James J Collins

List of Publications by Year in descending order

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193 papers	67,834 citations	1524 106 h-index	2305 199 g-index
217 all docs	217 docs citations	217 times ranked	70830 citing authors

#	Article	IF	Citations
1	Construction of a genetic toggle switch in Escherichia coli. Nature, 2000, 403, 339-342.	36.2	3,953
2	A Common Mechanism of Cellular Death Induced by Bactericidal Antibiotics. Cell, 2007, 130, 797-810.	27.8	2,436
3	Highly Efficient Reprogramming to Pluripotency and Directed Differentiation of Human Cells with Synthetic Modified mRNA. Cell Stem Cell, 2010, 7, 618-630.	11.0	2,412
4	Stochasticity in gene expression: from theories to phenotypes. Nature Reviews Genetics, 2005, 6, 451-464.	16.7	2,103
5	How antibiotics kill bacteria: from targets to networks. Nature Reviews Microbiology, 2010, 8, 423-435.	29.2	1,730
6	The Immunological Genome Project: networks of gene expression in immune cells. Nature Immunology, 2008, 9, 1091-1094.	13.9	1,642
7	Noise in eukaryotic gene expression. Nature, 2003, 422, 633-637.	36.2	1,552
8	Wisdom of crowds for robust gene network inference. Nature Methods, 2012, 9, 796-804.	19.6	1,537
9	Large-Scale Mapping and Validation of Escherichia coli Transcriptional Regulation from a Compendium of Expression Profiles. PLoS Biology, 2007, 5, e8.	5.4	1,332
10	Highly efficient Cas9-mediated transcriptional programming. Nature Methods, 2015, 12, 326-328.	19.6	1,303
11	Synthetic biology: applications come of age. Nature Reviews Genetics, 2010, 11, 367-379.	16.7	1,153
12	A Deep Learning Approach to Antibiotic Discovery. Cell, 2020, 180, 688-702.e13.	27.8	1,149
13	Rapid, Low-Cost Detection of Zika Virus Using Programmable Biomolecular Components. Cell, 2016, 165, 1255-1266.	27.8	1,126
14	Cellular Decision Making and Biological Noise: From Microbes to Mammals. Cell, 2011, 144, 910-925.	27.8	966
15	Sublethal Antibiotic Treatment Leads to Multidrug Resistance via Radical-Induced Mutagenesis. Molecular Cell, 2010, 37, 311-320.	9.6	829
16	Metabolite-enabled eradication of bacterial persisters by aminoglycosides. Nature, 2011, 473, 216-220.	36.2	827
17	Definitions and guidelines for research on antibiotic persistence. Nature Reviews Microbiology, 2019, 17, 441-448.	29.2	821
18	Dispersing biofilms with engineered enzymatic bacteriophage. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11197-11202.	7.6	751

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19	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.	7.6	729
20	Next-Generation Machine Learning for Biological Networks. Cell, 2018, 173, 1581-1592.	27.8	691
21	A brief history of synthetic biology. Nature Reviews Microbiology, 2014, 12, 381-390.	29.2	680
22	Toehold Switches: De-Novo-Designed Regulators of Gene Expression. Cell, 2014, 159, 925-939.	27.8	676
23	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.	7.6	676
24	A community effort to assess and improve drug sensitivity prediction algorithms. Nature Biotechnology, 2014, 32, 1202-1212.	20.8	674
25	Engineered gene circuits. Nature, 2002, 420, 224-230.	36.2	664
26	Paper-Based Synthetic Gene Networks. Cell, 2014, 159, 940-954.	27.8	620
27	CRISPR-based diagnostics. Nature Biomedical Engineering, 2021, 5, 643-656.	22.4	608
28	Phenotypic Consequences of Promoter-Mediated Transcriptional Noise. Molecular Cell, 2006, 24, 853-865.	9.6	600
29	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.	7.6	589
30	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.	7.6	573
31	Bacterial charity work leads to population-wide resistance. Nature, 2010, 467, 82-85.	36.2	563
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.	7.6	550
33	Antibiotics and the gut microbiota. Journal of Clinical Investigation, 2014, 124, 4212-4218.	8.2	543
34	Engineered riboregulators enable post-transcriptional control of gene expression. Nature Biotechnology, 2004, 22, 841-847.	20.8	523
35	Syntrophic exchange in synthetic microbial communities. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2149-56.	7.6	521
36	Computational studies of gene regulatory networks: in numero molecular biology. Nature Reviews Genetics, 2001, 2, 268-279.	16.7	511

