James J Collins

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5057945/publications.pdf

Version: 2024-02-01

		1463	3487
181	65,305	107	182
papers	citations	h-index	g-index

192	192	192	61307
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Construction of a genetic toggle switch in Escherichia coli. Nature, 2000, 403, 339-342.	27.8	3,885
2	Highly Efficient Reprogramming to Pluripotency and Directed Differentiation of Human Cells with Synthetic Modified mRNA. Cell Stem Cell, 2010, 7, 618-630.	11.1	2,368
3	A Common Mechanism of Cellular Death Induced by Bactericidal Antibiotics. Cell, 2007, 130, 797-810.	28.9	2,334
4	Nucleic acid detection with CRISPR-Cas13a/C2c2. Science, 2017, 356, 438-442.	12.6	2,275
5	Stochasticity in gene expression: from theories to phenotypes. Nature Reviews Genetics, 2005, 6, 451-464.	16.3	2,066
6	Multiplexed and portable nucleic acid detection platform with Cas13, Cas12a, and Csm6. Science, 2018, 360, 439-444.	12.6	1,649
7	How antibiotics kill bacteria: from targets to networks. Nature Reviews Microbiology, 2010, 8, 423-435.	28.6	1,648
8	The Immunological Genome Project: networks of gene expression in immune cells. Nature Immunology, 2008, 9, 1091-1094.	14.5	1,576
9	Noise in eukaryotic gene expression. Nature, 2003, 422, 633-637.	27.8	1,531
10	Wisdom of crowds for robust gene network inference. Nature Methods, 2012, 9, 796-804.	19.0	1,481
11	Large-Scale Mapping and Validation of Escherichia coli Transcriptional Regulation from a Compendium of Expression Profiles. PLoS Biology, 2007, 5, e8.	5.6	1,308
12	Highly efficient Cas9-mediated transcriptional programming. Nature Methods, 2015, 12, 326-328.	19.0	1,245
13	Synthetic biology: applications come of age. Nature Reviews Genetics, 2010, 11, 367-379.	16.3	1,130
14	Rapid, Low-Cost Detection of Zika Virus Using Programmable Biomolecular Components. Cell, 2016, 165, 1255-1266.	28.9	1,061
15	A Deep Learning Approach to Antibiotic Discovery. Cell, 2020, 180, 688-702.e13.	28.9	978
16	Cellular Decision Making and Biological Noise: From Microbes to Mammals. Cell, 2011, 144, 910-925.	28.9	944
17	Sublethal Antibiotic Treatment Leads to Multidrug Resistance via Radical-Induced Mutagenesis. Molecular Cell, 2010, 37, 311-320.	9.7	793
18	Metabolite-enabled eradication of bacterial persisters by aminoglycosides. Nature, 2011, 473, 216-220.	27.8	787

#	Article	IF	Citations
19	Definitions and guidelines for research on antibiotic persistence. Nature Reviews Microbiology, 2019, 17, 441-448.	28.6	748
20	Dispersing biofilms with engineered enzymatic bacteriophage. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11197-11202.	7.1	728
21	Antibiotics induce redox-related physiological alterations as part of their lethality. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2100-9.	7.1	698
22	Engineered gene circuits. Nature, 2002, 420, 224-230.	27.8	660
23	A community effort to assess and improve drug sensitivity prediction algorithms. Nature Biotechnology, 2014, 32, 1202-1212.	17.5	653
24	Contributions of microbiome and mechanical deformation to intestinal bacterial overgrowth and inflammation in a human gut-on-a-chip. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7-15.	7.1	652
25	Next-Generation Machine Learning for Biological Networks. Cell, 2018, 173, 1581-1592.	28.9	648
26	A brief history of synthetic biology. Nature Reviews Microbiology, 2014, 12, 381-390.	28.6	646
27	Toehold Switches: De-Novo-Designed Regulators of Gene Expression. Cell, 2014, 159, 925-939.	28.9	646
28	Paper-Based Synthetic Gene Networks. Cell, 2014, 159, 940-954.	28.9	597
29	Phenotypic Consequences of Promoter-Mediated Transcriptional Noise. Molecular Cell, 2006, 24, 853-865.	9.7	591
30	Silver Enhances Antibiotic Activity Against Gram-Negative Bacteria. Science Translational Medicine, 2013, 5, 190ra81.	12.4	574
31	Noise-based switches and amplifiers for gene expression. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 2075-2080.	7.1	569
32	Programmable cells: Interfacing natural and engineered gene networks. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8414-8419.	7.1	546
33	Antibiotic efficacy is linked to bacterial cellular respiration. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8173-8180.	7.1	544
34	Antibiotics and the gut microbiota. Journal of Clinical Investigation, 2014, 124, 4212-4218.	8.2	529
35	Synthetic Gene Networks That Count. Science, 2009, 324, 1199-1202.	12.6	528
36	Bacterial charity work leads to population-wide resistance. Nature, 2010, 467, 82-85.	27.8	515

