Timothy C Elston

List of Publications by Year
in descending order

69 papers	1,774 citations	331259 21 h-index	315357 38 g-index
73 all docs	73 docs citations	73 times ranked	2042 citing authors

#	Article	IF	Citations
1	Negative Feedback Enhances Robustness in the Yeast Polarity Establishment Circuit. Cell, 2012, 149, 322-333.	13.5	192
2	Deep learning enables structured illumination microscopy with low light levels and enhanced speed. Nature Communications, 2020, 11, 1934.	5.8	134
3	Regulation of Cell Signaling Dynamics by the Protein Kinase-Scaffold Ste5. Molecular Cell, 2008, 30, 649-656.	4.5	110
4	Tracking Shallow Chemical Gradients by Actin-Driven Wandering of the Polarization Site. Current Biology, 2013, 23, 32-41.	1.8	103
5	A Systems-Biology Analysis of Feedback Inhibition in the Sho1 Osmotic-Stress-Response Pathway. Current Biology, 2007, 17, 659-667.	1.8	97
6	Reciprocal Encoding of Signal Intensity and Duration in a Glucose-Sensing Circuit. Cell, 2014, 156, 1084-1095.	13.5	78
7	Principles that govern competition or co-existence in Rho-GTPase driven polarization. PLoS Computational Biology, 2018, 14, e1006095.	1.5	63
8	Enabled Negatively Regulates Diaphanous-Driven Actin Dynamics InÂVitro and InÂVivo. Developmental Cell, 2014, 28, 394-408.	3.1	58
9	Role of competition between polarity sites in establishing a unique front. ELife, 2015, 4, .	2.8	56
10	Role of Polarized G Protein Signaling in Tracking Pheromone Gradients. Developmental Cell, 2015, 35, 471-482.	3.1	54
11	Time-Domain Methods for Diffusive Transport in Soft Matter. SIAM Journal on Applied Mathematics, 2009, 69, 1277-1308.	0.8	51
12	Yeast Dynamically Modify Their Environment to Achieve Better Mating Efficiency. Science Signaling, 2011, 4, ra54.	1.6	48
13	An improved shortâ€lived fluorescent protein transcriptional reporter for <i>Saccharomyces cerevisiae</i>. Yeast, 2012, 29, 519-530.	0.8	48
14	MAPK feedback encodes a switch and timer for tunable stress adaptation in yeast. Science Signaling, 2015, 8, ra5.	1.6	46
15	Dissecting motility signaling through activation of specific Src-effector complexes. Nature Chemical Biology, 2014, 10, 286-290.	3.9	44
16	RGS Proteins and Septins Cooperate to Promote Chemotropism by Regulating Polar Cap Mobility. Current Biology, 2015, 25, 275-285.	1.8	39
17	Cellular Noise Suppression by the Regulator of G Protein Signaling Sst2. Molecular Cell, 2014, 55, 85-96.	4.5	32
18	Software for lattice light-sheet imaging of FRET biosensors, illustrated with a new Rap1 biosensor. Journal of Cell Biology, 2019, 218, 3153-3160.	2.3	32

#	ARTICLE	IF	CITATIONS
19	Ratiometric GPCR signaling enables directional sensing in yeast. PLoS Biology, 2019, 17, e3000484.	2.6	27
20	An RNAi screen of Rho signalling networks identifies RhoH as a regulator of Rac1 in prostate cancer cell migration. BMC Biology, 2018, 16, 29.	1.7	26
21	Modeling the Excess Cell Surface Stored in a Complex Morphology of Bleb-Like Protrusions. PLoS Computational Biology, 2016, 12, e1004841.	1.5	23
22	Mathematical model reveals role of nucleotide signaling in airway surface liquid homeostasis and its dysregulation in cystic fibrosis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7272-E7281.	3.3	23
23	Particle-based simulations of polarity establishment reveal stochastic promotion of Turing pattern formation. PLoS Computational Biology, 2018, 14, e1006016.	1.5	22
24	Signal inhibition by a dynamically regulated pool of monophosphorylated MAPK. Molecular Biology of the Cell, 2015, 26, 3359-3371.	0.9	21
25	Recurrent mismatch binding by MutS mobile clamps on DNA localizes repair complexes nearby. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17775-17784.	3.3	21
26	Mathematical and Computational Methods for Studying Energy Transduction in Protein Motors. Journal of Statistical Physics, 2007, 128, 35-76.	0.5	18
27	Expression of an S phase-stabilized version of the CDK inhibitor Dacapo can alter endoreplication. Development (Cambridge), 2015, 142, 4288-98.	1.2	18
28	Quantitative analysis of the yeast pheromone pathway. Yeast, 2019, 36, 495-518.	0.8	18
29	Pheromone-induced morphogenesis and gradient tracking are dependent on the MAPK Fus3 binding to GÎ±. Molecular Biology of the Cell, 2015, 26, 3343-3358.	0.9	17
30	Orientation of Cell Polarity by Chemical Gradients. Annual Review of Biophysics, 2022, 51, 431-451.	4.5	16
31	User-friendly tools for quantifying the dynamics of cellular morphology and intracellular protein clusters. Methods in Cell Biology, 2014, 123, 409-427.	0.5	15
32	A shadow detector for photosynthesis efficiency. Journal of Theoretical Biology, 2017, 414, 231-244.	0.8	15
33	Chemotactic movement of a polarity site enables yeast cells to find their mates. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	15
34	Testing the limits of gradient sensing. PLoS Computational Biology, 2017, 13, e1005386.	1.5	15
35	Biosensors based on peptide exposure show single molecule conformations in live cells. Cell, 2021, 184, 5670-5685.e23.	13.5	15
36	Positive roles for negative regulators in the mating response of yeast. Molecular Systems Biology, 2012, 8, 586.	3.2	14