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37	CellNet: Network Biology Applied to Stem Cell Engineering. Cell, 2014, 158, 903-915.	27.8	500
38	Universal Chimeric Antigen Receptors for Multiplexed and Logical Control of T Cell Responses. Cell, 2018, 173, 1426-1438.e11.	27.8	492
39	Mistranslation of Membrane Proteins and Two-Component System Activation Trigger Antibiotic-Mediated Cell Death. Cell, 2008, 135, 679-690.	27.8	477
40	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.	7.6	457
41	Antibiotic treatment expands the resistance reservoir and ecological network of the phage metagenome. Nature, 2013, 499, 219-222.	36.2	455
42	Comparison of Cas9 activators in multiple species. Nature Methods, 2016, 13, 563-567.	19.6	454
43	Bactericidal Antibiotics Induce Toxic Metabolic Perturbations that Lead to Cellular Damage. Cell Reports, 2015, 13, 968-980.	6.3	424
44	Noise-enhanced tactile sensation. Nature, 1996, 383, 770-770.	36.2	420
45	Oxidation of the Guanine Nucleotide Pool Underlies Cell Death by Bactericidal Antibiotics. Science, 2012, 336, 315-319.	20.9	418
46	Microbial Persistence and the Road to Drug Resistance. Cell Host and Microbe, 2013, 13, 632-642.	11.0	416
47	Gyrase inhibitors induce an oxidative damage cellular death pathway in Escherichia coli. Molecular Systems Biology, 2007, 3, 91.	7.5	414
48	Diversity-based, model-guided construction of synthetic gene networks with predicted functions. Nature Biotechnology, 2009, 27, 465-471.	20.8	413
49	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.	7.6	411
50	Potentiating antibacterial activity by predictably enhancing endogenous microbial ROS production. Nature Biotechnology, 2013, 31, 160-165.	20.8	398
51	An enhanced CRISPR repressor for targeted mammalian gene regulation. Nature Methods, 2018, 15, 611-616.	19.6	392
52	Bone marrowâ€“onâ€“aâ€“chip replicates hematopoietic niche physiology in vitro. Nature Methods, 2014, 11, 663-669.	19.6	387
53	Signaling-mediated bacterial persister formation. Nature Chemical Biology, 2012, 8, 431-433.	8.0	372
54	Antibiotic-Induced Bacterial Cell Death Exhibits Physiological and Biochemical Hallmarks of Apoptosis. Molecular Cell, 2012, 46, 561-572.	9.6	363

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55	Bacterial Metabolism and Antibiotic Efficacy. Cell Metabolism, 2019, 30, 251-259.	15.8	363
56	Synthetic Biology Moving into the Clinic. Science, 2011, 333, 1248-1252.	20.9	353
57	Deconstructing transcriptional heterogeneity in pluripotent stem cells. Nature, 2014, 516, 56-61.	36.2	351
58	RNA synthetic biology. Nature Biotechnology, 2006, 24, 545-554.	20.8	338
59	Complex cellular logic computation using ribocomputing devices. Nature, 2017, 548, 117-121.	36.2	336
60	Chemogenomic profiling on a genome-wide scale using reverse-engineered gene networks. Nature Biotechnology, 2005, 23, 377-383.	20.8	330
61	Wearable materials with embedded synthetic biology sensors for biomolecule detection. Nature Biotechnology, 2021, 39, 1366-1374.	20.8	330
62	Next-generation synthetic gene networks. Nature Biotechnology, 2009, 27, 1139-1150.	20.8	324
63	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.	7.6	313
64	Portable, On-Demand Biomolecular Manufacturing. Cell, 2016, 167, 248-259.e12.	27.8	305
65	A Synthetic Biology Framework for Programming Eukaryotic Transcription Functions. Cell, 2012, 150, 647-658.	27.8	301
66	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.	7.6	294
67	LIN28 Regulates Stem Cell Metabolism and Conversion to Primed Pluripotency. Cell Stem Cell, 2016, 19, 66-80.	11.0	286
68	Carbon Sources Tune Antibiotic Susceptibility in Pseudomonas aeruginosa via Tricarboxylic Acid Cycle Control. Cell Chemical Biology, 2017, 24, 195-206.	5.2	283
69	Cas9 gRNA engineering for genome editing, activation and repression. Nature Methods, 2015, 12, 1051-1054.	19.6	282
70	Programmable CRISPR-responsive smart materials. Science, 2019, 365, 780-785.	20.9	279
71	Noise in human muscle spindles. Nature, 1996, 383, 769-770.	36.2	278
72	Effects of Colored Noise on Stochastic Resonance in Sensory Neurons. Physical Review Letters, 1999, 82, 2402-2405.	8.0	272

