

Michael B Elowitz

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

69
papers

18,419
citations

43
h-index

86
g-index

86
ext. papers

21,919
ext. citations

25.6
avg, IF

6.96
L-index

#	Paper	IF	Citations
69	Synthetic multistability in mammalian cells.. <i>Science</i> , 2022 , 375, eabg9765	33.3	7
68	Protease-controlled secretion and display of intercellular signals.. <i>Nature Communications</i> , 2022 , 13, 912	17.4	2
67	Synthetic mammalian signaling circuits for robust cell population control.. <i>Cell</i> , 2022 ,	56.2	1
66	Programmable protein circuit design. <i>Cell</i> , 2021 , 184, 2284-2301	56.2	8
65	Imaging cell lineage with a synthetic digital recording system. <i>Science</i> , 2021 , 372,	33.3	24
64	Benchmarked approaches for reconstruction of in vitro cell lineages and in silico models of C. elegans and M. musculus developmental trees. <i>Cell Systems</i> , 2021 , 12, 810-826.e4	10.6	4
63	In situ readout of DNA barcodes and single base edits facilitated by in vitro transcription. <i>Nature Biotechnology</i> , 2020 , 38, 66-75	44.5	25
62	Constitutive splicing and economies of scale in gene expression. <i>Nature Structural and Molecular Biology</i> , 2019 , 26, 424-432	17.6	22
61	Communication codes in developmental signaling pathways. <i>Development (Cambridge)</i> , 2019 , 146,	6.6	33
60	activation in the Notch signaling pathway. <i>ELife</i> , 2019 , 8,	8.9	36
59	Morphogen gradient reconstitution reveals Hedgehog pathway design principles. <i>Science</i> , 2018 , 360, 543-548	33.3	62
58	Molecular Time Sharing through Dynamic Pulsing in Single Cells. <i>Cell Systems</i> , 2018 , 6, 216-229.e15	10.6	17
57	Dynamic Ligand Discrimination in the Notch Signaling Pathway. <i>Cell</i> , 2018 , 172, 869-880.e19	56.2	153
56	A stochastic epigenetic switch controls the dynamics of T-cell lineage commitment. <i>ELife</i> , 2018 , 7,	8.9	42
55	Self-Amplifying Pulsatile Protein Dynamics without Positive Feedback. <i>Cell Systems</i> , 2018 , 7, 453-462.e1	10.6	11
54	Programmable protein circuits in living cells. <i>Science</i> , 2018 , 361, 1252-1258	33.3	138
53	Metabolic interactions between dynamic bacterial subpopulations. <i>ELife</i> , 2018 , 7,	8.9	45

52	An operational view of intercellular signaling pathways. <i>Current Opinion in Systems Biology</i> , 2017 , 1, 16-24.	4.2	36
51	Combinatorial Signal Perception in the BMP Pathway. <i>Cell</i> , 2017 , 170, 1184-1196.e24	56.2	105
50	Advancing towards a global mammalian gene regulation model through single-cell analysis and synthetic biology. <i>Current Opinion in Biomedical Engineering</i> , 2017 , 4, 174-193	4.4	4
49	Challenges and emerging directions in single-cell analysis. <i>Genome Biology</i> , 2017 , 18, 84	18.3	166
48	Synthetic recording and in situ readout of lineage information in single cells. <i>Nature</i> , 2017 , 541, 107-111.	50.4	251
47	Inferring Cell-State Transition Dynamics from Lineage Trees and Endpoint Single-Cell Measurements. <i>Cell Systems</i> , 2016 , 3, 419-433.e8	10.6	43
46	Central Dogma Goes Digital. <i>Molecular Cell</i> , 2016 , 61, 791-2	17.6	5
45	Dynamics of epigenetic regulation at the single-cell level. <i>Science</i> , 2016 , 351, 720-4	33.3	249
44	Asynchronous combinatorial action of four regulatory factors activates Bcl11b for T cell commitment. <i>Nature Immunology</i> , 2016 , 17, 956-65	19.1	85
43	Synthetic biology: Precision timing in a cell. <i>Nature</i> , 2016 , 538, 462-463	50.4	7
42	Combinatorial gene regulation by modulation of relative pulse timing. <i>Nature</i> , 2015 , 527, 54-8	50.4	89
41	Single-cell transcriptome analysis reveals dynamic changes in lncRNA expression during reprogramming. <i>Cell Stem Cell</i> , 2015 , 16, 88-101	18	113
40	Realizing the potential of synthetic biology. <i>Nature Reviews Molecular Cell Biology</i> , 2014 , 15, 289-94	48.7	151
39	Pulsatile dynamics in the yeast proteome. <i>Current Biology</i> , 2014 , 24, 2189-2194	6.3	56
38	Dynamic heterogeneity and DNA methylation in embryonic stem cells. <i>Molecular Cell</i> , 2014 , 55, 319-31	17.6	210
37	Fringe proteins modulate Notch-ligand cis and trans interactions to specify signaling states. <i>ELife</i> , 2014 , 3, e02950	8.9	84
36	Polyphasic feedback enables tunable cellular timers. <i>Current Biology</i> , 2014 , 24, R994-5	6.3	9
35	Positive feedback between PU.1 and the cell cycle controls myeloid differentiation. <i>Science</i> , 2013 , 341, 670-3	33.3	182

