Diversity in ATP concentrations in a single bacterial cel quantitative single-cell imaging

Scientific Reports

4, 6522

DOI: 10.1038/srep06522

Citation Report

#	Article	IF	Citations
1	ATP regulation in bioproduction. Microbial Cell Factories, 2015, 14, 198.	1.9	74
2	Various Application of Fluorescent and Chemiluminescent Proteins. Seibutsu Butsuri, 2015, 55, 305-310.	0.0	0
3	2â€Oxoglutarate levels control adenosine nucleotide binding by Herbaspirillum seropedicae <scp>PII</scp> proteins. FEBS Journal, 2015, 282, 4797-4809.	2.2	10
4	Functional Characterization of the Receiver Domain for Phosphorelay Control in Hybrid Sensor Kinases. PLoS ONE, 2015, 10, e0132598.	1.1	32
5	Expression and purification of a single-chain Type IV restriction enzyme Eco94GmrSD anddetermination of its substrate preference. Scientific Reports, 2015, 5, 9747.	1.6	22
6	Single-Cell Tracking Reveals Antibiotic-Induced Changes in Mycobacterial Energy Metabolism. MBio, 2015, 6, e02236-14.	1.8	59
7	Experimental approaches to phenotypic diversity in infection. Current Opinion in Microbiology, 2015, 27, 25-36.	2.3	34
8	Bioluminescence assay for cell viability. Biochemistry (Moscow), 2015, 80, 701-713.	0.7	61
9	Continuous intravenous infusion of ATP in humans yields large expansions of erythrocyte ATP pools but extracellular ATP pools are elevated only at the start followed by rapid declines. Purinergic Signalling, 2015, 11, 251-262.	1.1	11
10	The growing importance of mitochondrial calcium in health and disease. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11150-11151.	3.3	11
11	Associative Interactions in Crowded Solutions of Biopolymers Counteract Depletion Effects. Journal of the American Chemical Society, 2015, 137, 13041-13048.	6.6	55
12	Challenging synergistic activity of poplarâ€“bacteria association for the Cd phytostabilization. Environmental Science and Pollution Research, 2015, 22, 19546-19561.	2.7	19
13	Coupled ATPase-adenylate kinase activity in ABC transporters. Nature Communications, 2016, 7, 13864.	5.8	45
14	A network property necessary for concentration robustness. Nature Communications, 2016, 7, 13255.	5.8	11
15	BTeam, a Novel BRET-based Biosensor for the Accurate Quantification of ATP Concentration within Living Cells. Scientific Reports, 2016, 6, 39618.	1.6	75
16	Mode of Interaction of the Signal-Transducing Protein EIIAGlc with the Maltose ABC Transporter in the Process of Inducer Exclusion. Biochemistry, 2016, 55, 5442-5452.	1.2	19
17	Imaging Adenosine Triphosphate (ATP). Biological Bulletin, 2016, 231, 73-84.	0.7	89
18	Structures and Transport Mechanisms of the ABC Efflux Pumps. , 2016, , 73-98.		3

#	Article	IF	Citations
19	Genetically Encoded Fluorescent Biosensors to Explore AMPK Signaling and Energy Metabolism. Exs, 2016, 107, 491-523.	1.4	9
20	Limiting Energy Dissipation Induces Glassy Kinetics in Single-Cell High-Precision Responses. Biophysical Journal, 2016, 110, 1180-1190.	0.2	2
21	High affinity nucleotide-binding mutant of the Îµ subunit of thermophilic F1-ATPase. Biochemical and Biophysical Research Communications, 2016, 469, 1129-1132.	1.0	8
22	On the ATP binding site of the Îµ subunit from bacterial F-type ATP synthases. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 332-340.	0.5	14
23	In-vivo fluorescence imaging of adenosine 5â€²-triphosphate. TrAC - Trends in Analytical Chemistry, 2016, 80, 190-203.	5.8	55
24	Novel actin filaments fromBacillus thuringiensisform nanotubules for plasmid DNA segregation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1200-E1205.	3.3	16
25	Formalin-fixed cells as an internal standard approach for the detection and quantitative assessment of Shiga toxin-producing Escherichia coli (STEC). Food Control, 2016, 63, 76-82.	2.8	2
26	The Molecular Basis of TnrA Control by Glutamine Synthetase in Bacillus subtilis. Journal of Biological Chemistry, 2016, 291, 3483-3495.	1.6	27
27	Mechanism of Action of ABC Importers: Conservation, Divergence, and Physiological Adaptations. Journal of Molecular Biology, 2017, 429, 606-619.	2.0	71
28	A Novel Phosphodiesterase of the GdpP Family Modulates Cyclic di-AMP Levels in Response to Cell Membrane Stress in Daptomycin-Resistant Enterococci. Antimicrobial Agents and Chemotherapy, 2017, 61, .	1.4	24
29	Depupylase Dop Requires Inorganic Phosphate in the Active Site for Catalysis. Journal of Biological Chemistry, 2017, 292, 4044-4053.	1.6	15
30	Mitochondrial dysfunction induces dendritic loss via eIF2Î± phosphorylation. Journal of Cell Biology, 2017, 216, 815-834.	2.3	47
31	Solidâ€state NMR and EPR Spectroscopy of Mn²⁺â€Substituted ATPâ€Fueled Protein Engines. Angewandte Chemie - International Edition, 2017, 56, 3369-3373.	7.2	49
32	Measuring ATP in Axons with FRET. Neuromethods, 2017, , 115-131.	0.2	3
33	Signaling complexes control the chemotaxis kinase by altering its apparent rate constant of autophosphorylation. Protein Science, 2017, 26, 1535-1546.	3.1	17
34	Diadenosine tetraphosphate (Ap4A) â€“ an E. coli alarmone or a damage metabolite?. FEBS Journal, 2017, 284, 2194-2215.	2.2	30
35	Crystallographic and biochemical characterization of the dimeric architecture of site-2 protease. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 1859-1871.	1.4	6
36	Phosphoribosyl Diphosphate (PRPP): Biosynthesis, Enzymology, Utilization, and Metabolic Significance. Microbiology and Molecular Biology Reviews, 2017, 81, .	2.9	131

