Anatoly B Kolomeisky

List of Publications by Year
in descending order

241	8,188	50276	62596
papers	citations	46 h-index	80 g-index

263	263	263	5553
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Microscopic mechanisms of cooperative communications within single nanocatalysts. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	5
2	<scp>DLPacker</scp>: Deep learning for prediction of amino acid side chain conformations in proteins. Proteins: Structure, Function and Bioinformatics, 2022, 90, 1278-1290.	2.6	24
3	Theoretical study of active secondary transport: Unexpected differences in molecular mechanisms for antiporters and symporters. Journal of Chemical Physics, 2022, 156, 085102.	3.0	3
4	Power of stochastic kinetic models: From biological signaling and antibiotic activities to T cell activation and cancer initiation dynamics. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2022, 12, .	14.6	3
5	The energy cost and optimal design of networks for biological discrimination. Journal of the Royal Society Interface, 2022, 19, 20210883.	3.4	10
6	Formation of cellular close-ended tunneling nanotubes through mechanical deformation. Science Advances, 2022, 8, eabj3995.	10.3	16
7	Optimal pathways control fixation of multiple mutations during cancer initiation. Biophysical Journal, 2022, 121, 3698-3705.	0.5	5
8	How Pioneer Transcription Factors Search for Target Sites on Nucleosomal DNA. Journal of Physical Chemistry B, 2022, 126, 4061-4068.	2.6	8
9	The role of extended range of interactions in the dynamics of interacting molecular motors. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 255601.	2.1	1
10	Light-activated molecular machines are fast-acting broad-spectrum antibacterials that target the membrane. Science Advances, 2022, 8, .	10.3	28
11	Understanding Mechanisms of Secondary Active Transport by Analyzing the Effects of Mutations and Stoichiometry. Journal of Physical Chemistry Letters, 2022, 13, 5405-5412.	4.6	0
12	(Digital Presentation) Realistic Molecular Dynamics Modeling of ssDNA/SWCNT Hybrids. ECS Meeting Abstracts, 2022, MA2022-01, 715-715.	0.0	0
13	Discrete-state stochastic kinetic models for target DNA search by proteins: Theory and experimental applications. Biophysical Chemistry, 2021, 269, 106521.	2.8	14
14	Understanding the molecular mechanisms of transcriptional bursting. Physical Chemistry Chemical Physics, 2021, 23, 21399-21406.	2.8	3
15	DNA Looping and DNA Conformational Fluctuations Can Accelerate Protein Target Search. Journal of Physical Chemistry B, 2021, 125, 1727-1734.	2.6	9
16	Theoretical Analysis Reveals the Cost and Benefit of Proofreading in Coronavirus Genome Replication. Journal of Physical Chemistry Letters, 2021, 12, 2691-2698.	4.6	4
17	Mesoscopic protein-rich clusters host the nucleation of mutant p53 amyloid fibrils. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
18	Charge-Free, Stabilizing Amideâ^'Ï€ Interactions Can Be Used to Control Collagen Triple-Helix Self-Assembly. Biomacromolecules, 2021, 22, 2137-2147.	5.4	16

