Jeff Hasty

List of Publications by Year
in descending order

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102	11,762	53660 45	34900 98
papers	citations	h-index	g-index

111	111	111	8831
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A fast, robust and tunable synthetic gene oscillator. Nature, 2008, 456, 516-519.	13.7	1,079
2	A synchronized quorum of genetic clocks. Nature, 2010, 463, 326-330.	13.7	916
3	Engineered gene circuits. Nature, 2002, 420, 224-230.	13.7	660
4	Computational studies of gene regulatory networks: in numero molecular biology. Nature Reviews Genetics, 2001, 2, 268-279.	7.7	508
5	The microbiome and human cancer. Science, 2021, 371, .	6.0	506
6	Delay-induced stochastic oscillations in gene regulation. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14593-14598.	3.3	498
7	Synchronized cycles of bacterial lysis for in vivo delivery. Nature, 2016, 536, 81-85.	13.7	487
8	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.	3.3	409
9	Reverse engineering gene networks: Integrating genetic perturbations with dynamical modeling. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 5944-5949.	3.3	380
10	A sensing array of radically coupled genetic â€˜biopixelsâ€™. Nature, 2012, 481, 39-44.	13.7	351
11	Programmable probiotics for detection of cancer in urine. Science Translational Medicine, 2015, 7, 289ra84.	5.8	326
12	A bottom-up approach to gene regulation. Nature, 2006, 439, 856-860.	13.7	294
13	Metabolic gene regulation in a dynamically changing environment. Nature, 2008, 454, 1119-1122.	13.7	274
14	Origins of extrinsic variability in eukaryotic gene expression. Nature, 2006, 439, 861-864.	13.7	263
15	Biomechanical ordering of dense cell populations. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15346-15351.	3.3	259
16	Synchronizing genetic relaxation oscillators by intercell signaling. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 679-684.	3.3	258
17	Designer gene networks: Towards fundamental cellular control. Chaos, 2001, 11, 207.	1.0	239
18	Microfluidic devices for measuring gene network dynamics in single cells. Nature Reviews Genetics, 2009, 10, 628-638.	7.7	224

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19	Entrainment of a Population of Synthetic Genetic Oscillators. Science, 2011, 333, 1315-1319.	6.0	222
20	Rapid and tunable post-translational coupling of genetic circuits. Nature, 2014, 508, 387-391.	13.7	194
21	Synthetic Gene Network for Entraining and Amplifying Cellular Oscillations. Physical Review Letters, 2002, 88, 148101.	2.9	181
22	Queueing up for enzymatic processing: correlated signaling through coupled degradation. Molecular Systems Biology, 2011, 7, 561.	3.2	170
23	Quorum Sensing Communication Modules for Microbial Consortia. ACS Synthetic Biology, 2016, 5, 969-977.	1.9	168
24	Delay-Induced Degrade-and-Fire Oscillations in Small Genetic Circuits. Physical Review Letters, 2009, 102, 068105.	2.9	130
25	A stabilized microbial ecosystem of self-limiting bacteria using synthetic quorum-regulated lysis. Nature Microbiology, 2017, 2, 17083.	5.9	129
26	Dynamics of singleâ€€cell gene expression. Molecular Systems Biology, 2006, 2, 64.	3.2	125
27	Rock-paper-scissors: Engineered population dynamics increase genetic stability. Science, 2019, 365, 1045-1049.	6.0	115
28	In-Vivo Real-Time Control of Protein Expression from Endogenous and Synthetic Gene Networks. PLoS Computational Biology, 2014, 10, e1003625.	1.5	114
29	Streaming Instability in Growing Cell Populations. Physical Review Letters, 2010, 104, 208101.	2.9	92
30	A synthetic gene network for tuning protein degradation in Saccharomyces cerevisiae. Molecular Systems Biology, 2007, 3, 127.	3.2	89
31	Vacuum-assisted cell loading enables shear-free mammalian microfluidic culture. Lab on A Chip, 2012, 12, 4732.	3.1	89
32	Rapid and Scalable Preparation of Bacterial Lysates for Cell-Free Gene Expression. ACS Synthetic Biology, 2017, 6, 2198-2208.	1.9	85
33	Monitoring dynamics of singleâ€€cell gene expression over multiple cell cycles. Molecular Systems Biology, 2005, 1, 2005.0024.	3.2	83
34	A programmable fate decision landscape underlies single-cell aging in yeast. Science, 2020, 369, 325-329.	6.0	77
35	The Balance of Stromal BMP Signaling Mediated by GREM1 and ISLR Drives Colorectal Carcinogenesis. Gastroenterology, 2021, 160, 1224-1239.e30.	0.6	76
36	Rational engineering of synthetic microbial systems: from single cells to consortia. Current Opinion in Microbiology, 2018, 45, 92-99.	2.3	75