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73	'Deadman' and 'Passcode' microbial kill switches for bacterial containment. Nature Chemical Biology, 2016, 12, 82-86.	8.0	261
74	Designing microbial consortia with defined social interactions. Nature Chemical Biology, 2018, 14, 821-829.	8.0	261
75	Cell-free biosensors for rapid detection of water contaminants. Nature Biotechnology, 2020, 38, 1451-1459.	20.8	253
76	Induction of Multipotential Hematopoietic Progenitors from Human Pluripotent Stem Cells via Respecification of Lineage-Restricted Precursors. Cell Stem Cell, 2013, 13, 459-470.	11.0	245
77	A White-Box Machine Learning Approach for Revealing Antibiotic Mechanisms of Action. Cell, 2019, 177, 1649-1661.e9.	27.8	242
78	Unraveling the Physiological Complexities of Antibiotic Lethality. Annual Review of Pharmacology and Toxicology, 2015, 55, 313-332.	9.6	232
79	Minimally instrumented SHERLOCK (miSHERLOCK) for CRISPR-based point-of-care diagnosis of SARS-CoV-2 and emerging variants. Science Advances, 2021, 7, .	10.9	215
80	Clinically relevant mutations in core metabolic genes confer antibiotic resistance. Science, 2021, 371, .	20.9	213
81	Tunable protein degradation in bacteria. Nature Biotechnology, 2014, 32, 1276-1281.	20.8	209
82	A low-cost paper-based synthetic biology platform for analyzing gut microbiota and host biomarkers. Nature Communications, 2018, 9, 3347.	13.2	204
83	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	193
84	Dynamic Control of Cardiac Alternans. Physical Review Letters, 1997, 78, 4518-4521.	8.0	191
85	Bacterial metabolic state more accurately predicts antibiotic lethality than growth rate. Nature Microbiology, 2019, 4, 2109-2117.	13.1	189
86	Synthetic Gene Network for Entraining and Amplifying Cellular Oscillations. Physical Review Letters, 2002, 88, 148101.	8.0	184
87	Noise-mediated enhancements and decrements in human tactile sensation. Physical Review E, 1997, 56, 923-926.	2.1	182
88	Probiotic strains detect and suppress cholera in mice. Science Translational Medicine, 2018, 10, .	13.4	178
89	Hydroxyurea Induces Hydroxyl Radical-Mediated Cell Death in Escherichia coli. Molecular Cell, 2009, 36, 845-860.	9.6	172
90	Engineering living therapeutics with synthetic biology. Nature Reviews Drug Discovery, 2021, 20, 941-960.	61.5	172