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19	DNA Looping Mediated by Site-Specific Sfilâ€“DNA Interactions. Journal of Physical Chemistry B, 2021, 125, 4645-4653.	2.6	6
20	Long-Range Supercoiling-Mediated RNA Polymerase Cooperation in Transcription. Journal of Physical Chemistry B, 2021, 125, 4692-4700.	2.6	10
21	(Invited) Computational Simulations of Selective Interactions between ssDNA and SWCNTs. ECS Meeting Abstracts, 2021, MA2021-01, 582-582.	0.0	0
22	Crowding breaks the forward/backward symmetry of transition times in biased random walks. Journal of Chemical Physics, 2021, 154, 204104.	3.0	2
23	Temporal order of mutations influences cancer initiation dynamics. Physical Biology, 2021, 18, 056002.	1.8	10
24	Molecular Mechanisms of Active Transport in Antiporters: Kinetic Constraints and Efficiency. Journal of Physical Chemistry Letters, 2021, 12, 9588-9594.	4.6	3
25	Single-cell stochastic modelling of the action of antimicrobial peptides on bacteria. Journal of the Royal Society Interface, 2021, 18, 20210392.	3.4	1
26	Surface-facilitated trapping by active sites: From catalysts to viruses. Journal of Chemical Physics, 2021, 155, 184106.	3.0	1
27	Steady-State Dynamics of Exclusion Process with Local Reversible Association of Particles. Journal of Statistical Physics, 2021, 185, 1.	1.2	0
28	A general theoretical framework to design base editors with reduced bystander effects. Nature Communications, 2021, 12, 6529.	12.8	10
29	Understanding the Reaction Dynamics on Heterogeneous Catalysts Using a Simple Stochastic Approach. Journal of Physical Chemistry Letters, 2021, , 11802-11810.	4.6	6
30	Molecular Model for the Surface-Catalyzed Protein Self-Assembly. Journal of Physical Chemistry B, 2020, 124, 366-372.	2.6	13
31	Role of Intrinsically Disordered Regions in Acceleration of Proteinâ€“Protein Association. Journal of Physical Chemistry B, 2020, 124, 20-27.	2.6	8
32	Stochastic Mechanisms of Cell-Size Regulation in Bacteria. Journal of Physical Chemistry Letters, 2020, 11, 8777-8782.	4.6	4
33	Single C-to-T substitution using engineered APOBEC3G-nCas9 base editors with minimum genome- and transcriptome-wide off-target effects. Science Advances, 2020, 6, eaba1773.	10.3	55
34	Relaxation Times of Ligand-Receptor Complex Formation Control T Cell Activation. Biophysical Journal, 2020, 119, 182-189.	0.5	5
35	Asymmetry of forward/backward transition times as a non-equilibrium measure of complexity of microscopic mechanisms. Journal of Chemical Physics, 2020, 153, 124103.	3.0	5
36	Dye Quenching of Carbon Nanotube Fluorescence Reveals Structure-Selective Coating Coverage. ACS Nano, 2020, 14, 12148-12158.	14.6	15

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37	Different time scales in dynamic systems with multiple outcomes. Journal of Chemical Physics, 2020, 153, 054107.	3.0	3
38	Do We Understand the Mechanisms Used by Biological Systems to Correct Their Errors?. Journal of Physical Chemistry B, 2020, 124, 9289-9296.	2.6	9
39	Trade-Offs between Speed, Accuracy, and Dissipation in tRNA^{Ile} Aminoacylation. Journal of Physical Chemistry Letters, 2020, 11, 4001-4007.	4.6	8
40	Direct detection of molecular intermediates from first-passage times. Science Advances, 2020, 6, eaaz4642.	10.3	26
41	Theoretical Investigations of the Dynamics of Chemical Reactions on Nanocatalysts with Multiple Active Sites. Journal of Physical Chemistry Letters, 2020, 11, 2330-2335.	4.6	9
42	The effect of obstacles in multi-site protein target search with DNA looping. Journal of Chemical Physics, 2020, 152, 025101.	3.0	7
43	A Mechanochemical Model of Transcriptional Bursting. Biophysical Journal, 2020, 118, 1213-1220.	0.5	9
44	Kinetic control of stationary flux ratios for a wide range of biochemical processes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8884-8889.	7.1	5
45	The role of dynamic defects in transport of interacting molecular motors. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 043206.	2.3	9
46	Biased Random Walk in Crowded Environment: Breaking Uphill/Downhill Symmetry of Transition Times. Journal of Physical Chemistry Letters, 2020, 11, 4530-4535.	4.6	9
47	Effect of local dissociations in bidirectional transport of driven particles. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 113202.	2.3	8
48	Theoretical study of network junction models for totally asymmetric exclusion processes with interacting particles. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 083202.	2.3	5
49	Enhancing silica surface deprotonation by using magnetic nanoparticles as heating agents. Journal Physics D: Applied Physics, 2019, 52, 465001.	2.8	8
50	Theoretical Analysis of Run Length Distributions for Coupled Motor Proteins. Journal of Physical Chemistry B, 2019, 123, 5805-5813.	2.6	8
51	The effect of local dissociation on dynamics of interacting molecular motors. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 365001.	2.1	6
52	Unveiling Molecular Mechanisms of Kinesin-5 Function using Multiscale Computational Techniques. Biophysical Journal, 2019, 116, 409a.	0.5	0
53	Target search on DNA by interacting molecules: First-passage approach. Journal of Chemical Physics, 2019, 151, 125101.	3.0	10
54	Facilitation of DNA loop formation by proteinâ€“DNA non-specific interactions. Soft Matter, 2019, 15, 5255-5263.	2.7	6

