Parbati Biswas

List of Publications by Citations

81 papers	1,163 citations	18 h-index	31 g-index
89 ext. papers	1,304 ext. citations	3.5 avg, IF	4.84 L-index

#	Paper	IF	Citations
81	Dynamics of Entangled H-Polymers: Theory, Rheology, and Neutron-Scattering. *Macromolecules*, **1999**, 32, 6734-6758	5.5	241
80	Polymer dynamics and topology: Extension of stars and dendrimers in external fields. *Macromolecular Theory and Simulations*, **2000**, 9, 56-67	1.5	71
79	Stretch dynamics of flexible dendritic polymers in solution. *Journal of Chemical Physics*, **2001**, 114, 2430-2441	3.9	66
78	Radial dimensions of starburst polymers. *Journal of Chemical Physics*, **1994**, 100, 3201-3209	3.9	44
77	Diffusion of Hydration Water around Intrinsically Disordered Proteins. *Journal of Physical Chemistry B*, **2015**, 119, 13262-70	3.4	39
76	Local Structure and Dynamics of Hydration Water in Intrinsically Disordered Proteins. *Journal of Physical Chemistry B*, **2015**, 119, 10858-67	3.4	34
75	Hydrodynamic effects on the extension of stars and dendrimers in external fields. *Macromolecular Theory and Simulations*, **2000**, 9, 608-620	1.5	34
74	Dynamics of Semiflexible Dendrimers in Dilute Solutions. *Macromolecules*, **2010**, 43, 7378-7385	5.5	31
73	Intramolecular relaxation dynamics in semiflexible dendrimers. *Journal of Chemical Physics*, **2011**, 134, 214901	3.9	30
72	Structure of hydration water in proteins: a comparison of molecular dynamics simulations and database analysis. *Biophysical Chemistry*, **2011**, 158, 73-80	3.5	29
71	Size, shape, and flexibility of proteins and DNA. *Journal of Chemical Physics*, **2009**, 131, 165104	3.9	28
70	Position-specific propensities of amino acids in the □strand. *BMC Structural Biology*, **2010**, 10, 29	2.7	27
69	Conformational Entropy of Intrinsically Disordered Proteins from Amino Acid Triads. *Scientific Reports*, **2015**, 5, 11740	4.9	26
68	Conformational transitions in semiflexible dendrimers induced by bond orientations. *Journal of Chemical Physics*, **2012**, 137, 124903	3.9	25
67	Hydrogen bond dynamics in intrinsically disordered proteins. *Journal of Physical Chemistry B*, **2014**, 118, 3018-25	3.4	22
66	Effect of varying chain length between P(1) and P(1)Wposition of tripeptidomimics on activity of angiotensin-converting enzyme inhibitors. *Bioorganic and Medicinal Chemistry Letters*, **2009**, 19, 4364-6	2.9	22
65	Statistical theory for protein ensembles with designed energy landscapes. *Journal of Chemical Physics*, **2005**, 123, 154908	3.9	19