#	Article	IF	Citations
37	Beyond the bulk: disclosing the life of single microbial cells. FEMS Microbiology Reviews, 2017, 41, 751-780.	3.9	38
38	Learning from quantitative data to understand central carbon metabolism. Biotechnology Advances, 2017, 35, 971-980.	6.0	23
39	Impact of cellular health conditions on the protein folding state in mammalian cells. Chemical Communications, 2017, 53, 11245-11248.	2.2	40
40	FestkÃ¶rperâ€NMRâ€•und EPRâ€Spektroskopie an Mn²⁺â€substituierten ATPâ€angetriebenen Proteinmaschinen. Angewandte Chemie, 2017, 129, 3418-3422.	1.6	5
41	Antimicrobial Properties of Silver Cations Substituted to Faujasite Mineral. Nanomaterials, 2017, 7, 240.	1.9	12
42	Information Theoretical Study of Cross-Talk Mediated Signal Transduction in MAPK Pathways. Entropy, 2017, 19, 469.	1.1	7
43	Imaging extracellular ATP with a genetically-encoded, ratiometric fluorescent sensor. PLoS ONE, 2017, 12, e0187481.	1.1	50
44	ATP-Driven Contraction of Phage T3 Capsids with DNA Incompletely Packaged In Vivo. Viruses, 2017, 9, 119.	1.5	8
45	Coupling of Rigor Mortis and Intestinal Necrosis during C.Âelegans Organismal Death. Cell Reports, 2018, 22, 2730-2741.	2.9	22
46	Fluorescent Mycobacterium tuberculosis reporters: illuminating hostâ€“pathogen interactions. Pathogens and Disease, 2018, 76, .	0.8	33
47	Metabolic heterogeneity in clonal microbial populations. Current Opinion in Microbiology, 2018, 45, 30-38.	2.3	82
48	Stochasticity in cellular metabolism and growth: Approaches and consequences. Current Opinion in Systems Biology, 2018, 8, 131-136.	1.3	18
49	A multidrug ABC transporter with a taste for GTP. Scientific Reports, 2018, 8, 2309.	1.6	26
50	Dynamic single-cell NAD(P)H measurement reveals oscillatory metabolism throughout the E. coli cell division cycle. Scientific Reports, 2018, 8, 2162.	1.6	19
51	Strongly enhanced bacterial bioluminescence with the lux operon for single-cell imaging. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 962-967.	3.3	96
52	The type IV pilus assembly motor PilB is a robust hexameric ATPase with complex kinetics. Biochemical Journal, 2018, 475, 1979-1993.	1.7	13
53	Dynamics of a Protein Chain Motor Driving Helical Bacteria under Stress. Biophysical Journal, 2018, 114, 1955-1969.	0.2	6
54	Guidelines on experimental methods to assess mitochondrial dysfunction in cellular models of neurodegenerative diseases. Cell Death and Differentiation, 2018, 25, 542-572.	5.0	120