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91	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.	7.6	169
92	Next-generation biocontainment systems for engineered organisms. Nature Chemical Biology, 2018, 14, 530-537.	8.0	169
93	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.	7.6	164
94	Multiple mechanisms disrupt the let-7 microRNA family in neuroblastoma. Nature, 2016, 535, 246-251.	36.2	163
95	Noise-enhanced human sensorimotor function. IEEE Engineering in Medicine and Biology Magazine, 2003, 22, 76-83.	0.8	160
96	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.	7.6	159
97	Genetic switchboard for synthetic biology applications. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5850-5855.	7.6	153
98	Targeting Antibiotic Tolerance, Pathogen by Pathogen. Cell, 2018, 172, 1228-1238.	27.8	151
99	A lab-on-a-chip for the concurrent electrochemical detection of SARS-CoV-2 RNA and anti-SARS-CoV-2 antibodies in saliva and plasma. Nature Biomedical Engineering, 2022, 6, 968-978.	22.4	146
100	A CRISPRâ€“Cas9-based gene drive platform for genetic interaction analysis in Candida albicans. Nature Microbiology, 2018, 3, 73-82.	13.1	144
101	Upright, correlated random walks: A statisticalâ€biomechanics approach to the human postural control system. Chaos, 1995, 5, 57-63.	2.6	138
102	Using Targeted Chromatin Regulators to Engineer Combinatorial and Spatial Transcriptional Regulation. Cell, 2014, 158, 110-120.	27.8	130
103	Biophysical Constraints Arising from Compositional Context in Synthetic Gene Networks. Cell Systems, 2017, 5, 11-24.e12.	6.2	126
104	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.	2.4	121
105	BioBitsâ„¢ Explorer: A modular synthetic biology education kit. Science Advances, 2018, 4, eaat5105.	10.9	119
106	Understanding and Sensitizing Density-Dependent Persistence to Quinolone Antibiotics. Molecular Cell, 2017, 68, 1147-1154.e3.	9.6	115
107	Benchmarking <scp>AlphaFold</scp> â€enabled molecular docking predictions for antibiotic discovery. Molecular Systems Biology, 2022, 18, .	7.5	111
108	Evidence that coronavirus superspreading is fat-tailed. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29416-29418.	7.6	108

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109	Chemogenomics and orthologyâ€based design of antibiotic combination therapies. Molecular Systems Biology, 2016, 12, 872.	7.5	102
110	De novo-designed translation-repressing riboregulators for multi-input cellular logic. Nature Chemical Biology, 2019, 15, 1173-1182.	8.0	101
111	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, .	7.6	101
112	Nanozyme-catalysed CRISPR assay for preamplification-free detection of non-coding RNAs. Nature Nanotechnology, 2022, 17, 1120-1126.	30.5	100
113	Stochastic Resonance in Ensembles of Nondynamical Elements: The Role of Internal Noise. Physical Review Letters, 1997, 79, 4701-4704.	8.0	99
114	A deep learning approach to programmable RNA switches. Nature Communications, 2020, 11, 5057.	13.2	95
115	Chromatin regulation at the frontier of synthetic biology. Nature Reviews Genetics, 2015, 16, 159-171.	16.7	93
116	BioBitsâ„¢ Bright: A fluorescent synthetic biology education kit. Science Advances, 2018, 4, eaat5107.	10.9	93
117	Predictive biology: modelling, understanding and harnessing microbial complexity. Nature Reviews Microbiology, 2020, 18, 507-520.	29.2	93
118	Using deep learning for dermatologist-level detection of suspicious pigmented skin lesions from wide-field images. Science Translational Medicine, 2021, 13, .	13.4	93
119	A role for the bacterial GATC methylome in antibiotic stress survival. Nature Genetics, 2016, 48, 581-586.	20.4	91
120	CRISPR-based genomic tools for the manipulation of genetically intractable microorganisms. Nature Reviews Microbiology, 2018, 16, 333-339.	29.2	91
121	Understanding Biological Regulation Through Synthetic Biology. Annual Review of Biophysics, 2018, 47, 399-423.	10.1	91
122	Deep learning-guided discovery of an antibiotic targeting Acinetobacter baumannii. Nature Chemical Biology, 2023, 19, 1342-1350.	8.0	90
123	Engineered Phagemids for Nonlytic, Targeted Antibacterial Therapies. Nano Letters, 2015, 15, 4808-4813.	9.5	89
124	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.	22.4	86
125	Reconstruction of complex single-cell trajectories using CellRouter. Nature Communications, 2018, 9, 892.	13.2	82
126	Engineering advanced logic and distributed computing in human CAR immune cells. Nature Communications, 2021, 12, 792.	13.2	82