64	Path integral description of polymers using fractional Brownian walks. *Journal of Chemical Physics*, **1993**, 99, 9230-9236	3.9	18
63	Effect of pH on Size and Internal Structure of Poly(propylene imine) Dendrimers: A Molecular Dynamics Simulation Study. *Journal of Physical Chemistry B*, **2018**, 122, 9250-9263	3.4	18
62	Orientational relaxation in semiflexible dendrimers. *Physical Chemistry Chemical Physics*, **2013**, 15, 20294-302	3.6	16
61	Salt-bridge dynamics in intrinsically disordered proteins: A trade-off between electrostatic interactions and structural flexibility. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2018**, 1866, 624-641	4	14
60	Hydrophobic moments, shape, and packing in disordered proteins. *Journal of Physical Chemistry B*, **2012**, 116, 6326-35	3.4	13
59	Shape, flexibility and packing of proteins and nucleic acids in complexes. *Physical Chemistry Chemical Physics*, **2011**, 13, 9632-43	3.6	13
58	Intramolecular relaxation of flexible dendrimers with excluded volume. *Journal of Chemical Physics*, **2014**, 141, 034902	3.9	11
57	Conformation and intramolecular relaxation dynamics of semiflexible randomly hyperbranched polymers. *Journal of Chemical Physics*, **2013**, 138, 104902	3.9	11
56	Effect of 3-thienylalanine-ornithine-proline, new sulfur-containing angiotensin-converting enzyme inhibitor on blood pressure and oxidative stress in spontaneously hypertensive rats. *Journal of Cardiovascular Pharmacology*, **2009**, 53, 145-50	3.1	11
55	Hydration Water Distribution around Intrinsically Disordered Proteins. *Journal of Physical Chemistry B*, **2018**, 122, 4206-4218	3.4	10
54	Statistical theory of protein sequence design by random mutation. *Journal of Physical Chemistry B*, **2009**, 113, 5520-7	3.4	10
53	Shapes of generalized random walks. *Journal of Chemical Physics*, **1996**, 104, 3360-3365	3.9	10
52	Dynamics of dendrimers with excluded volume: A comparison with experiments and simulations. *Journal of Rheology*, **2016**, 60, 111-120	4.1	10
51	Semiflexibility induced range of conformations in dendrimers. *Soft Matter*, **2013**, 9, 2375	3.6	9
50	Capturing molten globule state of α-lactalbumin through constant pH molecular dynamics simulations. *Journal of Chemical Physics*, **2013**, 138, 095101	3.9	9
49	Role of conformational heterogeneity on protein misfolding. *Soft Matter*, **2012**, 8, 4432	3.6	9
48	Statistical analysis and molecular dynamics simulations of ambivalent α-helices. *BMC Bioinformatics*, **2010**, 11, 519	3.6	9
47	Chain dimensions near the critical point. *Journal of Chemical Physics*, **1994**, 100, 4665-4673	3.9	9

46	Does lack of secondary structure imply intrinsic disorder in proteins? A sequence analysis. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2014**, 1844, 1827-34	4	8
45	Local order and mobility of water molecules around ambivalent helices. *Journal of Physical Chemistry B*, **2011**, 115, 12257-65	3.4	8
44	Designing misfolded proteins by energy landscaping. *Journal of Physical Chemistry B*, **2011**, 115, 113-9	3.4	8
43	Dynamics of Fractional Brownian Walks. *The Journal of Physical Chemistry*, **1995**, 99, 816-821		8
42	The role of site-directed point mutations in protein misfolding. *Physical Chemistry Chemical Physics*, **2014**, 16, 13964-73	3.6	7
41	Effect of excluded volume on the rheology and transport dynamics of randomly hyperbranched polymers. *Journal of Chemical Physics*, **2015**, 142, 174906	3.9	7
40	Effect of site-directed point mutations on protein misfolding: A simulation study. *Proteins: Structure, Function and Bioinformatics*, **2019**, 87, 760-773	4.2	6
39	Designing sequences with varied flexibility and stability through pair mutations. *RSC Advances*, **2014**, 4, 8031	3.7	6
38	Shape dependence of the radial distribution function of hydration water around proteins. *Journal of Physics Condensed Matter*, **2014**, 26, 335102	1.8	6
37	Are ambivalent □helices entropically driven?. *Protein Engineering, Design and Selection*, **2012**, 25, 73-9	1.9	6
36	Topology driven structural transition of dendrimers with a dimensional cross-over. *Polymer*, **2017**, 115, 118-127	3.9	5
35	Role of local and nonlocal interactions in folding and misfolding of globular proteins. *Journal of Chemical Physics*, **2017**, 146, 065102	3.9	5
34	Designing pH induced fold switch in proteins. *Journal of Chemical Physics*, **2015**, 142, 185102	3.9	5
33	Interaction Volume Is a Measure of the Aggregation Propensity of Amyloid-□*Journal of Physical Chemistry Letters*, **2020**, 11, 3993-4000	6.4	5
32	Globular-disorder transition in proteins: a compromise between hydrophobic and electrostatic interactions?. *Physical Chemistry Chemical Physics*, **2016**, 18, 23207-14	3.6	5
31	Unusual dynamics of hydration water around motor proteins with long-ranged hydrodynamic fluctuations. *Physica A: Statistical Mechanics and Its Applications*, **2019**, 534, 122045	3.3	5
30	Combinatorial design of protein sequences with applications to lattice and real proteins. *Journal of Chemical Physics*, **2009**, 131, 125101	3.9	5
29	Polymer dynamics and topology: Extension of stars and dendrimers in external fields **2000**, 9, 56		5