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55	Kinetic network model to explain gain-of-function mutations in ERK2 enzyme. Journal of Chemical Physics, 2019, 150, 155101.	3.0	4
56	Theoretical insights into mechanisms of channel-facilitated molecular transport in the presence of stochastic gating. Journal of Chemical Physics, 2019, 150, 124111.	3.0	3
57	Trade-Offs between Error, Speed, Noise, and Energy Dissipation in Biological Processes with Proofreading. Journal of Physical Chemistry B, 2019, 123, 4718-4725.	2.6	33
58	Theoretical investigation of stochastic clearance of bacteria: first-passage analysis. Journal of the Royal Society Interface, 2019, 16, 20180765.	3.4	15
59	Anomalous Dense Liquid Condensates Host the Nucleation of Tumor Suppressor p53 Fibrils. IScience, 2019, 12, 342-355.	4.1	46
60	Elucidating the correlations between cancer initiation times and lifetime cancer risks. Scientific Reports, 2019, 9, 18940.	3.3	11
61	Surface-Assisted Dynamic Search Processes. Journal of Physical Chemistry B, 2018, 122, 2243-2250.	2.6	9
62	Effect of interactions for one-dimensional asymmetric exclusion processes under periodic and bath-adapted coupling environment. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 043205.	2.3	23
63	Theoretical Investigations of the Role of Mutations in Dynamics of Kinesin Motor Proteins. Journal of Physical Chemistry B, 2018, 122, 4653-4661.	2.6	3
64	Theoretical Investigation of Distributions of Run Lengths for Biological Molecular Motors. Journal of Physical Chemistry B, 2018, 122, 3272-3279.	2.6	9
65	Physical-chemical mechanisms of pattern formation during gastrulation. Journal of Chemical Physics, 2018, 148, 123302.	3.0	3
66	Dynamics of relaxation to a stationary state for interacting molecular motors. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 015601.	2.1	3
67	Molecular search with conformational change: One-dimensional discrete-state stochastic model. Journal of Chemical Physics, 2018, 149, 174104.	3.0	15
68	First-passage processes on a filamentous track in a dense traffic: optimizing diffusive search for a target in crowding conditions. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 123209.	2.3	14
69	Theoretical Investigation of Transcriptional Bursting: A Multistate Approach. Journal of Physical Chemistry B, 2018, 122, 11969-11977.	2.6	15
70	Molecular mechanisms of the interhead coordination by interhead tension in cytoplasmic dyneins. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10052-10057.	7.1	13
71	Isonitriles as Stereoelectronic Chameleons: The Donorâ€“Acceptor Dichotomy in Radical Additions. Journal of the American Chemical Society, 2018, 140, 14272-14288.	13.7	53
72	Interactions in nonconserving driven diffusive systems. Physical Review E, 2018, 98, .	2.1	12