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37	Dose-Duration Reciprocity for G protein activation: Modulation of kinase to substrate ratio alters cell signaling. PLoS ONE, 2017, 12, e0190000.	1.1	13
38	Modulation of receptor dynamics by the regulator of G protein signaling Sst2. Molecular Biology of the Cell, 2015, 26, 4124-4134.	0.9	12
39	An integrated mathematical epithelial cell model for airway surface liquid regulation by mechanical forces. Journal of Theoretical Biology, 2018, 438, 34-45.	0.8	12
40	Molecular switch architecture determines response properties of signaling pathways. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	12
41	Exploratory polarization facilitates mating partner selection in <i>Saccharomyces cerevisiae</i>. Molecular Biology of the Cell, 2021, 32, 1048-1063.	0.9	12
42	Towards resolution of a paradox in plant G-protein signaling. Plant Physiology, 2022, 188, 807-815.	2.3	11
43	A Reaction-Diffusion Model Explains Amplification of the PLC/PKC Pathway in Fibroblast Chemotaxis. Biophysical Journal, 2017, 113, 185-194.	0.2	10
44	Stochastic modeling of human papillomavirusearly promoter gene regulation. Journal of Theoretical Biology, 2020, 486, 110057.	0.8	10
45	Systematic analysis of F-box proteins reveals a new branch of the yeast mating pathway. Journal of Biological Chemistry, 2019, 294, 14717-14731.	1.6	8
46	A novel stochastic simulation approach enables exploration of mechanisms for regulating polarity site movement. PLoS Computational Biology, 2021, 17, e1008525.	1.5	8
47	Probing Pathways Periodically. Science Signaling, 2008, 1, pe47.	1.6	6
48	EdgeProps: A Computational Platform for Correlative Analysis of Cell Dynamics and Near-Edge Protein Activity. Methods in Molecular Biology, 2018, 1821, 47-56.	0.4	6
49	From physics to pharmacology?. Reports on Progress in Physics, 2011, 74, 016601.	8.1	5
50	Mechanistic models of PLC/PKC signaling implicate phosphatidic acid as a key amplifier of chemotactic gradient sensing. PLoS Computational Biology, 2020, 16, e1007708.	1.5	5
51	Biophysics at the coffee shop: lessons learned working with George Oster. Molecular Biology of the Cell, 2019, 30, 1882-1889.	0.9	4
52	Bistability in the polarity circuit of yeast. Molecular Biology of the Cell, 2021, , mbc.E20-07-0445.	0.9	4
53	Gradient Tracking by Yeast GPCRs in a Microfluidics Chamber. Methods in Molecular Biology, 2021, 2268, 275-287.	0.4	3
54	A predictive model of gene expression reveals the role of network motifs in the mating response of yeast. Science Signaling, 2021, 14, .	1.6	2

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55	Bistability in the polarity circuit of yeast. Molecular Biology of the Cell, 2022, 33, edn1.	0.9	2
56	Spatio-Temporal Regulation of Rac1 Mobility by Actin Islands. PLoS ONE, 2015, 10, e0143753.	1.1	1
57	Stochastic Methods for Inferring States of Cell Migration. Frontiers in Physiology, 2020, 11, 822.	1.3	1
58	Emergent spatiotemporal dynamics of the actomyosin network in the presence of chemical gradients. Integrative Biology (United Kingdom), 2019, 11, 280-292.	0.6	0
59	Ratiometric GPCR signaling enables directional sensing in yeast. , 2019, 17, e3000484.		0
60	Ratiometric GPCR signaling enables directional sensing in yeast. , 2019, 17, e3000484.		0
61	Ratiometric GPCR signaling enables directional sensing in yeast. , 2019, 17, e3000484.		0
62	Ratiometric GPCR signaling enables directional sensing in yeast. , 2019, 17, e3000484.		0
63	Ratiometric GPCR signaling enables directional sensing in yeast. , 2019, 17, e3000484.		0
64	Ratiometric GPCR signaling enables directional sensing in yeast. , 2019, 17, e3000484.		0
65	Title is missing!. , 2020, 16, e1007708.		0
66	Title is missing!. , 2020, 16, e1007708.		0
67	Title is missing!. , 2020, 16, e1007708.		0
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