Mathieu Coppey

List of Publications by Year
in descending order

55	3,270	186265 28	161849 54
papers	citations	h-index	g-index

72	72	72	4145
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Persistent cell migration emerges from a coupling between protrusion dynamics and polarized trafficking. ELife, 2022, 11, .	6.0	5
2	Two timescales control the creation of large protein aggregates in cells. Biophysical Journal, 2021, 120, 2394-2399.	0.5	2
3	Autophagy Is Polarized toward Cell Front during Migration and Spatially Perturbed by Oncogenic Ras. Cells, 2021, 10, 2637.	4.1	2
4	Stick-slip dynamics of cell adhesion triggers spontaneous symmetry breaking and directional migration of mesenchymal cells on one-dimensional lines. Science Advances, 2020, 6, eaau5670.	10.3	56
5	Parallelized Manipulation of Adherent Living Cells by Magnetic Nanoparticles-Mediated Forces. International Journal of Molecular Sciences, 2020, 21, 6560.	4.1	13
6	Zwitterionic polymer ligands: an ideal surface coating to totally suppress protein-nanoparticle corona formation?. Biomaterials, 2019, 219, 119357.	11.4	110
7	Transient Activations of Rac1 at the Lamellipodium Tip Trigger Membrane Protrusion. Current Biology, 2019, 29, 2852-2866.e5.	3.9	38
8	Redox-Triggered Control of Cell Adhesion and Deadhesion on Poly(lysine)-g-poly(ethylene oxide) Adlayers. ACS Applied Bio Materials, 2019, 2, 4367-4376.	4.6	0
9	Localization of RalB signaling at endomembrane compartments and its modulation by autophagy. Scientific Reports, 2019, 9, 8910.	3.3	4
10	Intracellular organization in cell polarity â€“ placing organelles into the polarity loop. Journal of Cell Science, 2019, 132, .	2.0	18
11	Precision in a rush: Trade-offs between reproducibility and steepness of the hunchback expression pattern. PLoS Computational Biology, 2018, 14, e1006513.	3.2	32
12	Optogenetic dissection of Rac1 and Cdc42 gradient shaping. Nature Communications, 2018, 9, 4816.	12.8	64
13	Perspectives of RAS and RHEB GTPase Signaling Pathways in Regenerating Brain Neurons. International Journal of Molecular Sciences, 2018, 19, 4052.	4.1	23
14	3 minutes to precisely measure morphogen concentration. PLoS Genetics, 2018, 14, e1007676.	3.5	35
15	Live Imaging of mRNA Transcription in Drosophila Embryos. Methods in Molecular Biology, 2018, 1863, 165-182.	0.9	5
16	LiveFly: A Toolbox for the Analysis of Transcription Dynamics in Live Drosophila Embryos. Methods in Molecular Biology, 2018, 1863, 183-195.	0.9	4
17	Optical Magnetometry of Single Biocompatible Micromagnets for Quantitative Magnetogenetic and Magnetomechanical Assays. Nano Letters, 2018, 18, 7635-7641.	9.1	17
18	Non-specific interactions govern cytosolic diffusion of nanosized objects in mammalian cells. Nature Materials, 2018, 17, 740-746.	27.5	119