#	Article	IF	Citations
37	Engineered riboregulators enable post-transcriptional control of gene expression. Nature Biotechnology, 2004, 22, 841-847.	17.5	513
38	It's a small world. Nature, 1998, 393, 409-410.	27.8	510
39	Computational studies of gene regulatory networks: in numero molecular biology. Nature Reviews Genetics, 2001, 2, 268-279.	16.3	508
40	Syntrophic exchange in synthetic microbial communities. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2149-56.	7.1	498
41	CRISPR-based diagnostics. Nature Biomedical Engineering, 2021, 5, 643-656.	22.5	492
42	CellNet: Network Biology Applied to Stem Cell Engineering. Cell, 2014, 158, 903-915.	28.9	490
43	Mistranslation of Membrane Proteins and Two-Component System Activation Trigger Antibiotic-Mediated Cell Death. Cell, 2008, 135, 679-690.	28.9	459
44	Universal Chimeric Antigen Receptors for Multiplexed and Logical Control of T Cell Responses. Cell, 2018, 173, 1426-1438.e11.	28.9	454
45	Engineered bacteriophage targeting gene networks as adjuvants for antibiotic therapy. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4629-4634.	7.1	446
46	Antibiotic treatment expands the resistance reservoir and ecological network of the phage metagenome. Nature, 2013, 499, 219-222.	27.8	438
47	Comparison of Cas9 activators in multiple species. Nature Methods, 2016, 13, 563-567.	19.0	438
48	Prediction and measurement of an autoregulatory genetic module. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7714-7719.	7.1	409
49	Diversity-based, model-guided construction of synthetic gene networks with predicted functions. Nature Biotechnology, 2009, 27, 465-471.	17.5	409
50	Noise-enhanced tactile sensation. Nature, 1996, 383, 770-770.	27.8	406
51	Microbial Persistence and the Road to Drug Resistance. Cell Host and Microbe, 2013, 13, 632-642.	11.0	405
52	Oxidation of the Guanine Nucleotide Pool Underlies Cell Death by Bactericidal Antibiotics. Science, 2012, 336, 315-319.	12.6	400
53	Gyrase inhibitors induce an oxidative damage cellular death pathway in Escherichia coli. Molecular Systems Biology, 2007, 3, 91.	7.2	397
54	Bactericidal Antibiotics Induce Toxic Metabolic Perturbations that Lead to Cellular Damage. Cell Reports, 2015, 13, 968-980.	6.4	393

#	Article	IF	Citations
55	Bactericidal Antibiotics Induce Mitochondrial Dysfunction and Oxidative Damage in Mammalian Cells. Science Translational Medicine, 2013, 5, 192ra85.	12.4	391
56	Potentiating antibacterial activity by predictably enhancing endogenous microbial ROS production. Nature Biotechnology, 2013, 31, 160-165.	17.5	375
57	Bone marrowâ€“onâ€“aâ€“chip replicates hematopoietic niche physiology in vitro. Nature Methods, 2014, 11, 663-669.	19.0	369
58	Signaling-mediated bacterial persister formation. Nature Chemical Biology, 2012, 8, 431-433.	8.0	367
59	An enhanced CRISPR repressor for targeted mammalian gene regulation. Nature Methods, 2018, 15, 611-616.	19.0	361
60	Antibiotic-Induced Bacterial Cell Death Exhibits Physiological and Biochemical Hallmarks of Apoptosis. Molecular Cell, 2012, 46, 561-572.	9.7	349
61	Synthetic Biology Moving into the Clinic. Science, 2011, 333, 1248-1252.	12.6	348
62	Deconstructing transcriptional heterogeneity in pluripotent stem cells. Nature, 2014, 516, 56-61.	27.8	343
63	RNA synthetic biology. Nature Biotechnology, 2006, 24, 545-554.	17.5	332
64	Chemogenomic profiling on a genome-wide scale using reverse-engineered gene networks. Nature Biotechnology, 2005, 23, 377-383.	17.5	330
65	Next-generation synthetic gene networks. Nature Biotechnology, 2009, 27, 1139-1150.	17.5	321
66	Complex cellular logic computation using ribocomputing devices. Nature, 2017, 548, 117-121.	27.8	321
67	Programmable bacteria detect and record an environmental signal in the mammalian gut. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4838-4843.	7.1	306
68	Bacterial Metabolism and Antibiotic Efficacy. Cell Metabolism, 2019, 30, 251-259.	16.2	305
69	A Synthetic Biology Framework for Programming Eukaryotic Transcription Functions. Cell, 2012, 150, 647-658.	28.9	293
70	Portable, On-Demand Biomolecular Manufacturing. Cell, 2016, 167, 248-259.e12.	28.9	292
71	Wearable materials with embedded synthetic biology sensors for biomolecule detection. Nature Biotechnology, 2021, 39, 1366-1374.	17.5	286
72	Synthetic biology devices for in vitro and in vivo diagnostics. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14429-14435.	7.1	281