#	Article	IF	Citations
55	Survival of the Fattest: Evolutionary Trade-offs in Cellular Resource Storage. Electronic Notes in Theoretical Computer Science, 2018, 335, 91-112.	0.9	2
56	Dissecting the regulation and function of ATP at the single-cell level. PLoS Biology, 2018, 16, e3000095.	2.6	17
57	Hepatitis B virus core protein phosphorylation: Identification of the SRPK1 target sites and impact of their occupancy on RNA binding and capsid structure. PLoS Pathogens, 2018, 14, e1007488.	2.1	67
58	Genetically Encoded Fluorescent Biosensors Illuminate the Spatiotemporal Regulation of Signaling Networks. Chemical Reviews, 2018, 118, 11707-11794.	23.0	351
59	Unexplored Nucleotide Binding Modes for the ABC Exporter MsbA. Journal of the American Chemical Society, 2018, 140, 14112-14125.	6.6	32
60	Sources, propagation and consequences of stochasticity in cellular growth. Nature Communications, 2018, 9, 4528.	5.8	76
61	Frequent pauses in Escherichia coli flagella elongation revealed by single cell real-time fluorescence imaging. Nature Communications, 2018, 9, 1885.	5.8	31
62	Insights into the regulatory function of the É› subunit from bacterial F-type ATP synthases: a comparison of structural, biochemical and biophysical data. Open Biology, 2018, 8, 170275.	1.5	21
63	Structures of two aptamers with differing ligand specificity reveal ruggedness in the functional landscape of RNA. ELife, 2018, 7, .	2.8	27
64	RGBâ€Color Intensiometric Indicators to Visualize Spatiotemporal Dynamics of ATP in Single Cells. Angewandte Chemie - International Edition, 2018, 57, 10873-10878.	7.2	78
65	RGBâ€Color Intensiometric Indicators to Visualize Spatiotemporal Dynamics of ATP in Single Cells. Angewandte Chemie, 2018, 130, 11039-11044.	1.6	6
66	The Methanosarcina mazei MM2060 Gene Encodes a Bifunctional Kinase/Decarboxylase Enzyme Involved in Cobamide Biosynthesis. Biochemistry, 2018, 57, 4478-4495.	1.2	7
67	Fluorescent, Bioluminescent, and Optogenetic Approaches to Study Excitable Physiology in the Single Cardiomyocyte. Cells, 2018, 7, 51.	1.8	35
68	Dual roles for ATP in the regulation of phase separated protein aggregates in Xenopus oocyte nucleoli. ELife, 2018, 7, .	2.8	65
69	The two faces of pannexins: new roles in inflammation and repair. Journal of Inflammation Research, 2018, Volume 11, 273-288.	1.6	37
70	Modeling the Regulation of the Activity of Glutamine Synthetase from Escherichia coli by Magnesium Ions. Biophysics (Russian Federation), 2018, 63, 318-324.	0.2	1
71	Mechanism for the Regulated Control of Bacterial Transcription Termination by a Universal Adaptor Protein. Molecular Cell, 2018, 71, 911-922.e4.	4.5	65
72	Acid-responsive activity of the Helicobacter pylori metalloregulator NikR. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8966-8971.	3.3	34

#	Article	IF	Citations
73	The aminoâ€terminal domain of MycobacteriumÂtuberculosis ClpB protein plays a crucial role in its substrate disaggregation activity. FEBS Open Bio, 2018, 8, 1669-1690.	1.0	11
74	Imaging pH Dynamics Simultaneously in Two Cellular Compartments Using a Ratiometric pH-Sensitive Mutant of mCherry. ACS Omega, 2018, 3, 9476-9486.	1.6	22
75	Enhancing fluorescent protein photostability through robot-assisted photobleaching. Integrative Biology (United Kingdom), 2018, 10, 419-428.	0.6	12
76	Single-molecule probing of the conformational homogeneity of the ABC transporter BtuCD. Nature Chemical Biology, 2018, 14, 715-722.	3.9	46
77	Combining Mutations That Inhibit Two Distinct Steps of the ATP Hydrolysis Cycle Restores Wild-Type Function in the Lipopolysaccharide Transporter and Shows that ATP Binding Triggers Transport. MBio, 2019, 10, .	1.8	17
78	Cell Fuelling and Metabolic Energy Conservation in Synthetic Cells. ChemBioChem, 2019, 20, 2581-2592.	1.3	22
79	Detection of Osmotic Shock-Induced Extracellular Nucleotide Release with a Genetically Encoded Fluorescent Sensor of ADP and ATP. Sensors, 2019, 19, 3253.	2.1	8
80	Aptamer-Based Fluorescent Biosensing of Adenosine Triphosphate and Cytochrome c via Aggregation-Induced Emission Enhancement on Novel Label-Free DNA-Capped Silver Nanoclusters/Graphene Oxide Nanohybrids. ACS Applied Materials & Interfaces, 2019, 11, 46077-46089.	4.0	40
81	Relation between activityâ€induced intracellular sodium transients and ATP dynamics in mouse hippocampal neurons. Journal of Physiology, 2019, 597, 5687-5705.	1.3	35
82	Inhibition and Activation of Kinases by Reaction Products: A Reporter-Free Assay. Analytical Chemistry, 2019, 91, 11803-11811.	3.2	9
83	Circularly Permuted Fluorescent Protein-Based Indicators: History, Principles, and Classification. International Journal of Molecular Sciences, 2019, 20, 4200.	1.8	83
84	Selective sensing of ATP by hydroxide-bridged dizinc(ii) complexes offering a hydrogen bonding cavity. Dalton Transactions, 2019, 48, 14737-14747.	1.6	24
85	Reconciling the controversy regarding the functional importance of bullet- and football-shaped GroE complexes. Journal of Biological Chemistry, 2019, 294, 13527-13529.	1.6	13
86	Overcoming the Bottleneck of the Enzymatic Cycle by Steric Frustration. Physical Review Letters, 2019, 122, 238102.	2.9	24
87	Live cell imaging of signaling and metabolic activities. , 2019, 202, 98-119.		41
88	Quantifying Acute Fuel and Respiration Dependent pH Homeostasis in Live Cells Using the mCherryTYG Mutant as a Fluorescence Lifetime Sensor. Analytical Chemistry, 2019, 91, 8466-8475.	3.2	8
89	Modeling the Growth of Organisms Validates a General Relation between Metabolic Costs and Natural Selection. Physical Review Letters, 2019, 122, 238101.	2.9	23
90	Live-Cell Imaging of Physiologically Relevant Metal Ions Using Genetically Encoded FRET-Based Probes. Cells, 2019, 8, 492.	1.8	71

