Thomas R Weikl

List of Publications by Year
in descending order

77 papers	5,098 citations	109321 35 h-index	91884 69 g-index
82 all docs	82 docs citations	82 times ranked	5011 citing authors

#	Article	IF	Citations
1	The Protein Folding Problem. Annual Review of Biophysics, 2008, 37, 289-316.	10.0	916
2	Constructing the equilibrium ensemble of folding pathways from short off-equilibrium simulations. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 19011-19016.	7.1	730
3	The 2018 biomembrane curvature and remodeling roadmap. Journal Physics D: Applied Physics, 2018, 51, 343001.	2.8	212
4	The protein folding problem: when will it be solved?. Current Opinion in Structural Biology, 2007, 17, 342-346.	5.7	208
5	Wrapping of nanoparticles by membranes. Advances in Colloid and Interface Science, 2014, 208, 214-224.	14.7	186
6	Selectedâ€fit versus inducedâ€fit protein binding: Kinetic differences and mutational analysis. Proteins: Structure, Function and Bioinformatics, 2009, 75, 104-110.	2.6	144
7	Tubulation and Aggregation of Spherical Nanoparticles Adsorbed on Vesicles. Physical Review Letters, 2012, 109, 188102.	7.8	144
8	Interaction of conical membrane inclusions: Effect of lateral tension. Physical Review E, 1998, 57, 6988-6995.	2.1	140
9	Protein-peptide association kinetics beyond the seconds timescale from atomistic simulations. Nature Communications, 2017, 8, 1095.	12.8	137
10	Pattern Formation during T-Cell Adhesion. Biophysical Journal, 2004, 87, 3665-3678.	0.5	117
11	Binding constants of membrane-anchored receptors and ligands depend strongly on the nanoscale roughness of membranes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15283-15288.	7.1	117
12	Conformational selection in protein binding and function. Protein Science, 2014, 23, 1508-1518.	7.6	99
13	Adhesion of membranes via receptorâ€"ligand complexes: Domain formation, binding cooperativity, and active processes. Soft Matter, 2009, 5, 3213.	2.7	92
14	Folding Rates and Low-entropy-loss Routes of Two-state Proteins. Journal of Molecular Biology, 2003, 329, 585-598.	4.2	88
15	How to Distinguish Conformational Selection and Induced Fit Based on Chemical Relaxation Rates. PLoS Computational Biology, 2016, 12, e1005067.	3.2	74
16	Cooperative wrapping of nanoparticles by membrane tubes. Soft Matter, 2014, 10, 3570.	2.7	72
17	Binding cooperativity of membrane adhesion receptors. Soft Matter, 2009, 5, 3354.	2.7	71
18	The role of membrane curvature for the wrapping of nanoparticles. Soft Matter, 2016, 12, 581-587.	2.7	71