#	Article	IF	Citations
73	LIN28 Regulates Stem Cell Metabolism and Conversion to Primed Pluripotency. Cell Stem Cell, 2016, 19, 66-80.	11.1	278
74	Noise in human muscle spindles. Nature, 1996, 383, 769-770.	27.8	275
75	Cas9 gRNA engineering for genome editing, activation and repression. Nature Methods, 2015, 12, 1051-1054.	19.0	272
76	Effects of Colored Noise on Stochastic Resonance in Sensory Neurons. Physical Review Letters, 1999, 82, 2402-2405.	7.8	268
77	Carbon Sources Tune Antibiotic Susceptibility in Pseudomonas aeruginosa via Tricarboxylic Acid Cycle Control. Cell Chemical Biology, 2017, 24, 195-206.	5.2	264
78	Designing microbial consortia with defined social interactions. Nature Chemical Biology, 2018, 14, 821-829.	8.0	250
79	'Deadman' and 'Passcode' microbial kill switches for bacterial containment. Nature Chemical Biology, 2016, 12, 82-86.	8.0	249
80	Programmable CRISPR-responsive smart materials. Science, 2019, 365, 780-785.	12.6	248
81	Induction of Multipotential Hematopoietic Progenitors from Human Pluripotent Stem Cells via Respecification of Lineage-Restricted Precursors. Cell Stem Cell, 2013, 13, 459-470.	11.1	241
82	Dissecting Engineered Cell Types and Enhancing Cell Fate Conversion via CellNet. Cell, 2014, 158, 889-902.	28.9	238
83	A White-Box Machine Learning Approach for Revealing Antibiotic Mechanisms of Action. Cell, 2019, 177, 1649-1661.e9.	28.9	227
84	Unraveling the Physiological Complexities of Antibiotic Lethality. Annual Review of Pharmacology and Toxicology, 2015, 55, 313-332.	9.4	222
85	Cell-free biosensors for rapid detection of water contaminants. Nature Biotechnology, 2020, 38, 1451-1459.	17.5	221
86	Tunable protein degradation in bacteria. Nature Biotechnology, 2014, 32, 1276-1281.	17.5	195
87	A low-cost paper-based synthetic biology platform for analyzing gut microbiota and host biomarkers. Nature Communications, 2018, 9, 3347.	12.8	192
88	Dynamic Control of Cardiac Alternans. Physical Review Letters, 1997, 78, 4518-4521.	7.8	191
89	Minimally instrumented SHERLOCK (miSHERLOCK) for CRISPR-based point-of-care diagnosis of SARS-CoV-2 and emerging variants. Science Advances, 2021, 7, .	10.3	189
90	Clinically relevant mutations in core metabolic genes confer antibiotic resistance. Science, 2021, 371, .	12.6	187