#	Article	IF	Citations
91	Analytical Techniques for Single-Cell Studies in Microbiology. , 2019, , 1-26.		0
92	Rule-Based Modeling Using Wildcards in the Smoldyn Simulator. Methods in Molecular Biology, 2019, 1945, 179-202.	0.4	3
93	Cas3-stimulated runaway replication of modified ColE1 plasmids in Escherichia coli is temperature dependent. FEMS Microbiology Letters, 2019, 366, .	0.7	2
94	Proteolysis mediated by the membraneâ€integrated ATPâ€dependent protease FtsH has a unique nonlinear dependence on ATP hydrolysis rates. Protein Science, 2019, 28, 1262-1275.	3.1	4
95	Kinetics of Enzymatic Mercury Methylation at Nanomolar Concentrations Catalyzed by HgcAB. Applied and Environmental Microbiology, 2019, 85, .	1.4	20
96	Birth and Resuscitation of (p)ppGpp Induced Antibiotic Tolerant Persister Cells. Scientific Reports, 2019, 9, 6056.	1.6	61
97	Stochastic modelling reveals mechanisms of metabolic heterogeneity. Communications Biology, 2019, 2, 108.	2.0	44
98	Spindle pole body movement is affected by glucose and ammonium chloride in fission yeast. Biochemical and Biophysical Research Communications, 2019, 511, 820-825.	1.0	6
99	Pareto Optimality Explanation of the Glycolytic Alternatives in Nature. Scientific Reports, 2019, 9, 2633.	1.6	16
100	Reliable imaging of ATP in living budding and fission yeast. Journal of Cell Science, 2019, 132, .	1.2	30
101	Production of active manganese peroxidase in Escherichia coli by co-expression of chaperones and inÂvitro maturation by ATP-dependent chaperone release. Journal of Bioscience and Bioengineering, 2019, 128, 290-295.	1.1	13
102	The ABC Guide to Fluorescent Toolsets for the Development of Future Biomaterials. Frontiers in Bioengineering and Biotechnology, 2019, 7, 5.	2.0	1
103	Chemical Biology Gateways to Mapping Location, Association, and Pathway Responsivity. Frontiers in Chemistry, 2019, 7, 125.	1.8	8
104	(p)ppGpp-mediated stress response induced by defects in outer membrane biogenesis and ATP production promotes survival in Escherichia coli. Scientific Reports, 2019, 9, 2934.	1.6	31
105	A genetically encoded single-wavelength sensor for imaging cytosolic and cell surface ATP. Nature Communications, 2019, 10, 711.	5.8	185
106	Stochastic Variation in Expression of the Tricarboxylic Acid Cycle Produces Persister Cells. MBio, 2019, 10, .	1.8	84
107	Intracellular Energy Variability Modulates Cellular Decision-Making Capacity. Scientific Reports, 2019, 9, 20196.	1.6	8
108	Evaluating the performance of a post-translational dynamic metabolic control system. IFAC-PapersOnLine, 2019, 52, 225-230.	0.5	0