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127	Iterative plug-and-play methodology for constructing and modifying synthetic gene networks. Nature Methods, 2012, 9, 1077-1080.	19.6	81
128	Synchronization of noisy systems by stochastic signals. Physical Review E, 1999, 60, 284-292.	2.1	78
129	Antibiotic efficacy â€" context matters. Current Opinion in Microbiology, 2017, 39, 73-80.	5.2	75
130	A Blueprint for a Synthetic Genetic Feedback Controller to Reprogram Cell Fate. Cell Systems, 2017, 4, 109-120.e11.	6.2	71
131	Synthetic biology in the clinic: engineering vaccines, diagnostics, and therapeutics. Cell, 2021, 184, 881-898.	27.8	66
132	Creating Single-Copy Genetic Circuits. Molecular Cell, 2016, 63, 329-336.	9.6	65
133	Eradicating Bacterial Persisters with Combinations of Strongly and Weakly Metabolism-Dependent Antibiotics. Cell Chemical Biology, 2020, 27, 1544-1552.e3.	5.2	62
134	Cytoplasmic condensation induced by membrane damage is associated with antibiotic lethality. Nature Communications, 2021, 12, 2321.	13.2	62
135	Comprehensive Mapping of Pluripotent Stem Cell Metabolism Using Dynamic Genome-Scale Network Modeling. Cell Reports, 2017, 21, 2965-2977.	6.3	61
136	Leveraging artificial intelligence in the fight against infectious diseases. Science, 2023, 381, 164-170.	20.9	61
137	Boosting Bacterial Metabolism to Combat Antibiotic Resistance. Cell Metabolism, 2015, 21, 154-155.	15.8	59
138	Parallel bimodal single-cell sequencing of transcriptome and chromatin accessibility. Genome Research, 2020, 30, 1027-1039.	5.6	57
139	Deep-Learning Resources for Studying Glycan-Mediated Host-Microbe Interactions. Cell Host and Microbe, 2021, 29, 132-144.e3.	11.0	55
140	MYC-Activated LncRNA MNX1-AS1 Promotes the Progression of Colorectal Cancer by Stabilizing YB1. Cancer Research, 2021, 81, 2636-2650.	0.9	54
141	Mechanism of stochastic resonance enhancement in neuronal models driven by1/fnoise. Physical Review E, 1999, 60, 4637-4644.	2.1	53
142	Discovery of a structural class of antibiotics with explainable deep learning. Nature, 2024, 626, 177-185.	36.2	53
143	RNAi Reveals Phase-Specific Global Regulators of Human Somatic Cell Reprogramming. Cell Reports, 2016, 15, 2597-2607.	6.3	51
144	An annotated key to the lichenicolous Ascomycota (including mitosporic morphs) of Sweden. Nova Hedwigia, 2008, 86, 275-365.	0.4	48

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145	DNA sense-and-respond protein modules for mammalian cells. Nature Methods, 2015, 12, 1085-1090.	19.6	48
146	An engineered live biotherapeutic for the prevention of antibiotic-induced dysbiosis. Nature Biomedical Engineering, 2022, 6, 910-921.	22.4	48
147	Fishing for function in noise. Nature, 1999, 402, 241-242.	36.2	47
148	Unspinning the web. Nature, 2001, 411, 30-31.	36.2	45
149	RNA-responsive elements for eukaryotic translational control. Nature Biotechnology, 2022, 40, 539-545.	20.8	45
150	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.	7.6	43
151	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.	22.4	43
152	Synthetic biology platform technologies for antimicrobial applications. Advanced Drug Delivery Reviews, 2016, 105, 35-43.	14.3	39
153	Diversification of reprogramming trajectories revealed by parallel single-cell transcriptome and chromatin accessibility sequencing. Science Advances, 2020, 6, .	10.9	38
154	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.	1.9	37
155	ZSCAN10 expression corrects the genomic instability of iPSCs from aged donors. Nature Cell Biology, 2017, 19, 1037-1048.	10.0	37
156	Using Engineered Bacteria to Characterize Infection Dynamics and Antibiotic Effects InÂVivo. Cell Host and Microbe, 2017, 22, 263-268.e4.	11.0	37
157	Designing Biological Circuits: Synthetic Biology Within the Operon Model and Beyond. Annual Review of Biochemistry, 2021, 90, 221-244.	11.2	35
158	Assessing muscle stiffness from quiet stance in Parkinson's disease. Muscle and Nerve, 1999, 22, 635-639.	2.3	34
159	Neutralizing noise in gene networks. Nature, 2000, 405, 520-521.	36.2	32
160	A multiplexable assay for screening antibiotic lethality against drug-tolerant bacteria. Nature Methods, 2019, 16, 303-306.	19.6	31
161	Synthetic biology: How best to build a cell. Nature, 2014, 509, 155-157.	36.2	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.	7.6	29