#	Article	IF	Citations
91	Synthetic Gene Network for Entraining and Amplifying Cellular Oscillations. Physical Review Letters, 2002, 88, 148101.	7.8	181
92	Antibiotic-Induced Changes to the Host Metabolic Environment Inhibit Drug Efficacy and Alter Immune Function. Cell Host and Microbe, 2017, 22, 757-765.e3.	11.0	178
93	Noise-mediated enhancements and decrements in human tactile sensation. Physical Review E, 1997, 56, 923-926.	2.1	175
94	Probiotic strains detect and suppress cholera in mice. Science Translational Medicine, 2018, 10, .	12.4	173
95	Bacterial metabolic state more accurately predicts antibiotic lethality than growth rate. Nature Microbiology, 2019, 4, 2109-2117.	13.3	171
96	Hydroxyurea Induces Hydroxyl Radical-Mediated Cell Death in Escherichia coli. Molecular Cell, 2009, 36, 845-860.	9.7	168
97	Tracking, tuning, and terminating microbial physiology using synthetic riboregulators. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15898-15903.	7.1	166
98	Systematic Identification of Factors for Provirus Silencing in Embryonic Stem Cells. Cell, 2015, 163, 230-245.	28.9	162
99	Next-generation biocontainment systems for engineered organisms. Nature Chemical Biology, 2018, 14, 530-537.	8.0	161
100	Multiple mechanisms disrupt the let-7 microRNA family in neuroblastoma. Nature, 2016, 535, 246-251.	27.8	159
101	Noise-enhanced human sensorimotor function. IEEE Engineering in Medicine and Biology Magazine, 2003, 22, 76-83.	0.8	155
102	Salmonella typhimurium intercepts Escherichia coli signaling to enhance antibiotic tolerance. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14420-14425.	7.1	155
103	Genetic switchboard for synthetic biology applications. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5850-5855.	7.1	151
104	Ultrasensitive CRISPR-based diagnostic for field-applicable detection of Plasmodium species in symptomatic and asymptomatic malaria. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25722-25731.	7.1	146
105	Engineering living therapeutics with synthetic biology. Nature Reviews Drug Discovery, 2021, 20, 941-960.	46.4	142
106	Targeting Antibiotic Tolerance, Pathogen by Pathogen. Cell, 2018, 172, 1228-1238.	28.9	139
107	Upright, correlated random walks: A statisticalâ€biomechanics approach to the human postural control system. Chaos, 1995, 5, 57-63.	2.5	136
108	A CRISPRâ€“Cas9-based gene drive platform for genetic interaction analysis in Candida albicans. Nature Microbiology, 2018, 3, 73-82.	13.3	135

#	Article	IF	Citations
109	Using Targeted Chromatin Regulators to Engineer Combinatorial and Spatial Transcriptional Regulation. Cell, 2014, 158, 110-120.	28.9	120
110	Biophysical Constraints Arising from Compositional Context in Synthetic Gene Networks. Cell Systems, 2017, 5, 11-24.e12.	6.2	120
111	Complex signal processing in synthetic gene circuits using cooperative regulatory assemblies. Science, 2019, 364, 593-597.	12.6	117
112	An Atlas for Schistosoma mansoni Organs and Life-Cycle Stages Using Cell Type-Specific Markers and Confocal Microscopy. PLoS Neglected Tropical Diseases, 2011, 5, e1009.	3.0	116
113	BioBitsâ„¢ Explorer: A modular synthetic biology education kit. Science Advances, 2018, 4, eaat5105.	10.3	113
114	Understanding and Sensitizing Density-Dependent Persistence to Quinolone Antibiotics. Molecular Cell, 2017, 68, 1147-1154.e3.	9.7	105
115	Evidence that coronavirus superspreading is fat-tailed. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29416-29418.	7.1	104
116	Stochastic Resonance in Ensembles of Nondynamical Elements: The Role of Internal Noise. Physical Review Letters, 1997, 79, 4701-4704.	7.8	98
117	Chemogenomics and orthologyâ€based design of antibiotic combination therapies. Molecular Systems Biology, 2016, 12, 872.	7.2	96
118	BioBitsâ„¢ Bright: A fluorescent synthetic biology education kit. Science Advances, 2018, 4, eaat5107.	10.3	90
119	De novo-designed translation-repressing riboregulators for multi-input cellular logic. Nature Chemical Biology, 2019, 15, 1173-1182.	8.0	90
120	Chromatin regulation at the frontier of synthetic biology. Nature Reviews Genetics, 2015, 16, 159-171.	16.3	89
121	CRISPR-based genomic tools for the manipulation of genetically intractable microorganisms. Nature Reviews Microbiology, 2018, 16, 333-339.	28.6	88
122	Understanding Biological Regulation Through Synthetic Biology. Annual Review of Biophysics, 2018, 47, 399-423.	10.0	88
123	Engineered Phagemids for Nonlytic, Targeted Antibacterial Therapies. Nano Letters, 2015, 15, 4808-4813.	9.1	87
124	Deep learning identifies synergistic drug combinations for treating COVID-19. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	87
125	A role for the bacterial GATC methylome in antibiotic stress survival. Nature Genetics, 2016, 48, 581-586.	21.4	85
126	A deep learning approach to programmable RNA switches. Nature Communications, 2020, 11, 5057.	12.8	83