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19	Cooperativity in two-state protein folding kinetics. Protein Science, 2004, 13, 822-829.	7.6	66
20	Adhesion-induced phase behavior of multicomponent membranes. Physical Review E, 2001, 64, 011903.	2.1	65
21	Vesicles with multiple membrane domains. Soft Matter, 2011, 7, 6092.	2.7	65
22	Indirect interactions of membrane-adsorbed cylinders. European Physical Journal E, 2003, 12, 265-273.	1.6	60
23	Pattern formation during adhesion of multicomponent membranes. Europhysics Letters, 2002, 59, 916-922.	2.0	59
24	Adhesion of membranes with competing specific and generic interactions. European Physical Journal E, 2002, 8, 59-66.	1.6	55
25	Binding constants of membrane-anchored receptors and ligands: A general theory corroborated by Monte Carlo simulations. Journal of Chemical Physics, 2015, 143, 243136.	3.0	54
26	Folding Kinetics of Two-state Proteins: Effect of Circularization, Permutation, and Crosslinks. Journal of Molecular Biology, 2003, 332, 953-963.	4.2	51
27	Modeling nanoparticle wrapping or translocation in bilayer membranes. Nanoscale, 2015, 7, 14505-14514.	5.6	49
28	Fluctuation-induced aggregation of rigid membrane inclusions. Europhysics Letters, 2001, 54, 547-553.	2.0	45
29	Membrane fluctuations and acidosis regulate cooperative binding of â€œmarker of selfâ€•CD47 with macrophage checkpoint receptor SIRPÎ±. Journal of Cell Science, 2018, 132, .	2.0	45
30	Segregation of receptorâ€“ligand complexes in cell adhesion zones: phase diagrams and the role of thermal membrane roughness. New Journal of Physics, 2010, 12, 095003.	2.9	42
31	Curvature-Mediated Assembly of Janus Nanoparticles on Membrane Vesicles. Nano Letters, 2018, 18, 1259-1263.	9.1	41
32	Membrane-Mediated Cooperativity of Proteins. Annual Review of Physical Chemistry, 2018, 69, 521-539.	10.8	41
33	Unbinding transitions and phase separation of multicomponent membranes. Physical Review E, 2000, 62, R45-R48.	2.1	40
34	Â values in protein-folding kinetics have energetic and structural components. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10171-10175.	7.1	40
35	Lateral diffusion of receptor-ligand bonds in membrane adhesion zones: Effect of thermal membrane roughness. Europhysics Letters, 2007, 78, 38003.	2.0	38
36	Stable Patterns of Membrane Domains at Corrugated Substrates. Physical Review Letters, 2008, 100, 098103.	7.8	38

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37	Particle-based membrane model for mesoscopic simulation of cellular dynamics. Journal of Chemical Physics, 2018, 148, 044901.	3.0	33
38	Transition-States in Protein Folding Kinetics: The Structural Interpretation of Î¦ values. Journal of Molecular Biology, 2007, 365, 1578-1586.	4.2	32
39	Binding equilibrium and kinetics of membrane-anchored receptors and ligands in cell adhesion: Insights from computational model systems and theory. Cell Adhesion and Migration, 2016, 10, 576-589.	2.7	29
40	Line Tension and Stability of Domains in Cell-Adhesion Zones Mediated by Long and Short Receptor-Ligand Complexes. PLoS ONE, 2011, 6, e23284.	2.5	28
41	Binding kinetics of membrane-anchored receptors and ligands: Molecular dynamics simulations and theory. Journal of Chemical Physics, 2015, 143, 243137.	3.0	27
42	Adhesion of Membranes with Active Stickers. Physical Review Letters, 2006, 96, 048101.	7.8	25
43	Loop-closure principles in protein folding. Archives of Biochemistry and Biophysics, 2008, 469, 67-75.	3.0	24
44	Identifying Conformational-Selection and Induced-Fit Aspects in the Binding-Induced Folding of PMI from Markov State Modeling of Atomistic Simulations. Journal of Physical Chemistry B, 2018, 122, 5649-5656.	2.6	24
45	Membrane adhesion via competing receptor/ligand bonds. Europhysics Letters, 2006, 76, 703-709.	2.0	23
46	Domain formation in cholesterolâ€“phospholipid membranes exposed to adhesive surfaces or environments. Soft Matter, 2013, 9, 8438.	2.7	22
47	Two direct methods to calculate fluctuation forces between rigid objects embedded in fluid membranes. European Physical Journal E, 2001, 5, 423-439.	1.6	20
48	Conformational selection and induced changes along the catalytic cycle of <i>Escherichia coli</i> dihydrofolate reductase. Proteins: Structure, Function and Bioinformatics, 2012, 80, 2369-2383.	2.6	20
49	A simple measure of nativeâ€state topology and chain connectivity predicts the folding rates of twoâ€state proteins with and without crosslinks. Proteins: Structure, Function and Bioinformatics, 2006, 64, 193-197.	2.6	18
50	Membrane Morphologies Induced by Arc-Shaped Scaffolds Are Determined by Arc Angle and Coverage. Biophysical Journal, 2019, 116, 1239-1247.	0.5	18
51	Dynamic phase separation of fluid membranes with rigid inclusions. Physical Review E, 2002, 66, 061915.	2.1	17
52	Transition States in Protein Folding Kinetics: Modeling Î¦-Values of Small Î²-Sheet Proteins. Biophysical Journal, 2008, 94, 929-937.	0.5	17
53	How conformational changes can affect catalysis, inhibition and drug resistance of enzymes with induced-fit binding mechanism such as the HIV-1 protease. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2013, 1834, 867-873.	2.3	16
54	Local Adhesion of Membranes to Striped Surface Domains. Langmuir, 2000, 16, 9338-9346.	3.5	14

