

# Michael B Elowitz

## List of Publications by Citations

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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	Stochastic gene expression in a single cell. <i>Science</i> , <b>2002</b> , 297, 1183-6	33.3	3846
68	A synthetic oscillatory network of transcriptional regulators. <i>Nature</i> , <b>2000</b> , 403, 335-8	50.4	3302
67	Intrinsic and extrinsic contributions to stochasticity in gene expression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2002</b> , 99, 12795-800	11.5	1167
66	Functional roles for noise in genetic circuits. <i>Nature</i> , <b>2010</b> , 467, 167-73	50.4	1072
65	Gene regulation at the single-cell level. <i>Science</i> , <b>2005</b> , 307, 1962-5	33.3	846
64	Dynamics of the p53-Mdm2 feedback loop in individual cells. <i>Nature Genetics</i> , <b>2004</b> , 36, 147-50	36.3	772
63	An excitable gene regulatory circuit induces transient cellular differentiation. <i>Nature</i> , <b>2006</b> , 440, 545-50	50.4	597
62	Negative autoregulation speeds the response times of transcription networks. <i>Journal of Molecular Biology</i> , <b>2002</b> , 323, 785-93	6.5	532
61	Cis-interactions between Notch and Delta generate mutually exclusive signalling states. <i>Nature</i> , <b>2010</b> , 465, 86-90	50.4	425
60	Tunability and noise dependence in differentiation dynamics. <i>Science</i> , <b>2007</b> , 315, 1716-9	33.3	390
59	Frequency-modulated nuclear localization bursts coordinate gene regulation. <i>Nature</i> , <b>2008</b> , 455, 485-90	50.4	379
58	Reconstruction of genetic circuits. <i>Nature</i> , <b>2005</b> , 438, 443-8	50.4	293
57	Programming gene expression with combinatorial promoters. <i>Molecular Systems Biology</i> , <b>2007</b> , 3, 145	12.2	264
56	Functional roles of pulsing in genetic circuits. <i>Science</i> , <b>2013</b> , 342, 1193-200	33.3	251
55	Synthetic recording and in situ readout of lineage information in single cells. <i>Nature</i> , <b>2017</b> , 541, 107-111	50.4	251
54	Dynamics of epigenetic regulation at the single-cell level. <i>Science</i> , <b>2016</b> , 351, 720-4	33.3	249
53	Synthetic biology: integrated gene circuits. <i>Science</i> , <b>2011</b> , 333, 1244-8	33.3	248

52	Measuring single-cell gene expression dynamics in bacteria using fluorescence time-lapse microscopy. <i>Nature Protocols</i> , <b>2011</b> , 7, 80-8	18.8	242
51	Architecture-dependent noise discriminates functionally analogous differentiation circuits. <i>Cell</i> , <b>2009</b> , 139, 512-22	56.2	213
50	Dynamic heterogeneity and DNA methylation in embryonic stem cells. <i>Molecular Cell</i> , <b>2014</b> , 55, 319-31	17.6	210
49	Using movies to analyse gene circuit dynamics in single cells. <i>Nature Reviews Microbiology</i> , <b>2009</b> , 7, 383-92	22.2	188
48	Positive feedback between PU.1 and the cell cycle controls myeloid differentiation. <i>Science</i> , <b>2013</b> , 341, 670-3	33.3	182
47	Challenges and emerging directions in single-cell analysis. <i>Genome Biology</i> , <b>2017</b> , 18, 84	18.3	166
46	Regulatory activity revealed by dynamic correlations in gene expression noise. <i>Nature Genetics</i> , <b>2008</b> , 40, 1493-8	36.3	166
45	Dynamic Ligand Discrimination in the Notch Signaling Pathway. <i>Cell</i> , <b>2018</b> , 172, 869-880.e19	56.2	153
44	Realizing the potential of synthetic biology. <i>Nature Reviews Molecular Cell Biology</i> , <b>2014</b> , 15, 289-94	48.7	151
43	Stochastic pulse regulation in bacterial stress response. <i>Science</i> , <b>2011</b> , 334, 366-9	33.3	147
42	Build life to understand it. <i>Nature</i> , <b>2010</b> , 468, 889-90	50.4	146
41	Programmable protein circuits in living cells. <i>Science</i> , <b>2018</b> , 361, 1252-1258	33.3	138
40	Single-cell transcriptome analysis reveals dynamic changes in lncRNA expression during reprogramming. <i>Cell Stem Cell</i> , <b>2015</b> , 16, 88-101	18	113
39	Partial penetrance facilitates developmental evolution in bacteria. <i>Nature</i> , <b>2009</b> , 460, 510-4	50.4	106
38	Combinatorial Signal Perception in the BMP Pathway. <i>Cell</i> , <b>2017</b> , 170, 1184-1196.e24	56.2	105
37	Rate of environmental change determines stress response specificity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 4140-5	11.5	98
36	Combinatorial gene regulation by modulation of relative pulse timing. <i>Nature</i> , <b>2015</b> , 527, 54-8	50.4	89
35	Mutual inactivation of Notch receptors and ligands facilitates developmental patterning. <i>PLoS Computational Biology</i> , <b>2011</b> , 7, e1002069	5	88