#	Article	IF	Citations
109	ATP-Dependent Dynamic Protein Aggregation Regulates Bacterial Dormancy Depth Critical for Antibiotic Tolerance. Molecular Cell, 2019, 73, 143-156.e4.	4.5	221
110	A rapid method for post-antibiotic bacterial susceptibility testing. PLoS ONE, 2019, 14, e0210534.	1.1	22
111	The enigmatic ATP supply of the endoplasmic reticulum. Biological Reviews, 2019, 94, 610-628.	4.7	38
112	FRETâ€based imaging of intracellular ATP in organotypic brain slices. Journal of Neuroscience Research, 2019, 97, 933-945.	1.3	24
113	Phenotypic heterogeneity of microbial populations under nutrient limitation. Current Opinion in Biotechnology, 2020, 62, 160-167.	3.3	18
114	Discovery of novel tRNA-amino acid dual-site inhibitors against threonyl-tRNA synthetase by fragment-based target hopping. European Journal of Medicinal Chemistry, 2020, 187, 111941.	2.6	15
115	Genetically encoded single circularly permuted fluorescent protein-based intensity indicators. Journal Physics D: Applied Physics, 2020, 53, 113001.	1.3	10
116	Metabolic Compartmentalization at the Leading Edge of Metastatic Cancer Cells. Frontiers in Oncology, 2020, 10, 554272.	1.3	8
117	Cell-Cycle-Associated Expression Patterns Predict Gene Function in Mycobacteria. Current Biology, 2020, 30, 3961-3971.e6.	1.8	13
118	A Review of Methods to Determine Viability, Vitality, and Metabolic Rates in Microbiology. Frontiers in Microbiology, 2020, 11, 547458.	1.5	84
119	From inÂvitro towards inÂsitu : structureâ€based investigation of ABC exporters by electron paramagnetic resonance spectroscopy. FEBS Letters, 2020, 594, 3839-3856.	1.3	11
120	Microfluidic Single-Cell Analytics. Advances in Biochemical Engineering/Biotechnology, 2020, , 1.	0.6	4
121	Extracellular ATP as an Inter-Kingdom Signaling Molecule: Release Mechanisms by Bacteria and Its Implication on the Host. International Journal of Molecular Sciences, 2020, 21, 5590.	1.8	35
122	Metabolic Profiling of Single Cancer Cells Using Mitochondrial ATP Probes. STAR Protocols, 2020, 1, 100048.	0.5	1
124	A Dual Nanosensor Approach to Determine the Cytosolic Concentration of ATP in Astrocytes. Frontiers in Cellular Neuroscience, 2020, 14, 565921.	1.8	11
125	Structures of ABC transporters: handle with care. FEBS Letters, 2020, 594, 3799-3814.	1.3	35
126	Bacterial Vivisection: How Fluorescence-Based Imaging Techniques Shed a Light on the Inner Workings of Bacteria. Microbiology and Molecular Biology Reviews, 2020, 84, .	2.9	17
127	Random packing material in disinfection contactors: Effects on final drinking water quality. AWWA Water Science, 2020, 2, e1187.	1.0	1

#	Article	IF	Citations
128	Computation of Single-Cell Metabolite Distributions Using Mixture Models. Frontiers in Cell and Developmental Biology, 2020, 8, 614832.	1.8	13
129	Flux controlling technology for central carbon metabolism for efficient microbial bio-production. Current Opinion in Biotechnology, 2020, 64, 169-174.	3.3	15
130	Real-time monitoring of the in vivo redox state transition using the ratiometric redox state sensor protein FROG/B. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16019-16026.	3.3	19
131	Bacterial metabolic heterogeneity: origins and applications in engineering and infectious disease. Current Opinion in Biotechnology, 2020, 64, 183-189.	3.3	19
132	Fluorescent Biosensors for Neuronal Metabolism and the Challenges of Quantitation. Current Opinion in Neurobiology, 2020, 63, 111-121.	2.0	32
133	Metabolic mapping with plasmonic nanoparticle assemblies. Analyst, The, 2020, 145, 2586-2594.	1.7	8
134	Insights into the stability and substrate specificity of the E. coli aerobic Î²-oxidation trifunctional enzyme complex. Journal of Structural Biology, 2020, 210, 107494.	1.3	10
135	The Molecular Basis for Purine Binding Selectivity in the Bacterial ATP Synthase Ïµ Subunit. ChemBioChem, 2020, 21, 3249-3254.	1.3	5
136	Genetically Encoded Tools for Research of Cell Signaling and Metabolism under Brain Hypoxia. Antioxidants, 2020, 9, 516.	2.2	10
137	Structural asymmetry does not indicate hemiphosphorylation in the bacterial histidine kinase CpxA. Journal of Biological Chemistry, 2020, 295, 8106-8117.	1.6	4
138	ATP-binding affinity of the Îµ subunit of thermophilic F1-ATPase under label-free conditions. Biochemistry and Biophysics Reports, 2020, 21, 100725.	0.7	2
139	Methionine Adenosyltransferase Engineering to Enable Bioorthogonal Platforms for AdoMet-Utilizing Enzymes. ACS Chemical Biology, 2020, 15, 695-705.	1.6	20
140	New frontiers in probing the dynamics of purinergic transmitters in vivo. Neuroscience Research, 2020, 152, 35-43.	1.0	16
141	Water and microbial monitoring technologies towards the near future space exploration. Water Research, 2020, 177, 115787.	5.3	10
142	Quantitative Imaging of Changes in Astrocytic and Neuronal Adenosine Triphosphate Using Two Different Variants of ATeam. Frontiers in Cellular Neuroscience, 2020, 14, 80.	1.8	21
143	Assessing the real-time metabolism and bioenergetics of single cells using fluorescence biosensors. , 2021, , 269-284.		1
144	ATP utilization by a DEAD-box protein during refolding of a misfolded group I intron ribozyme. Journal of Biological Chemistry, 2021, 296, 100132.	1.6	8
145	In vivo Fluorescence Imaging of Extracellular ATP in the Mouse Cerebral Cortex with a Hybrid-type Optical Sensor. Bio-protocol, 2021, 11, e4046.	0.2	3