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37	Transcriptional regulation with CRISPR-Cas9: principles, advances, and applications. Current Opinion in Biotechnology, 2016, 40, 177-184.	3.3	69
38	Transient Dynamics of Genetic Regulatory Networks. Biophysical Journal, 2007, 92, 3501-3512.	0.2	64
39	Multigenerational silencing dynamics control cell aging. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11253-11258.	3.3	60
40	Orthogonal Modular Gene Repression in Escherichia coli Using Engineered CRISPR/Cas9. ACS Synthetic Biology, 2016, 5, 81-88.	1.9	58
41	Inducible cell-to-cell signaling for tunable dynamics in microbial communities. Nature Communications, 2020, 11, 1193.	5.8	58
42	Cell cycle-dependent variations in protein concentration. Nucleic Acids Research, 2010, 38, 2676-2681.	6.5	57
43	Effective Temperature in Stochastic Kinetics and Gene Networks. Biophysical Journal, 2006, 91, 84-94.	0.2	56
44	Translational Cross Talk in Gene Networks. Biophysical Journal, 2013, 104, 2564-2572.	0.2	54
45	Translating the noise. Nature Genetics, 2002, 31, 13-14.	9.4	50
46	Yeast Dynamically Modify Their Environment to Achieve Better Mating Efficiency. Science Signaling, 2011, 4, ra54.	1.6	48
47	In Vivo Gene Expression Dynamics of Tumor-Targeted Bacteria. ACS Synthetic Biology, 2012, 1, 465-470.	1.9	48
48	Unspinning the web. Nature, 2001, 411, 30-31.	13.7	45
49	Correlation Resonance Generated by Coupled Enzymatic Processing. Biophysical Journal, 2010, 99, 3172-3181.	0.2	45
50	Dynamic Localization of the Cyanobacterial Circadian Clock Proteins. Current Biology, 2014, 24, 1836-1844.	1.8	45
51	Divergent Aging of Isogenic Yeast Cells Revealed through Single-Cell Phenotypic Dynamics. Cell Systems, 2019, 8, 242-253.e3.	2.9	43
52	Dual Delayed Feedback Provides Sensitivity and Robustness to the NF-Î²B Signaling Module. PLoS Computational Biology, 2013, 9, e1003112.	1.5	42
53	Phenotypic variability of growing cellular populations. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18982-18987.	3.3	39
54	Genetic Circuits in Salmonella typhimurium. ACS Synthetic Biology, 2012, 1, 458-464.	1.9	37

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55	A Microfluidic Platform for Long-Term Monitoring of Algae in a Dynamic Environment. ACS Synthetic Biology, 2016, 5, 8-14.	1.9	33
56	Synchronized DNA cycling across a bacterial population. Nature Genetics, 2017, 49, 1282-1285.	9.4	33
57	Statistics of cellular signal transduction as a race to the nucleus by multiple random walkers in compartment/phosphorylation space. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 16752-16757.	3.3	30
58	Antagonistic gene transcripts regulate adaptation to new growth environments. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 21087-21092.	3.3	30
59	Interfacing gene circuits with microelectronics through engineered population dynamics. Science Advances, 2020, 6, eaaz8344.	4.7	28
60	Posttranscriptional Regulation of Gcr1 Expression and Activity Is Crucial for Metabolic Adjustment in Response to Glucose Availability. Molecular Cell, 2016, 62, 346-358.	4.5	27
61	Circadian rhythms in Neurospora crassa: Dynamics of the clock component frequency visualized using a fluorescent reporter. Fungal Genetics and Biology, 2010, 47, 332-341.	0.9	26
62	The pedestrian watchmaker: Genetic clocks from engineered oscillators. FEBS Letters, 2009, 583, 3931-3937.	1.3	25
63	Phenotypic impact of regulatory noise in cellular stress-response pathways. Systems and Synthetic Biology, 2010, 4, 105-116.	1.0	25
64	Criticality and Adaptivity in Enzymatic Networks. Biophysical Journal, 2016, 111, 1078-1087.	0.2	25
65	Survival of the weakest in non-transitive asymmetric interactions among strains of E. coli. Nature Communications, 2020, 11, 6055.	5.8	23
66	Distributed Classifier Based on Genetically Engineered Bacterial Cell Cultures. ACS Synthetic Biology, 2015, 4, 72-82.	1.9	22
67	Genetically engineered control of phenotypic structure in microbial colonies. Nature Microbiology, 2020, 5, 697-705.	5.9	22
68	Synchronization of Degrade-and-Fire Oscillations via a Common Activator. Physical Review Letters, 2014, 113, 128102.	2.9	21
69	Genome-scale transcriptional dynamics and environmental biosensing. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3301-3306.	3.3	21
70	Turing Patterning Using Gene Circuits with Gas-Induced Degradation of Quorum Sensing Molecules. PLoS ONE, 2016, 11, e0153679.	1.1	19
71	Synthetic biology approaches to biofuel production. Biofuels, 2012, 3, 9-12.	1.4	18
72	Design then mutate. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 16516-16518.	3.3	17

