Rajarshi Chakrabarti

List of Publications by Year
in descending order

58	1,125	394421	477307
papers	citations	19 h-index	29 g-index

66	66	66	1169
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Variable G protein determinants of GPCR coupling selectivity. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12054-12059.	7.1	111
2	Chain reconfiguration in active noise. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 195601.	2.1	59
3	Tracer diffusion in a sea of polymers with binding zones: mobile vs. frozen traps. Soft Matter, 2016, 12, 8554-8563.	2.7	54
4	Enhanced diffusion, swelling, and slow reconfiguration of a single chain in non-Gaussian active bath. Journal of Chemical Physics, 2019, 150, 094902.	3.0	52
5	Entropy production and work fluctuation relations for a single particle in active bath. Physica A: Statistical Mechanics and Its Applications, 2018, 511, 302-315.	2.6	51
6	Effects of active fluctuations on energetics of a colloidal particle: Superdiffusion, dissipation and entropy production. Physica A: Statistical Mechanics and Its Applications, 2019, 530, 121574.	2.6	49
7	Transport of probe particles in a polymer network: effects of probe size, network rigidity and probeâ€“polymer interaction. Soft Matter, 2019, 15, 8992-9002.	2.7	39
8	How Do Branched Detergents Stabilize GPCRs in Micelles?. Biochemistry, 2020, 59, 2125-2134.	2.5	37
9	Escape of a passive particle from an activity-induced energy landscape: emergence of slow and fast effective diffusion. Soft Matter, 2020, 16, 7103-7115.	2.7	33
10	A universal allosteric mechanism for G protein activation. Molecular Cell, 2021, 81, 1384-1396.e6.	9.7	33
11	Structural instability and divergence from conserved residues underlie intracellular retention of mammalian odorant receptors. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2957-2967.	7.1	27
12	Azadirachtin inhibits amyloid formation, disaggregates pre-formed fibrils and protects pancreatic Î²-cells from human islet amyloid polypeptide/amylin-induced cytotoxicity. Biochemical Journal, 2019, 476, 889-907.	3.7	26
13	Translational and rotational dynamics of a self-propelled Janus probe in crowded environments. Soft Matter, 2020, 16, 8482-8491.	2.7	26
14	Probing the Salt Concentration Dependent Nucleobase Distribution in a Single-Stranded DNAâ€“Single-Walled Carbon Nanotube Hybrid with Molecular Dynamics. Journal of Physical Chemistry B, 2016, 120, 455-466.	2.6	25
15	Choline Chloride as a Nanoâ€Crowder Protects HPâ€36 from Ureaâ€Induced Denaturation: Insights from Solvent Dynamics and Proteinâ€Solvent Interactions. ChemPhysChem, 2020, 21, 552-567.	2.1	25
16	Ammonium based stabilizers effectively counteract urea-induced denaturation in a small protein: insights from molecular dynamics simulations. RSC Advances, 2017, 7, 52888-52906.	3.6	24
17	Can an ammonium-based room temperature ionic liquid counteract the urea-induced denaturation of a small peptide?. Physical Chemistry Chemical Physics, 2017, 19, 7772-7787.	2.8	23
18	Ion assisted structural collapse of a single stranded DNA: A molecular dynamics approach. Chemical Physics, 2015, 459, 137-147.	1.9	22

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19	Tracer diffusion in a crowded cylindrical channel. Physical Review E, 2013, 87, 062709.	2.1	21
20	Dynamics of end-to-end loop formation for an isolated chain in viscoelastic fluid. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 5326-5331.	2.6	19
21	Unzipping of Double-Stranded Ribonucleic Acids by Graphene and Single-Walled Carbon Nanotube: Helix Geometry versus Surface Curvature. Journal of Physical Chemistry C, 2016, 120, 22681-22693.	3.1	19
22	Looping and reconfiguration dynamics of a flexible chain with internal friction. AIP Advances, 2014, 4, .	1.3	18
23	Rate processes with dynamical disorder: A direct variational approach. Journal of Chemical Physics, 2006, 124, 204111.	3.0	17
24	Spontaneous Unzipping of Xylonucleic Acid Assisted by a Single-Walled Carbon Nanotube: A Computational Study. Journal of Physical Chemistry B, 2016, 120, 3642-3652.	2.6	17
25	Microscopic structural features of water in aqueousâ€“reline mixtures of varying compositions. Physical Chemistry Chemical Physics, 2021, 23, 3779-3793.	2.8	17
26	Salt Induced Structural Collapse, Swelling, and Signature of Aggregation of Two ssDNA Strands: Insights from Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2019, 123, 47-56.	2.6	16
27	Polymer-mediated spatial organization of nanoparticles in dense melts: Transferability and an effective one-component approach. Journal of Chemical Physics, 2010, 133, 144905.	3.0	15
28	Dynamics of end-to-end loop formation: A flexible chain in the presence of hydrodynamic interaction. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 4081-4087.	2.6	15
29	Machine Learning for Prioritization of Thermostabilizing Mutations for G-Protein Coupled Receptors. Biophysical Journal, 2019, 117, 2228-2239.	0.5	15
30	End to end loop formation in a single polymer chain with internal friction. Chemical Physics Letters, 2013, 582, 71-77.	2.6	13
31	Reconfiguration dynamics in folded and intrinsically disordered protein with internal friction: Effect of solvent quality and denaturant. Physica A: Statistical Mechanics and Its Applications, 2016, 450, 165-179.	2.6	13
32	Transport of a self-propelled tracer through a hairy cylindrical channel: interplay of stickiness and activity. Soft Matter, 2022, 18, 1310-1318.	2.7	12
33	Motion of an active particle with dynamical disorder. Soft Matter, 2022, 18, 2332-2345.	2.7	11
34	Exact analytical evaluation of time dependent transmission coefficient from the method of reactive flux for an inverted parabolic barrier. Journal of Chemical Physics, 2007, 126, 134106.	3.0	10
35	Packing correlations, collective scattering and compressibility of fractal-like aggregates in polymer nanocomposites and suspensions. Soft Matter, 2011, 7, 5397.	2.7	10
36	Diffusion in an elastic medium: A model for macromolecule transport across the nuclear pore complex. Physica A: Statistical Mechanics and Its Applications, 2014, 404, 65-78.	2.6	10

