segmentation of Myotubes Reveals Single-cell Dynamics of S6 Kinase Activation. <i>Cell Structure and Function</i> , 2018, 43, 153-169.	1.1	2
82	ATP Imaging in <i>Xenopus laevis</i> Oocytes. , 2014, , 181-186.		2
83	1P188 Reconstitution of V ₁ complex of <i>Thermus thermophilus</i> V-ATPase revealed that ATP binding to the A subunit is crucial for V ₁ formation(6. Macromolecular assembly,Poster) Tj ETQq1 1 0.784314 rgBT /Overlock0.10 Tf 50337 Td (Se		
84	3P162 Determination the relationship between crystal structure and chemical state of F ₁ -ATPase by single molecule analysis(Molecular motors,Poster Presentations). <i>Seibutsu Butsuri</i> , 2007, 47, S243.	0.1	0
85	3P037 N-terminal domain of F ₁ -ATPase β subunit affects ATP binding to the C-terminal domain(Proteins-structure and structure-function relationship,Poster Presentations). <i>Seibutsu Butsuri</i> , 2007, 47, S212.	0.1	0
86	3P-325 Spatio-temporal dynamics of intracellular ATP during apoptosis revealed by a genetically encoded fluorescent ATP indicator(The 46th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2008, 48, S177.	0.1	0
87	ATP concentration change in <i>Caenorhabditis elegans</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010, 1797, 60-61.	1.0	0
88	Simultaneous ratiometric imaging of ATP and Ca ²⁺ concentrations inside single living cells. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2010, 1797, 126.	1.0	0
89	ATP Gradient Across the Innermitochondrial Membrane. <i>Biophysical Journal</i> , 2010, 98, 578a.	0.5	0
90	Application of FRET Biosensors in Energy Metabolism. <i>Biophysical Journal</i> , 2013, 104, 304a.	0.5	0

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91	3P133 ATP quantification and live-imaging in <i>Xenopus laevis</i> oocyte(09. Development & Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	0.1	0
92	Macromolecular Crowding in the Cytosol: Underappreciated or Overestimated?. <i>Biophysical Journal</i> , 2015, 108, 114a.	0.5	0
93	Cardiac Energetics Re-evaluated by in Vivo Visualization of ATP Levels. <i>Journal of Cardiac Failure</i> , 2015, 21, S174.	1.7	0
94	Evaluation of Mitochondrial Respiratory Activity Using a FRET-based Indicator for Intracellular ATP. <i>Seibutsu Butsuri</i> , 2017, 57, 268-270.	0.1	0
95	Glycolysis, but not Mitochondria, responsible for intracellular ATP distribution in cortical area of podocytes. <i>Proceedings for Annual Meeting of the Japanese Pharmacological Society</i> , 2018, WCP2018, PO2-4-22.	0.0	0
96	Dynamics of ATP Levels in Single Dying Apoptotic Cells. <i>Seibutsu Butsuri</i> , 2022, 62, 125-127.	0.1	0