#	Article	IF	Citations
146	Adenosine triphosphate (<scp>ATP</scp>) as a metric of microbial biomass in aquatic systems: new simplified protocols, laboratory validation, and a reflection on data from the literature. Limnology and Oceanography: Methods, 2021, 19, 115-131.	1.0	16
147	An Evolutionary Systems Biology View on Metabolic System Structure and Dynamics. , 2021, , 159-196.		0
148	Discovery, Processing, and Potential Role of Noncanonical Caps in RNA. RNA Technologies, 2021, , 435-469.	0.2	2
149	Towards Conformation-Sensitive Inhibition of Gyrase: Implications of Mechanistic Insight for the Identification and Improvement of Inhibitors. Molecules, 2021, 26, 1234.	1.7	11
150	Structure of a reaction intermediate mimic in t6A biosynthesis bound in the active site of the TsaBD heterodimer from Escherichia coli. Nucleic Acids Research, 2021, 49, 2141-2160.	6.5	9
152	Bacterial persisters are a stochastically formed subpopulation of low-energy cells. PLoS Biology, 2021, 19, e3001194.	2.6	85
153	Identification and mechanistic analysis of an inhibitor of the CorC Mg2+ transporter. IScience, 2021, 24, 102370.	1.9	5
154	Pareto optimality between growth-rate and lag-time couples metabolic noise to phenotypic heterogeneity in Escherichia coli. Nature Communications, 2021, 12, 3204.	5.8	13
155	Recent progress in developing fluorescent probes for imaging cell metabolites. Biomedical Materials (Bristol), 2021, 16, 044108.	1.7	21
156	Measuring and modeling energy and power consumption in living microbial cells with a synthetic ATP reporter. BMC Biology, 2021, 19, 101.	1.7	33
157	An l-2-hydroxyglutarate biosensor based on specific transcriptional regulator LhgR. Nature Communications, 2021, 12, 3619.	5.8	21
158	In Vitro Production of Coenzyme A Using Thermophilic Enzymes. Applied and Environmental Microbiology, 2021, 87, e0054121.	1.4	6
159	Bioenergetic Heterogeneity in Mycobacterium tuberculosis Residing in Different Subcellular Niches. MBio, 2021, 12, e0108821.	1.8	4
160	Sensory neurons derived from diabetic rats exhibit deficits in functional glycolysis and ATP that are ameliorated by IGF-1. Molecular Metabolism, 2021, 49, 101191.	3.0	12
161	Fate of low-molecular-weight organic phosphorus compounds in the P-rich and P-poor paddy soils. Journal of Integrative Agriculture, 2021, 20, 2526-2534.	1.7	5
162	Approaches to monitor ATP levels in living cells: where do we stand?. FEBS Journal, 2022, 289, 7940-7969.	2.2	14
163	Reactor control system in bacterial coâ€culture based on fluorescent proteins using an Arduinoâ€based homeâ€made device. Biotechnology Journal, 2021, 16, e2100169.	1.8	6
164	Binding interactions in a kinase active site modulate background ATP hydrolysis. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2022, 1870, 140720.	1.1	1

#	Article	IF	Citations
165	Mitochondrial depolarization promotes calcium alternans: Mechanistic insights from a ventricular myocyte model. PLoS Computational Biology, 2021, 17, e1008624.	1.5	4
166	Rapid estimation of cytosolic ATP concentration from the ciliary beating frequency in the green alga Chlamydomonas reinhardtii. Journal of Biological Chemistry, 2021, 296, 100156.	1.6	4
167	Physicochemical and metabolic constraints for thermodynamics-based stoichiometric modelling under mesophilic growth conditions. PLoS Computational Biology, 2021, 17, e1007694.	1.5	5
168	Toward Catalytic Antibiotics: Redesign of Fluoroquinolones to Catalytically Fragment Chromosomal DNA. ACS Infectious Diseases, 2021, 7, 608-623.	1.8	5
169	Construction of Artificial Photosynthetic Cell. Seibutsu Butsuri, 2021, 61, 303-307.	0.0	0
170	Molecular and Systems Biology Approaches for Analyzing Drug-Tolerant Bacterial Persister Cells. Sustainable Agriculture Reviews, 2020, , 109-128.	0.6	1
171	Active metabolism unmasks functional proteinâ€“protein interactions in real time in-cell NMR. Communications Biology, 2020, 3, 249.	2.0	10
180	Structural characterization of free-state and product-stateMycobacterium tuberculosismethionyl-tRNA synthetase reveals an induced-fit ligand-recognition mechanism. IUCrJ, 2018, 5, 478-490.	1.0	10
181	Aging, mortality, and the fast growth trade-off of Schizosaccharomyces pombe. PLoS Biology, 2017, 15, e2001109.	2.6	41
182	The Inhibitory Effect of Non-Substrate and Substrate DNA on the Ligation and Self-Adenylylation Reactions Catalyzed by T4 DNA Ligase. PLoS ONE, 2016, 11, e0150802.	1.1	7
183	The structural basis of a high affinity ATP binding Îµ subunit from a bacterial ATP synthase. PLoS ONE, 2017, 12, e0177907.	1.1	13
184	Critical physiological factors influencing the outcome of antimicrobial testing according to ISO 22196 / JIS Z 2801. PLoS ONE, 2018, 13, e0194339.	1.1	38
185	QUEEN-based Spatiotemporal ATP Imaging in Budding and Fission Yeast. Bio-protocol, 2019, 9, e3320.	0.2	10
186	Exploring conformational equilibria of a heterodimeric ABC transporter. ELife, 2017, 6, .	2.8	63
187	Cryo-EM reveals distinct conformations of E. coli ATP synthase on exposure to ATP. ELife, 2019, 8, .	2.8	48
188	Real-time in vivo imaging of extracellular ATP in the brain with a hybrid-type fluorescent sensor. ELife, 2020, 9, .	2.8	38
189	Membrane voltage dysregulation driven by metabolic dysfunction underlies bactericidal activity of aminoglycosides. ELife, 2020, 9, .	2.8	47
190	Single mutations in the Îµ subunit from thermophilic Bacillus PS3 generate a high binding affinity site for ATP. PeerJ, 2018, 6, e5505.	0.9	3