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37	Looping dynamics of a flexible chain with internal friction at different degrees of compactness. Physica A: Statistical Mechanics and Its Applications, 2015, 436, 377-386.	2.6	10
38	Engineering Salt Bridge Networks between Transmembrane Helices Confers Thermostability in G-Protein-Coupled Receptors. Journal of Chemical Theory and Computation, 2018, 14, 6574-6585.	5.3	10
39	Rheological consequences of wet and dry friction in a dumbbell model with hydrodynamic interactions and internal viscosity. Journal of Chemical Physics, 2018, 149, 094903.	3.0	10
40	In Silico Elucidation of Molecular Picture of Waterâ€“Choline Chloride Mixture. Journal of Physical Chemistry B, 2021, 125, 13212-13228.	2.6	10
41	Wet and dry internal friction can be measured with the Jarzynski equality. Physical Review Research, 2020, 2, .	3.6	9
42	Effect of Stapling on the Thermodynamics of mdm2â€“p53 Binding. Journal of Chemical Information and Modeling, 2021, 61, 1989-2000.	5.4	8
43	Stochastic resetting and first arrival subjected to Gaussian noise and Poisson white noise. Physical Review E, 2021, 104, 034113.	2.1	8
44	Chemically symmetric and asymmetric self-driven rigid dumbbells in a 2D polymer gel. Soft Matter, 2022, 18, 2663-2671.	2.7	8
45	Computational design of stapled peptide inhibitor against <scp>SARSâ€CoV</scp>â€2 receptor binding domain. Peptide Science, 2022, 114, e24267.	1.8	8
46	A lower bound to the survival probability and an approximate first passage time distribution for Markovian and non-Markovian dynamics in phase space. Journal of Chemical Physics, 2009, 131, 224504.	3.0	6
47	Dynamical disorder in presence of exponential sink. Chemical Physics Letters, 2010, 495, 60-62.	2.6	6
48	Molecular dynamics simulation elucidates the preferential binding affinity of sodium and tetramethylammonium ions for tetrameric Nafion unit under aqueous conditions. RSC Advances, 2016, 6, 97961-97968.	3.6	6
49	Thermodynamics of site-specific small molecular ion interactions with DNA duplex: a molecular dynamics study. Molecular Simulation, 2016, 42, 715-724.	2.0	6
50	Bubble dynamics in double stranded DNA: A Rouse chain based approach. Chemical Physics Letters, 2011, 502, 107-111.	2.6	5
51	Prediction of Conformation Specific Thermostabilizing Mutations for Class A G Protein-Coupled Receptors. Journal of Chemical Information and Modeling, 2019, 59, 3744-3754.	5.4	5
52	Transient state work fluctuation theorem for a classical harmonic oscillator linearly coupled to a harmonic bath. Pramana - Journal of Physics, 2009, 72, 665-677.	1.8	4
53	Directing the Diffusion of a Nonmagnetic Nanosized Active Particle with External Magnetic Fields. Journal of Physical Chemistry B, 2020, 124, 8188-8197.	2.6	4
54	Sequence coevolution and structure stabilization modulate olfactory receptor expression. Biophysical Journal, 2022, 121, 830-840.	0.5	4

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55	Rouse model with fluctuating internal friction. Journal of Rheology, 2021, 65, 903-923.	2.6	3
56	How important are fluctuations in the treatment of internal friction in polymers?. Soft Matter, 2021, 17, 7133-7157.	2.7	3
57	How does the tail length and the separation between the tagged monomers influence the reconfiguration of a chain with internal friction for different solvent-quality?. Journal of Physics: Conference Series, 2016, 759, 012014.	0.4	1
58	A Universal Allosteric Mechanism for G Protein Activation. SSRN Electronic Journal, 0, , .	0.4	0