Binny J Cherayil

List of Publications by Citations

47 papers	**1,769** citations	**16** h-index	**42** g-index
52 ext. papers	**1,909** ext. citations	**4.1** avg, IF	**4.43** L-index

#	Paper	IF	Citations
47	Ever-fluctuating single enzyme molecules: Michaelis-Menten equation revisited. *Nature Chemical Biology*, **2006**, 2, 87-94	11.7	608
46	Fluctuating enzymes: lessons from single-molecule studies. *Accounts of Chemical Research*, **2005**, 38, 923-31	24.3	318
45	Single-molecule Michaelis-Menten equations. *Journal of Physical Chemistry B*, **2005**, 109, 19068-81	3.4	276
44	Complex chemical kinetics in single enzyme molecules: Kramers' model with fractional Gaussian noise. *Journal of Chemical Physics*, **2006**, 125, 24904	3.9	70
43	Vibrational Lifetimes and Spectral Shifts in Supercritical Fluids as a Function of Density: Experiments and Theory. *Journal of Physical Chemistry B*, **2000**, 104, 2402-2414	3.4	44
42	Radial dimensions of starburst polymers. *Journal of Chemical Physics*, **1994**, 100, 3201-3209	3.9	44
41	The dynamics of chain closure in semiflexible polymers. *Journal of Chemical Physics*, **2002**, 116, 399	3.9	43
40	Non-Gaussian Brownian Diffusion in Dynamically Disordered Thermal Environments. *Journal of Physical Chemistry B*, **2017**, 121, 7204-7209	3.4	39
39	Exact path-integral evaluation of the heat distribution function of a trapped brownian oscillator. *Physical Review E*, **2010**, 82, 051104	2.4	25
38	Chain dynamics in steady shear flow. *Journal of Chemical Physics*, **2000**, 112, 8707-8714	3.9	25
37	The dynamics of single enzyme reactions: A reconsideration of Kramers' model for colored noise processes. *Journal of Chemical Physics*, **2008**, 129, 075104	3.9	23
36	Polymer collapse in supercritical solvents. *Journal of Chemical Physics*, **1999**, 111, 3274-3277	3.9	23
35	Dynamic disorder in single-molecule Michaelis-Menten kinetics: the reaction-diffusion formalism in the Wilemski-Fixman approximation. *Journal of Chemical Physics*, **2007**, 127, 105103	3.9	20
34	The thermodynamics of reversible cyclization in semiflexible polymers. *Journal of Chemical Physics*, **2002**, 117, 7765-7773	3.9	20
33	Phase separation in polymer solutions near the critical point. *Journal of Chemical Physics*, **1991**, 95, 2135-2142	3.9	19
32	Path integral description of polymers using fractional Brownian walks. *Journal of Chemical Physics*, **1993**, 99, 9230-9236	3.9	18
31	Approximate first passage time distribution for barrier crossing in a double well under fractional Gaussian noise. *Journal of Chemical Physics*, **2006**, 125, 114106	3.9	16

30	Stretched exponential relaxation in polymer dynamics. *Journal of Chemical Physics*, **1992**, 97, 2090-2094	3.9	15
29	Polymer dynamics in linear mixed flow. *Journal of Chemical Physics*, **2003**, 119, 5696-5700	3.9	14
28	Effects of stiffness on the flow behavior of polymers. *Journal of Chemical Physics*, **2000**, 113, 10776-10783	3.9	14
27	Polymer melt dynamics: microscopic roots of fractional viscoelasticity. *Physical Review E*, **2010**, 81, 021804	2.4	12
26	Work fluctuations in an elastic dumbbell model of polymers in planar elongational flow. *Physical Review E*, **2011**, 83, 041805	2.4	9
25	Chain dimensions near the critical point. *Journal of Chemical Physics*, **1994**, 100, 4665-4673	3.9	9
24	Polymer extension under flow: A path integral evaluation of the free energy change using the Jarzynski relation. *Journal of Chemical Physics*, **2016**, 144, 214902	3.9	8
23	Anomalies in the self-diffusion coefficient near the critical point. *Journal of Chemical Physics*, **2002**, 116, 8455	3.9	6
22	The anomalous diffusion of polymers in random media. *Journal of Chemical Physics*, **2000**, 112, 421-427	3.9	6
21	Chain extension of a confined polymer in steady shear flow. *Journal of Chemical Physics*, **2012**, 137, 194906	3.9	5
20	Phase separation in solutions of binary polymer mixtures. *Journal of Chemical Physics*, **1992**, 96, 9173-9179	3.9	5
19	Anomalies in the coil-stretch transition of flexible polymers. *Journal of Chemical Physics*, **2018**, 148, 094903	3.9	4
18	Bond fluctuation model of polymers in random media. *Journal of Chemical Physics*, **1998**, 109, 7011-7016	3.9	4
17	Polymer extension under flow: Some statistical properties of the work distribution function. *Journal of Chemical Physics*, **2016**, 145, 204901	3.9	4
16	Brownian motion under dynamic disorder: effects of memory on the decay of the non-Gaussianity parameter. *Journal of Statistical Mechanics: Theory and Experiment*, **2018**, 2018, 033211	1.9	3
15	Fluctuation relations for flow-driven trapped colloids and implications for related polymeric systems. *European Physical Journal B*, **2019**, 92, 1	1.2	3
14	Semiflexible random A**B** block copolymers under tension. *Journal of Chemical Physics*, **2003**, 118, 1970-1978	3.9	3
13	Conformational properties of randomly flexible heteropolymers. *Journal of Chemical Physics*, **2002**, 116, 4330-4338	3.9	3

12	The effects of slit-like confinement on flow-induced polymer deformation. *Journal of Chemical Physics*, **2017**, 147, 064905	3.9	2
11	Quantum correction factors for multiphonon processes in condensed phase vibrational relaxation. *Journal of Chemical Physics*, **2001**, 115, 5536-5545	3.9	2
10	Stochastic thermodynamics of a harmonically trapped colloid in linear mixed flow. *Physical Review E* , **2019**, 100, 052124	2.4	2
9	Enhancement of target location rates by stochastic modulation of Brownian motion. *Journal of Statistical Mechanics: Theory and Experiment*, **2018**, 2018, 063208	1.9	1
8	Michaelis and Menten at 100: Still going strong **2013**, 18, 969-995		1
7	An integral representation of isolated binary collisions in vibrational relaxation. *Journal of Chemical Physics*, **1999**, 111, 6471-6473	3.9	1
6	Thermodynamic asymmetries in dual-temperature Brownian dynamics. *Journal of Statistical Mechanics: Theory and Experiment*, **2020**, 2020, 113204	1.9	1
5	Particle dynamics in viscoelastic media: Effects of non-thermal white noise on barrier crossing rates.. *Journal of Chemical Physics*, **2021**, 155, 244903	3.9	1
4	The relaxation dynamics of single flow-stretched polymers in semidilute to concentrated solutions. *Journal of Chemical Physics*, **2021**, 154, 024907	3.9	0
3	Dynamics of the reaction between the free end of a tethered self-avoiding polymer and a flat penetrable surface: a renormalization group study. *Journal of Chemical Physics*, **2014**, 140, 234902	3.9	
2	Entropy and the direction of natural change **2001**, 6, 82-93		
1	The Different Dimensions of Dimensional Analysis **2018**, 23, 641-661		