#	Article	IF	Citations
193	PrzydatnoÅ›Ä‡ pomiaru ATP w badaniach mikrobiologicznych. PrzemysÅ•SpoÅ»ywczy, 2015, 1, 22-25.	0.1	0
197	Analytical Techniques for Single-Cell Studies in Microbiology. , 2019, , 1-26.		0
200	ATP MONITORING AS AN EXPRESS METHOD TO DETERMINE OBJECT CONTAMINATION. HarÄ•va Nauka Ã¬ TehnologÃ¬Ã¢, 2019, 13, .	0.2	0
204	Simulating single-cell metabolism using a stochastic flux-balance analysis algorithm. Biophysical Journal, 2021, 120, 5231-5242.	0.2	8
205	Analytical Techniques for Single-Cell Studies in Microbiology. , 2022, , 695-725.		0
206	Single-Cell Technologies to Study Phenotypic Heterogeneity and Bacterial Persisters. Microorganisms, 2021, 9, 2277.	1.6	11
207	Availability of the Molecular Switch XylR Controls Phenotypic Heterogeneity and Lag Duration during Escherichia coli Adaptation from Glucose to Xylose. MBio, 2020, 11, .	1.8	6
208	Biosensors for single-cell metabolomic characterization. , 2022, , 37-70.		2
211	RedATeam: A Genetically Encoded Red ATP Sensor and Its Application in Dual FRET Imaging With a Single Excitation Light. SSRN Electronic Journal, 0, , .	0.4	0
213	Analytical Techniques for Single-Cell Studies in Microbiology. , 2021, , 1-32.		2
214	Fluorescence-based sensing of the bioenergetic and physicochemical status of the cell. Current Topics in Membranes, 2021, 88, 1-54.	0.5	7
215	Intracellular ATP Concentration and Implication for Cellular Evolution. Biology, 2021, 10, 1166.	1.3	43
216	MsbA: an ABC transporter paradigm. Biochemical Society Transactions, 2021, 49, 2917-2927.	1.6	9
217	Increased energy demand from anabolic-catabolic processes drives Î²-lactam antibiotic lethality. Cell Chemical Biology, 2022, 29, 276-286.e4.	2.5	20
218	Dynamic Boolean modelling reveals the influence of energy supply on bacterial efflux pump expression. Journal of the Royal Society Interface, 2022, 19, 20210771.	1.5	7
219	Real-Time Monitoring of the Yeast Intracellular State During Bioprocesses With a Toolbox of Biosensors. Frontiers in Microbiology, 2021, 12, 802169.	1.5	23
220	Chaperonin Mechanisms: Multiple and (Mis)Understood?. Annual Review of Biophysics, 2022, 51, 115-133.	4.5	15
221	Temperature Regulates Stability, Ligand Binding (Mg²⁺ and ATP), and Stoichiometry of GroELâ€“GroES Complexes. Journal of the American Chemical Society, 2022, 144, 2667-2678.	6.6	18