#	Article	IF	Citations
127	Iterative plug-and-play methodology for constructing and modifying synthetic gene networks. Nature Methods, 2012, 9, 1077-1080.	19.0	80
128	Predictive biology: modelling, understanding and harnessing microbial complexity. Nature Reviews Microbiology, 2020, 18, 507-520.	28.6	80
129	A CRISPR-based assay for the detection of opportunistic infections post-transplantation and for the monitoring of transplant rejection. Nature Biomedical Engineering, 2020, 4, 601-609.	22.5	80
130	Synchronization of noisy systems by stochastic signals. Physical Review E, 1999, 60, 284-292.	2.1	78
131	Reconstruction of complex single-cell trajectories using CellRouter. Nature Communications, 2018, 9, 892.	12.8	78
132	Using deep learning for dermatologist-level detection of suspicious pigmented skin lesions from wide-field images. Science Translational Medicine, 2021, 13, .	12.4	78
133	Antibiotic efficacy â€" context matters. Current Opinion in Microbiology, 2017, 39, 73-80.	5.1	71
134	Engineering advanced logic and distributed computing in human CAR immune cells. Nature Communications, 2021, 12, 792.	12.8	68
135	A Blueprint for a Synthetic Genetic Feedback Controller to Reprogram Cell Fate. Cell Systems, 2017, 4, 109-120.e11.	6.2	65
136	Creating Single-Copy Genetic Circuits. Molecular Cell, 2016, 63, 329-336.	9.7	62
137	Comprehensive Mapping of Pluripotent Stem Cell Metabolism Using Dynamic Genome-Scale Network Modeling. Cell Reports, 2017, 21, 2965-2977.	6.4	61
138	Synthetic biology in the clinic: engineering vaccines, diagnostics, and therapeutics. Cell, 2021, 184, 881-898.	28.9	56
139	Boosting Bacterial Metabolism to Combat Antibiotic Resistance. Cell Metabolism, 2015, 21, 154-155.	16.2	55
140	Eradicating Bacterial Persisters with Combinations of Strongly and Weakly Metabolism-Dependent Antibiotics. Cell Chemical Biology, 2020, 27, 1544-1552.e3.	5.2	55
141	Parallel bimodal single-cell sequencing of transcriptome and chromatin accessibility. Genome Research, 2020, 30, 1027-1039.	5.5	52
142	Mechanism of stochastic resonance enhancement in neuronal models driven by1/fnoise. Physical Review E, 1999, 60, 4637-4644.	2.1	49
143	Cytoplasmic condensation induced by membrane damage is associated with antibiotic lethality. Nature Communications, 2021, 12, 2321.	12.8	49
144	RNAi Reveals Phase-Specific Global Regulators of Human Somatic Cell Reprogramming. Cell Reports, 2016, 15, 2597-2607.	6.4	47