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163	Engineering microbial division of labor for plastic upcycling. Nature Communications, 2023, 14, .	13.2	28
164	Increased energy demand from anabolic-catabolic processes drives Î²-lactam antibiotic lethality. Cell Chemical Biology, 2022, 29, 276-286.e4.	5.2	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	Modulating the evolutionary trajectory of tolerance using antibiotics with different metabolic dependencies. Nature Communications, 2022, 13, 2525.	13.2	26
167	Continuous bioactivity-dependent evolution of an antibiotic biosynthetic pathway. Nature Communications, 2020, 11, 4202.	13.2	21
168	Discovering small-molecule senolytics with deep neural networks. Nature Aging, 2023, 3, 734-750.	8.5	21
169	Effects of a charcoal powderâ€“wood vinegar compound solution in piglets for raw pigeon pea seed meal. Animal, 2008, 2, 366-374.	3.3	20
170	A systems biology pipeline identifies regulatory networks for stem cell engineering. Nature Biotechnology, 2019, 37, 810-818.	20.8	20
171	Point-of-Care Devices to Detect Zika and Other Emerging Viruses. Annual Review of Biomedical Engineering, 2020, 22, 371-386.	12.4	20
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.	7.6	18
173	UK Head and neck cancer surgical capacity during the second wave of the COVIDâ€”19 pandemic: Have we learned the lessons? COVIDSurg collaborative. Clinical Otolaryngology, 2021, 46, 729-735.	1.3	17
174	Frequency Control of an Oscillatory Reaction by Reversible Binding of an Autocatalyst. Physical Review Letters, 1999, 82, 1582-1585.	8.0	14
175	CellComm infers cellular crosstalk that drives haematopoietic stem and progenitor cell development. Nature Cell Biology, 2022, 24, 579-589.	10.0	13
176	Anomalous COVID-19 tests hinder researchers. Science, 2021, 371, 244-245.	20.9	11
177	Tuning stochastic resonance. Nature, 1995, 378, 341-342.	36.2	10
178	Enhancing nutritional niche and host defenses by modifying the gut microbiome. Molecular Systems Biology, 2022, 18, .	7.5	9
179	Detection of viral RNAs at ambient temperature via reporter proteins produced through the target-splinted ligation of DNA probes. Nature Biomedical Engineering, 2023, 7, 1571-1582.	22.4	9
180	Autocatalytic base editing for RNA-responsive translational control. Nature Communications, 2023, 14, .	13.2	8

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181	CRISPR Guide RNA Cloning for Mammalian Systems. Journal of Visualized Experiments, 2018, , .	0.3	7
182	Machine learning for antimicrobial peptide identification and design. Nature Reviews Bioengineering, 2024, 2, 392-407.	0.0	6
183	A selfâ€propagating, barcoded transposon system for the dynamic rewiring of genomic networks. Molecular Systems Biology, 2023, 19, .	7.5	3
184	Free Hip Arthroplasty Templating Software - Does it Work?. Arthroplasty Today, 2023, 23, 101182.	1.5	2
185	High Precision Fiber Loop Ringdown Chemical Corrosion Sensors. , 2010, , .		1
186	Ribocomputing devices for sophisticated in vivo logic computation. , 2016, , .		1
187	Engineering Models to Scale. Cell, 2016, 165, 516-517.	27.8	1
188	Engineering microbial peer pressure. Science, 2019, 365, 986-987.	20.9	1
189	Behavioral activation / inhibition systems and lifestyle as predictors of mental disorders in adolescent athletes during Covid19 pandemic. BMC Public Health, 2022, 22, .	3.0	0
190	Polyfunctional CD4+ T cells specific for Trypanosoma cruzi can be restored after in vitro treatment with IL-7 and IL-27. Journal of Immunology, 2019, 202, 190.60-190.60.	0.8	0
191	Gaming bacterial metabolism. Nature Microbiology, 2023, 8, 1004-1005.	13.1	0
192	Rapid discovery and evolution of nanosensors containing fluorogenic amino acids. Nature Communications, 2024, 15, .	13.2	0
193	Customizable gene sensing and response without altering endogenous coding sequences. Nature Chemical Biology, 0, , .	8.0	0