34	Functional roles of pulsing in genetic circuits. <i>Science</i> , 2013 , 342, 1193-200	33.3	251
33	Rate of environmental change determines stress response specificity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 4140-5	11.5	98
32	Pulsed feedback defers cellular differentiation. <i>PLoS Biology</i> , 2012 , 10, e1001252	9.7	78
31	Measuring single-cell gene expression dynamics in bacteria using fluorescence time-lapse microscopy. <i>Nature Protocols</i> , 2011 , 7, 80-8	18.8	242
30	Synthetic biology: integrated gene circuits. <i>Science</i> , 2011 , 333, 1244-8	33.3	248
29	Dynamical consequences of bandpass feedback loops in a bacterial phosphorelay. <i>PLoS ONE</i> , 2011 , 6, e25102	3.7	16
28	Stochastic pulse regulation in bacterial stress response. <i>Science</i> , 2011 , 334, 366-9	33.3	147
27	Mutual inactivation of Notch receptors and ligands facilitates developmental patterning. <i>PLoS Computational Biology</i> , 2011 , 7, e1002069	5	88
26	Cis-interactions between Notch and Delta generate mutually exclusive signalling states. <i>Nature</i> , 2010 , 465, 86-90	50.4	425
25	Functional roles for noise in genetic circuits. <i>Nature</i> , 2010 , 467, 167-73	50.4	1072
24	Build life to understand it. <i>Nature</i> , 2010 , 468, 889-90	50.4	146
23	A synthetic three-color scaffold for monitoring genetic regulation and noise. <i>Journal of Biological Engineering</i> , 2010 , 4, 10	6.3	50
22	Partial penetrance facilitates developmental evolution in bacteria. <i>Nature</i> , 2009 , 460, 510-4	50.4	106
21	Using movies to analyse gene circuit dynamics in single cells. <i>Nature Reviews Microbiology</i> , 2009 , 7, 383-92	22.2	188
20	Architecture-dependent noise discriminates functionally analogous differentiation circuits. <i>Cell</i> , 2009 , 139, 512-22	56.2	213
19	Frequency-modulated nuclear localization bursts coordinate gene regulation. <i>Nature</i> , 2008 , 455, 485-90	50.4	379
18	Regulatory activity revealed by dynamic correlations in gene expression noise. <i>Nature Genetics</i> , 2008 , 40, 1493-8	36.3	166
17	Programming gene expression with combinatorial promoters. <i>Molecular Systems Biology</i> , 2007 , 3, 145	12.2	264

16	Tunability and noise dependence in differentiation dynamics. <i>Science</i> , 2007 , 315, 1716-9	33.3	390
15	An excitable gene regulatory circuit induces transient cellular differentiation. <i>Nature</i> , 2006 , 440, 545-50	50.4	597
14	Gene regulation at the single-cell level. <i>Science</i> , 2005 , 307, 1962-5	33.3	846
13	Reconstruction of genetic circuits. <i>Nature</i> , 2005 , 438, 443-8	50.4	293
12	Dynamics of the p53-Mdm2 feedback loop in individual cells. <i>Nature Genetics</i> , 2004 , 36, 147-50	36.3	772
11	Intrinsic and extrinsic contributions to stochasticity in gene expression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 12795-800	11.5	1167
10	Stochastic gene expression in a single cell. <i>Science</i> , 2002 , 297, 1183-6	33.3	3846
9	Negative autoregulation speeds the response times of transcription networks. <i>Journal of Molecular Biology</i> , 2002 , 323, 785-93	6.5	532
8	A synthetic oscillatory network of transcriptional regulators. <i>Nature</i> , 2000 , 403, 335-8	50.4	3302
7	Correction: Fringe proteins modulate Notch-ligand cis and trans interactions to specify signaling states. <i>ELife</i> , 3 ,	8.9	2
6	Protease-controlled secretion and display of intercellular signals		1
5	Imaging cell lineage with a synthetic digital recording system		7
4	Synthetic mammalian signaling circuits for robust cell population control		4
3	Metabolic Interactions Between Dynamic Bacterial Subpopulations		1
2	Cis-activation in the Notch signaling pathway		1
1	Synthetic multistability in mammalian cells		1