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19	RalB directly triggers invasion downstream Ras by mobilizing the Wave complex. ELife, 2018, 7, .	6.0	27
20	Engineered Ferritin for Magnetogenetic Manipulation of Proteins and Organelles Inside Living Cells. Advanced Materials, 2017, 29, 1700189.	21.0	42
21	Magnetic control of cellular processes using biofunctional nanoparticles. Chemical Science, 2017, 8, 7330-7338.	7.4	60
22	Gradients of Rac1 Nanoclusters Support Spatial Patterns of Rac1 Signaling. Cell Reports, 2017, 21, 1922-1935.	6.4	74
23	New methods to image transcription in living fly embryos: the insights so far, and the prospects. Wiley Interdisciplinary Reviews: Developmental Biology, 2016, 5, 296-310.	5.9	27
24	Transcriptional Memory in the Drosophila Embryo. Current Biology, 2016, 26, 212-218.	3.9	63
25	Precision of Readout at the hunchback Gene: Analyzing Short Transcription Time Traces in Living Fly Embryos. PLoS Computational Biology, 2016, 12, e1005256.	3.2	48
26	Magnetogenetic Control of Protein Gradients Inside Living Cells with High Spatial and Temporal Resolution. Nano Letters, 2015, 15, 3487-3494.	9.1	68
27	Actin Flows Mediate a Universal Coupling between Cell Speed and Cell Persistence. Cell, 2015, 161, 374-386.	28.9	369
28	Predictive Spatiotemporal Manipulation of Signaling Perturbations Using Optogenetics. Biophysical Journal, 2015, 109, 1785-1797.	0.5	57
29	Magneto-fluorescent core-shell supernanoparticles. Nature Communications, 2014, 5, 5093.	12.8	223
30	Live Imaging of Bicoid-Dependent Transcription in Drosophila Embryos. Current Biology, 2013, 23, 2135-2139.	3.9	159
31	Subcellular control of Rac-GTPase signalling by magnetogenetic manipulation inside living cells. Nature Nanotechnology, 2013, 8, 193-198.	31.5	132
32	Magnetic Manipulation of Signaling â€œHotspotsâ€•Inside Living Cells Shows Context-Dependent Amplification of the Rac Pathway. Biophysical Journal, 2012, 102, 475a.	0.5	0
33	MAPK Substrate Competition Integrates Patterning Signals in the Drosophila Embryo. Current Biology, 2010, 20, 446-451.	3.9	80
34	Modelling the Bicoid gradient. Development (Cambridge), 2010, 137, 2253-2264.	2.5	139
35	Signaling gradients in cascades of two-state reaction-diffusion systems. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1087-1092.	7.1	23
36	MAPK signaling in equations and embryos. Fly, 2009, 3, 62-67.	1.7	13

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37	Nuclear Trapping Shapes the Terminal Gradient in the Drosophila Embryo. Current Biology, 2008, 18, 915-919.	3.9	92
38	Dynamics of maternal morphogen gradients in Drosophila. Current Opinion in Genetics and Development, 2008, 18, 342-347.	3.3	25
39	Cell-to-cell communication: Time and length scales of ligand internalization in cultures of suspended cells. Journal of Chemical Physics, 2008, 128, 225102.	3.0	3
40	Modeling the bicoid gradient: Diffusion and reversible nuclear trapping of a stable protein. Developmental Biology, 2007, 312, 623-630.	2.0	81
41	Time and Length Scales of Autocrine Signals in Three Dimensions. Biophysical Journal, 2007, 93, 1917-1922.	0.5	26
42	Modelling the early steps of transduction in insect olfactory receptor neurons. BioSystems, 2007, 89, 101-109.	2.0	20
43	Intermittent search strategies: When losing time becomes efficient. Europhysics Letters, 2006, 75, 349-354.	2.0	56
44	A stochastic theory for the intermittent behaviour of foraging animals. Physica A: Statistical Mechanics and Its Applications, 2005, 356, 151-156.	2.6	12
45	Mean joint residence time of two Brownian particles in a sphere. Journal of Physics A, 2005, 38, 7205-7214.	1.6	10
46	Kinetics of diffusion-limited catalytically activated reactions: An extension of the Wilemskiâ€“Fixman approach. Journal of Chemical Physics, 2005, 123, 194506.	3.0	24
47	Optimal Search Strategies for Hidden Targets. Physical Review Letters, 2005, 94, 198101.	7.8	270
48	Averaged residence times of stochastic motions in bounded domains. Europhysics Letters, 2005, 70, 42-48.	2.0	66
49	A stochastic model for intermittent search strategies. Journal of Physics Condensed Matter, 2005, 17, S4275-S4286.	1.8	40
50	Catalytic reactions with bulk-mediated excursions: Mixing fails to restore chemical equilibrium. Physical Review E, 2004, 69, 036115.	2.1	11
51	Kinetics of Target Site Localization of a Protein on DNA: A Stochastic Approach. Biophysical Journal, 2004, 87, 1640-1649.	0.5	204
52	Lattice theory of trapping reactions with mobile species. Physical Review E, 2004, 69, 046101.	2.1	42
53	Stochastic theory of diffusion-controlled reactions. Physica A: Statistical Mechanics and Its Applications, 2003, 327, 99-104.	2.6	7
54	Pascal principle for diffusion-controlled trapping reactions. Physical Review E, 2003, 67, 045104.	2.1	54

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55	Trapping reactions with randomly moving traps: Exact asymptotic results for compact exploration. Physical Review E, 2002, 66, 060101.	2.1	56