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55	Chapter 4 Membrane Adhesion and Domain Formation. Behavior Research Methods, 2006, , 63-127.	4.0	14
56	Loop-closure events during protein folding: Rationalizing the shape of Î¦-value distributions. Proteins: Structure, Function and Bioinformatics, 2005, 60, 701-711.	2.6	13
57	Substructural cooperativity and parallel versus sequential events during protein unfolding. Proteins: Structure, Function and Bioinformatics, 2006, 63, 1052-1058.	2.6	13
58	Effective surface interactions mediated by adhesive particles. Europhysics Letters, 2008, 84, 26004.	2.0	13
59	A litmus test for classifying recognition mechanisms of transiently binding proteins. Nature Communications, 2022, 13, .	12.8	13
60	Adhesion of membranes via switchable molecules. Physical Review E, 2006, 73, 061908.	2.1	12
61	Weak carbohydrateâ€"carbohydrate interactions in membrane adhesion are fuzzy and generic. Nanoscale, 2020, 12, 17342-17353.	5.6	10
62	Stochastic resonance for adhesion of membranes with active stickers. European Physical Journal E, 2007, 22, 97-106.	1.6	9
63	Adhesion-Induced Phase Behavior of Two-Component Membranes and Vesicles. International Journal of Molecular Sciences, 2013, 14, 2203-2229.	4.1	9
64	Membrane Tubulation by Elongated and Patchy Nanoparticles. Advanced Materials Interfaces, 2017, 4, 1600325.	3.7	9
65	In vivo folding efficiencies for mutants of the P22 tailspike Î²-helix protein correlate with predicted stability changes. Biophysical Chemistry, 2009, 141, 186-192.	2.8	7
66	Theoretical modeling of interactions at the bio-nano interface. Nanoscale, 2020, 12, 10426-10429.	5.6	7
67	Structural variability and concerted motions of the T cell receptor â€" CD3 complex. ELife, 2021, 10, .	6.0	7
68	Binding and segregation of proteins in membrane adhesion: theory, modeling, and simulations. Advances in Biomembranes and Lipid Self-Assembly, 2019, 30, 159-194.	0.6	6
69	Accessory mutations balance the marginal stability of the HIVâ€1 protease in drug resistance. Proteins: Structure, Function and Bioinformatics, 2020, 88, 476-484.	2.6	6
70	Membrane morphologies induced by mixtures of arc-shaped particles with opposite curvature. Soft Matter, 2021, 17, 268-275.	2.7	6
71	Direct Observation of Membrane Insertion by Enveloped Virus Matrix Proteins by Phosphate Displacement. PLoS ONE, 2013, 8, e57916.	2.5	5
72	On the relationship between docking scores and protein conformational changes in HIV-1 protease. Journal of Molecular Graphics and Modelling, 2019, 91, 186-193.	2.4	4

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73	Interplay of Trans- and Cis-Interactions of Glycolipids in Membrane Adhesion. Frontiers in Molecular Biosciences, 2021, 8, 754654.	3.5	4
74	Cooperative Stabilization of Close-Contact Zones Leads to Sensitivity and Selectivity in T-Cell Recognition. Cells, 2021, 10, 1023.	4.1	3
75	Adhesion of surfaces mediated by adsorbed particles: Monte Carlo simulations and a general relationship between adsorption isotherms and effective adhesion energies. Soft Matter, 2012, 8, 11737.	2.7	2
76	Adhesion of surfaces via particle adsorption: exact results for a lattice of fluid columns. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P11006.	2.3	1
77	Transition States in Protein Folding. Communications in Computational Physics, 2010, 7, 283-300.	1.7	0