#	Article	IF	Citations
222	Monitoring Cellular Responses to Infection with Fluorescent Biosensors. Methods in Molecular Biology, 2022, 2440, 99-114.	0.4	0
223	ATP-responsive biomolecular condensates tune bacterial kinase signaling. Science Advances, 2022, 8, eabm6570.	4.7	28
224	Genetically encoded fluorescent sensors for imaging neuronal dynamics in vivo. Journal of Neurochemistry, 2023, 164, 284-308.	2.1	10
225	Auxiliary ATP binding sites support DNA unwinding by RecBCD. Nature Communications, 2022, 13, 1806.	5.8	5
228	High and stable ATP levels prevent aberrant intracellular protein aggregation in yeast. ELife, 2022, 11, .	2.8	23
231	Genetically encoded tools for measuring and manipulating metabolism. Nature Chemical Biology, 2022, 18, 451-460.	3.9	15
232	Single-Fluorescence ATP Sensor Based on Fluorescence Resonance Energy Transfer Reveals Role of Antibiotic-Induced ATP Perturbation in Mycobacterial Killing. MSystems, 2022, 7, .	1.7	1
233	A high-throughput multiparameter screen for accelerated development and optimization of soluble genetically encoded fluorescent biosensors. Nature Communications, 2022, 13, .	5.8	39
234	Genetically encoded fluorescent sensing probes. Scientia Sinica Chimica, 2022, , .	0.2	0
237	Genetically Encoded ATP Biosensors for Direct Monitoring of Cellular ATP Dynamics. Cells, 2022, 11, 1920.	1.8	16
238	Identification and demonstration of roGFP2 as an environmental sensor for cryogenic correlative light and electron microscopy. Journal of Structural Biology, 2022, 214, 107881.	1.3	2
239	Digital models in biotechnology: Towards multi-scale integration and implementation. Biotechnology Advances, 2022, 60, 108015.	6.0	14
240	Connecting single-cell ATP dynamics to overflow metabolism, cell growth, and the cell cycle in Escherichia coli. Current Biology, 2022, 32, 3911-3924.e4.	1.8	21
241	Alteration of DNA supercoiling serves as a trigger of short-term cold shock repressed genes ofE. coli. Nucleic Acids Research, 2022, 50, 8512-8528.	6.5	3
242	Structural basis of DNA packaging by a ring-type ATPase from an archetypal viral system. Nucleic Acids Research, 2022, 50, 8719-8732.	6.5	6
243	Recent Methods for the Viability Assessment of Bacterial Pathogens: Advances, Challenges, and Future Perspectives. Pathogens, 2022, 11, 1057.	1.2	4
244	Genetically encoded ATP and NAD(P)H biosensors: potential tools in metabolic engineering. Critical Reviews in Biotechnology, 2023, 43, 1211-1225.	5.1	2
246	E. coli 6S RNA complexed to RNA polymerase maintains product RNA synthesis at low cellular ATP levels by initiation with non-canonical initiator nucleotides. Rna, 0, , rna.079356.122.	1.6	1

#	Article	IF	Citations
247	Intercellular interaction mechanisms promote diversity in intracellular ATP concentration in Escherichia coli populations. Scientific Reports, 2022, 12, .	1.6	3
248	Structure-Guided Design of Halofuginone Derivatives as ATP-Aided Inhibitors Against Bacterial Prolyl-tRNA Synthetase. Journal of Medicinal Chemistry, 2022, 65, 15840-15855.	2.9	3
249	Solubility and Thermal Stability of Thermotoga maritima MreB. International Journal of Molecular Sciences, 2022, 23, 16044.	1.8	1
251	Magnesium Modulates Bacillus subtilis Cell Division Frequency. Journal of Bacteriology, 2023, 205, .	1.0	4
252	A carnivorous mushroom paralyzes and kills nematodes via a volatile ketone. Science Advances, 2023, 9, .	4.7	9
254	P-glycoprotein (ABCB1) - weak dipolar interactions provide the key to understanding allocrite recognition, binding, and transport. Cancer Drug Resistance (Alhambra, Calif), 2022, 6, 1-29.	0.9	5
255	Fragment-Based Lead Discovery Strategies in Antimicrobial Drug Discovery. Antibiotics, 2023, 12, 315.	1.5	1
256	Structure of VanS from vancomycin-resistant enterococci: AÂsensor kinase with weak ATP binding. Journal of Biological Chemistry, 2023, 299, 103001.	1.6	0
258	A Series of Spiropyrimidinetriones that Enhances DNA Cleavage Mediated by Mycobacterium tuberculosis Gyrase. ACS Infectious Diseases, 2023, 9, 706-715.	1.8	1
259	ATP binding by an F1Fo ATP synthase Îµ subunit is pH dependent, suggesting a diversity of Îµ subunit functional regulation in bacteria. Frontiers in Molecular Biosciences, 0, 10, .	1.6	4
260	Molecular imaging: design mechanism and bioapplications. Science China Chemistry, 2023, 66, 1336-1383.	4.2	12
261	F1Â·Fo ATP Synthase/ATPase: Contemporary View on Unidirectional Catalysis. International Journal of Molecular Sciences, 2023, 24, 5417.	1.8	5
263	Applications and Tuning Strategies for Transcription Factor-Based Metabolite Biosensors. Biosensors, 2023, 13, 428.	2.3	3
288	Synthetic microbiology in sustainability applications. Nature Reviews Microbiology, 0, , .	13.6	1