#	Article	IF	Citations
145	Fishing for function in noise. Nature, 1999, 402, 241-242.	27.8	46
146	DNA sense-and-respond protein modules for mammalian cells. Nature Methods, 2015, 12, 1085-1090.	19.0	46
147	Deep-Learning Resources for Studying Glycan-Mediated Host-Microbe Interactions. Cell Host and Microbe, 2021, 29, 132-144.e3.	11.0	46
148	Unspinning the web. Nature, 2001, 411, 30-31.	27.8	45
149	Creating CRISPR-responsive smart materials for diagnostics and programmable cargo release. Nature Protocols, 2020, 15, 3030-3063.	12.0	42
150	Synthetic biology platform technologies for antimicrobial applications. Advanced Drug Delivery Reviews, 2016, 105, 35-43.	13.7	39
151	Predicting cerebral blood flow response to orthostatic stress from resting dynamics: effects of healthy aging. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2001, 281, R716-R722.	1.8	37
152	Diversification of reprogramming trajectories revealed by parallel single-cell transcriptome and chromatin accessibility sequencing. Science Advances, 2020, 6, .	10.3	37
153	Using Engineered Bacteria to Characterize Infection Dynamics and Antibiotic Effects InÂVivo. Cell Host and Microbe, 2017, 22, 263-268.e4.	11.0	36
154	An engineered live biotherapeutic for the prevention of antibiotic-induced dysbiosis. Nature Biomedical Engineering, 2022, 6, 910-921.	22.5	36
155	ZSCAN10 expression corrects the genomic instability of iPSCs from aged donors. Nature Cell Biology, 2017, 19, 1037-1048.	10.3	35
156	Assessing muscle stiffness from quiet stance in Parkinson's disease. , 1999, 22, 635-639.		34
157	Lethality of MalE-LacZ hybrid protein shares mechanistic attributes with oxidative component of antibiotic lethality. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9164-9169.	7.1	34
158	RNA-responsive elements for eukaryotic translational control. Nature Biotechnology, 2022, 40, 539-545.	17.5	34
159	Neutralizing noise in gene networks. Nature, 2000, 405, 520-521.	27.8	32
160	A multiplexable assay for screening antibiotic lethality against drug-tolerant bacteria. Nature Methods, 2019, 16, 303-306.	19.0	30
161	Synthetic biology: How best to build a cell. Nature, 2014, 509, 155-157.	27.8	30
162	Precise Cas9 targeting enables genomic mutation prevention. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3669-3673.	7.1	28

#	Article	IF	Citations
163	Designing Biological Circuits: Synthetic Biology Within the Operon Model and Beyond. Annual Review of Biochemistry, 2021, 90, 221-244.	11.1	28
164	Field validation of the performance of paper-based tests for the detection of the Zika and chikungunya viruses in serum samples. Nature Biomedical Engineering, 2022, 6, 246-256.	22.5	27
165	Real-time experimental control of a system in its chaotic and nonchaotic regimes. Physical Review E, 1997, 56, R3749-R3752.	2.1	26
166	Hard-wired central pattern generators for quadrupedal locomotion. Biological Cybernetics, 1994, 71, 375-385.	1.3	23
167	Modulating the evolutionary trajectory of tolerance using antibiotics with different metabolic dependencies. Nature Communications, 2022, 13, 2525.	12.8	22
168	Point-of-Care Devices to Detect Zika and Other Emerging Viruses. Annual Review of Biomedical Engineering, 2020, 22, 371-386.	12.3	20
169	Increased energy demand from anabolic-catabolic processes drives Î²-lactam antibiotic lethality. Cell Chemical Biology, 2022, 29, 276-286.e4.	5.2	20
170	Continuous bioactivity-dependent evolution of an antibiotic biosynthetic pathway. Nature Communications, 2020, 11, 4202.	12.8	19
171	A systems biology pipeline identifies regulatory networks for stem cell engineering. Nature Biotechnology, 2019, 37, 810-818.	17.5	18
172	Targeted erythropoietin selectively stimulates red blood cell expansion in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5245-5250.	7.1	16
173	A group-theoretic approach to rings of coupled biological oscillators. Biological Cybernetics, 1994, 71, 95-103.	1.3	16
174	Frequency Control of an Oscillatory Reaction by Reversible Binding of an Autocatalyst. Physical Review Letters, 1999, 82, 1582-1585.	7.8	14
175	Anomalous COVID-19 tests hinder researchers. Science, 2021, 371, 244-245.	12.6	11
176	CellComm infers cellular crosstalk that drives haematopoietic stem and progenitor cell development. Nature Cell Biology, 2022, 24, 579-589.	10.3	11
177	Tuning stochastic resonance. Nature, 1995, 378, 341-342.	27.8	10
178	CRISPR Guide RNA Cloning for Mammalian Systems. Journal of Visualized Experiments, 2018, , .	0.3	6
179	Ribocomputing devices for sophisticated in vivo logic computation. , 2016, , .		1
180	Engineering Models to Scale. Cell, 2016, 165, 516-517.	28.9	1

#	Article	IF	Citations
181	Engineering microbial peer pressure. Science, 2019, 365, 986-987.	12.6	1