28	Orientational relaxation of ring polymers in dilute solutions. *Soft Matter*, **2019**, 15, 5896-5907	3.6	4
27	Helical ambivalency induced by point mutations. *BMC Structural Biology*, **2013**, 13, 9	2.7	4
26	Structural patterns in alpha helices and beta sheets in globular proteins. *Protein and Peptide Letters* , **2009**, 16, 953-60	1.9	4
25	Effect of Alzheimer's Disease Causative and Protective Mutations on the Hydration Environment of Amyloid-β. *Journal of Physical Chemistry B*, **2020**, 124, 2311-2322	3.4	3
24	Estimating the mean first passage time of protein misfolding. *Physical Chemistry Chemical Physics*, **2018**, 20, 5692-5698	3.6	3
23	Sulfur-containing angiotensin-converting enzyme inhibitor 3-thienylalanine-ornithyl-proline activates endothelial function and expression of genes involved in Renin-Angiotensin system. *Journal of Cardiovascular Pharmacology*, **2013**, 61, 311-7	3.1	3
22	Neutrality and evolvability of designed protein sequences. *Physical Review E*, **2010**, 82, 011906	2.4	3
21	Polymers below the theta point: Renormalization group considerations. *Journal of Chemical Physics*, **1995**, 103, 7562-7568	3.9	3
20	Conformational transitions of a DNA hairpin through transition path times. *Journal of Statistical Mechanics: Theory and Experiment*, **2020**, 2020, 073411	1.9	3
19	Theory for the Dynamics of Polymer Grafted Nanoparticle in Solution. *Journal of Physical Chemistry C*, **2019**, 123, 30657-30665	3.8	3
18	Hydrodynamic effects on the extension of stars and dendrimers in external fields **2000**, 9, 608		3
17	Effect of Correlated Pair Mutations in Protein Misfolding. *Journal of Physical Chemistry B*, **2019**, 123, 5069-5078	3.4	2
16	Hydration Thermodynamics of Familial Parkinson's Disease-Linked Mutants of α-Synuclein. *Journal of Chemical Information and Modeling*, **2021**, 61, 1850-1858	6.1	2
15	Intramolecular relaxation of ring polymers in dilute solutions. *Journal of Rheology*, **2021**, 65, 381-390	4.1	2
14	A generalized Langevin equation approach for barrier crossing dynamics in conformational transitions of proteins. *Journal of Statistical Mechanics: Theory and Experiment*, **2021**, 2021, 063502	1.9	2
13	Orientational Relaxation of Poly(propylene imine) Dendrimers at Different pH. *Journal of Physical Chemistry B*, **2020**, 124, 4193-4202	3.4	2
12	Hydration water dynamics around a protein surface: a first passage time approach. *Journal of Physics Condensed Matter*, **2018**, 30, 035101	1.8	2
11	Conformational properties of complexes of poly(propylene imine) dendrimers with linear polyelectrolytes in dilute solutions. *Journal of Chemical Physics*, **2020**, 153, 194902	3.9	1

10	Theoretical and computational advances in protein misfolding. *Advances in Protein Chemistry and Structural Biology*, **2019**, 118, 1-31	5.3	1
9	Conformations of poly(propylene imine) dendrimers in an ionic liquid at different pH. *Soft Matter*, **2020**, 16, 8400-8411	3.6	1
8	Effect of ligand binding on riboswitch folding: Theory and simulations. *Journal of Chemical Physics*, **2021**, 154, 185101	3.9	1
7	Conformations of ring polymers with excluded volume interactions. *Journal of Rheology*, **2021**, 65, 595-604	4.1	1
6	Segmental Mobility of Ring Polymers in Good and Poor Solvents. *Macromolecules*, **2022**, 55, 2182-2192	5.5	1
5	Conformational Transitions of Amyloid-A Langevin and Generalized Langevin Dynamics Simulation Study. *ACS Omega*, **2021**, 6, 13611-13619	3.9	0
4	Hydration Thermodynamics of the N-Terminal FAD Mutants of Amyloid-*Journal of Chemical Information and Modeling*, **2021**, 61, 298-310	6.1	0
3	Role of foldability and stability in designing real protein sequences. *Physical Chemistry Chemical Physics*, **2011**, 13, 9223-31	3.6	
2	Statistical theory of neutral protein evolution by random site mutations. *Journal of Chemical Sciences*, **2009**, 121, 887-896	1.8	
1	Predicting protein shelf lives from mean first passage times. *Chemical Physics Letters*, **2022**, 792, 139426	2.5	