34	Asynchronous combinatorial action of four regulatory factors activates Bcl11b for T cell commitment. <i>Nature Immunology</i> , <b>2016</b> , 17, 956-65	19.1	85
33	Fringe proteins modulate Notch-ligand cis and trans interactions to specify signaling states. <i>ELife</i> , <b>2014</b> , 3, e02950	8.9	84
32	Pulsed feedback defers cellular differentiation. <i>PLoS Biology</i> , <b>2012</b> , 10, e1001252	9.7	78
31	Morphogen gradient reconstitution reveals Hedgehog pathway design principles. <i>Science</i> , <b>2018</b> , 360, 543-548	33.3	62
30	Pulsatile dynamics in the yeast proteome. <i>Current Biology</i> , <b>2014</b> , 24, 2189-2194	6.3	56
29	A synthetic three-color scaffold for monitoring genetic regulation and noise. <i>Journal of Biological Engineering</i> , <b>2010</b> , 4, 10	6.3	50
28	Metabolic interactions between dynamic bacterial subpopulations. <i>ELife</i> , <b>2018</b> , 7,	8.9	45
27	Inferring Cell-State Transition Dynamics from Lineage Trees and Endpoint Single-Cell Measurements. <i>Cell Systems</i> , <b>2016</b> , 3, 419-433.e8	10.6	43
26	A stochastic epigenetic switch controls the dynamics of T-cell lineage commitment. <i>ELife</i> , <b>2018</b> , 7,	8.9	42
25	An operational view of intercellular signaling pathways. <i>Current Opinion in Systems Biology</i> , <b>2017</b> , 1, 16-24.2	3.2	36
24	activation in the Notch signaling pathway. <i>ELife</i> , <b>2019</b> , 8,	8.9	36
23	Communication codes in developmental signaling pathways. <i>Development (Cambridge)</i> , <b>2019</b> , 146,	6.6	33
22	In situ readout of DNA barcodes and single base edits facilitated by in vitro transcription. <i>Nature Biotechnology</i> , <b>2020</b> , 38, 66-75	44.5	25
21	Imaging cell lineage with a synthetic digital recording system. <i>Science</i> , <b>2021</b> , 372,	33.3	24
20	Constitutive splicing and economies of scale in gene expression. <i>Nature Structural and Molecular Biology</i> , <b>2019</b> , 26, 424-432	17.6	22
19	Molecular Time Sharing through Dynamic Pulsing in Single Cells. <i>Cell Systems</i> , <b>2018</b> , 6, 216-229.e15	10.6	17
18	Dynamical consequences of bandpass feedback loops in a bacterial phosphorelay. <i>PLoS ONE</i> , <b>2011</b> , 6, e25102	3.7	16
17	Self-Amplifying Pulsatile Protein Dynamics without Positive Feedback. <i>Cell Systems</i> , <b>2018</b> , 7, 453-462.e1	10.6	11

16	Polyphasic feedback enables tunable cellular timers. <i>Current Biology</i> , <b>2014</b> , 24, R994-5	6.3	9
15	Programmable protein circuit design. <i>Cell</i> , <b>2021</b> , 184, 2284-2301	56.2	8
14	Synthetic multistability in mammalian cells.. <i>Science</i> , <b>2022</b> , 375, eabg9765	33.3	7
13	Imaging cell lineage with a synthetic digital recording system		7
12	Synthetic biology: Precision timing in a cell. <i>Nature</i> , <b>2016</b> , 538, 462-463	50.4	7
11	Central Dogma Goes Digital. <i>Molecular Cell</i> , <b>2016</b> , 61, 791-2	17.6	5
10	Advancing towards a global mammalian gene regulation model through single-cell analysis and synthetic biology. <i>Current Opinion in Biomedical Engineering</i> , <b>2017</b> , 4, 174-193	4.4	4
9	Synthetic mammalian signaling circuits for robust cell population control		4
8	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> , <b>2021</b> , 12, 810-826.e4	10.6	4
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.. <i>Nature Communications</i> , <b>2022</b> , 13, 912	17.4	2
5	Protease-controlled secretion and display of intercellular signals		1
4	Metabolic Interactions Between Dynamic Bacterial Subpopulations		1
3	Cis-activation in the Notch signaling pathway		1
2	Synthetic multistability in mammalian cells		1
1	Synthetic mammalian signaling circuits for robust cell population control.. <i>Cell</i> , <b>2022</b> ,	56.2	1