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73	Measuring Competitive Fitness in Dynamic Environments. Journal of Physical Chemistry B, 2013, 117, 13175-13181.	1.2	17
74	Flavin-based metabolic cycles are integral features of growth and division in single yeast cells. Scientific Reports, 2018, 8, 18045.	1.6	17
75	Renormalization Group for Directed Sandpile Models. Physical Review Letters, 1998, 81, 1722-1725.	2.9	16
76	Recent advances in single-cell studies of gene regulation. Current Opinion in Biotechnology, 2012, 23, 34-40.	3.3	15
77	Measuring Growth and Gene Expression Dynamics of Tumor-Targeted S. Typhimurium Bacteria. Journal of Visualized Experiments, 2013, , e50540.	0.2	15
78	Stochastic Emergence of Groupthink. Science, 2010, 328, 987-988.	6.0	14
79	A DNA methylationâ€“based switch generates bistable gene expression. Nature Genetics, 2007, 39, 146-147.	9.4	13
80	Genome rewired. Nature, 2008, 452, 824-825.	13.7	13
81	Advances in quantitative biology methods for studying replicative aging in Saccharomyces cerevisiae. Translational Medicine of Aging, 2020, 4, 151-160.	0.6	13
82	Overpowering the component problem. Nature Biotechnology, 2009, 27, 450-451.	9.4	11
83	Renormalization of one-dimensional avalanche models. Journal of Statistical Physics, 1997, 86, 1179-1201.	0.5	10
84	Suppression of Beneficial Mutations in Dynamic Microbial Populations. Physical Review Letters, 2017, 118, 028102.	2.9	10
85	Imaging gene expression: tiny signals make a big noise. Nature Chemical Biology, 2006, 2, 181-182.	3.9	9
86	In-Silico Patterning of Vascular Mesenchymal Cells in Three Dimensions. PLoS ONE, 2011, 6, e20182.	1.1	9
87	One-Day Construction of Multiplex Arrays to Harness Natural CRISPR-Cas Systems. ACS Synthetic Biology, 2020, 9, 1129-1137.	1.9	9
88	Coherent activation of a synthetic mammalian gene network. Systems and Synthetic Biology, 2010, 4, 15-23.	1.0	8
89	Systems biology of cellular rhythms: from cacophony to symphony. Current Opinion in Genetics and Development, 2010, 20, 571-573.	1.5	8
90	Design, mutate, screen: Multiplexed creation and arrayed screening of synchronized genetic clocks. Cell Systems, 2022, 13, 365-375.e5.	2.9	8

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91	Complex ligand-protein systems: a globally convergent iterative method for the n Ã— m case. Journal of Mathematical Biology, 2001, 43, 313-324.	0.8	7
92	Making gene circuits sing. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16758-16759.	3.3	4
93	Synthetic Gene Circuits: Design, Implement, and Apply. Proceedings of the IEEE, 2022, 110, 613-630.	16.4	4
94	Nutrient Gradients Mediate Complex Colony-Level Antibiotic Responses in Structured Microbial Populations. Frontiers in Microbiology, 2022, 13, 740259.	1.5	4
95	Monitoring dynamics of single-cell gene expression over multiple cell cycles. , 2006, , .		3
96	Engineered Microbes for Therapeutic Applications. ACS Synthetic Biology, 2012, 1, 438-439.	1.9	3
97	Wavelets of Excitability in Sensory Neurons. Journal of Neurophysiology, 2001, 86, 2097-2101.	0.9	2
98	Renormalization of Self-Organized Critical Models. Annals of the New York Academy of Sciences, 1998, 848, 9-17.	1.8	1
99	Design, Mutate, Screen: High-Throughput Creation of Genetic Clocks with Different Period-Amplitude Characteristics. SSRN Electronic Journal, 0, , .	0.4	1
100	Origins of extrinsic variability in eukaryotic gene expression. , 2006, , .		0
101	Sensing array of radically coupled genetic biopixels. FASEB Journal, 2012, 26, 468.1.	0.2	0
102	Rapid, Affordable, and Uncomplicated Production of Bacterial Cell-free Lysate. Journal of Visualized Experiments, 2021, , .	0.2	0