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73	Discrete-State Stochastic Modeling of Morphogen Gradient Formation. Methods in Molecular Biology, 2018, 1863, 199-221.	0.9	0
74	Mechanisms of Protein Search for Targets on DNA: Theoretical Insights. Molecules, 2018, 23, 2106.	3.8	34
75	Theoretical investigations of asymmetric simple exclusion processes for interacting oligomers. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 053209.	2.3	11
76	Elucidating interplay of speed and accuracy in biological error correction. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5183-5188.	7.1	75
77	Current-Generating Double-Layer Shoe with a Porous Sole: Ion Transport Matters. Journal of Physical Chemistry C, 2017, 121, 7584-7595.	3.1	13
78	On the Mechanism of Homology Search by RecA Protein Filaments. Biophysical Journal, 2017, 112, 859-867.	0.5	11
79	Cooperativity of Kinesin Motor Proteins under External Loads. Biophysical Journal, 2017, 112, 426a.	0.5	0
80	Accuracy of Substrate Selection by Enzymes Is Controlled by Kinetic Discrimination. Journal of Physical Chemistry Letters, 2017, 8, 1552-1556.	4.6	16
81	Mechanism of Genome Interrogation: How CRISPR RNA-Guided Cas9 Proteins Locate Specific Targets on DNA. Biophysical Journal, 2017, 113, 1416-1424.	0.5	9
82	Molecular origin of the weak susceptibility of kinesin velocity to loads and its relation to the collective behavior of kinesins. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8611-E8617.	7.1	32
83	Molecular machines open cell membranes. Nature, 2017, 548, 567-572.	27.8	257
84	The effect of side motion in the dynamics of interacting molecular motors. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 073202.	2.3	13
85	How Viruses Enter Cells: A Story behind Bacteriophage T4. Biophysical Journal, 2017, 113, 4-5.	0.5	2
86	Optimal Length of Conformational Transition Region in Protein Search for Targets on DNA. Journal of Physical Chemistry Letters, 2017, 8, 4049-4054.	4.6	11
87	Dependence of the Enzymatic Velocity on the Substrate Dissociation Rate. Journal of Physical Chemistry B, 2017, 121, 3437-3442.	2.6	18
88	A deterministic model for one-dimensional excluded flow with local interactions. PLoS ONE, 2017, 12, e0182074.	2.5	5
89	A Two-Step Method for smFRET Data Analysis. Journal of Physical Chemistry B, 2016, 120, 7128-7132.	2.6	16
90	The Role of DNA Looping in the Search for Specific Targets on DNA by Multisite Proteins. Journal of Physical Chemistry Letters, 2016, 7, 5022-5027.	4.6	15

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91	Protein Search for Multiple Targets on DNA. Biophysical Journal, 2016, 110, 236a.	0.5	0
92	Current-generating â€˜double layer shoeâ€™ with a porous sole. Journal of Physics Condensed Matter, 2016, 28, 464009.	1.8	7
93	Channel-facilitated molecular transport: The role of strength and spatial distribution of interactions. Chemical Physics, 2016, 481, 34-41.	1.9	2
94	Theoretical Investigation of the Mechanisms of ERK2 Enzymatic Catalysis. Journal of Physical Chemistry B, 2016, 120, 10508-10514.	2.6	3
95	DNA sequencing by nanopores: advances and challenges. Journal Physics D: Applied Physics, 2016, 49, 413001.	2.8	40
96	How conformational dynamics influences the protein search for targets on DNA. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 444004.	2.1	18
97	Mechanisms of the formation of biological signaling profiles. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 483001.	2.1	15
98	Crowding on DNA in Protein Search for Targets. Journal of Physical Chemistry Letters, 2016, 7, 2502-2506.	4.6	35
99	Development of Morphogen Gradients with Spatially Varying Degradation Rates. Journal of Physical Chemistry B, 2016, 120, 2745-2750.	2.6	7
100	Role of Static and Dynamic Obstacles in the Protein Search for Targets on DNA. Journal of Physical Chemistry B, 2016, 120, 5802-5809.	2.6	24
101	Turning On and Off Photoinduced Electron Transfer in Fluorescent Proteins by Ï€-Stacking, Halide Binding, and Tyr145 Mutations. Journal of the American Chemical Society, 2016, 138, 4807-4817.	13.7	52
102	New Model for Understanding Mechanisms of Biological Signaling: Direct Transport via Cytonemes. Journal of Physical Chemistry Letters, 2016, 7, 180-185.	4.6	19
103	Entropy production in mesoscopic stochastic thermodynamics: nonequilibrium kinetic cycles driven by chemical potentials, temperatures, and mechanical forces. Journal of Physics Condensed Matter, 2016, 28, 153004.	1.8	36
104	Collective dynamics of processive cytoskeletal motors. Soft Matter, 2016, 12, 14-21.	2.7	55
105	Molecular Motors: A Theoristâ€™s Perspective. , 2016, , 297-321.		0
106	Kinetic Mechanisms of Target Location by Inducible Transcription Factor Egr-1. Biophysical Journal, 2015, 108, 76a.	0.5	0
107	Theoretical analysis of degradation mechanisms in the formation of morphogen gradients. Journal of Chemical Physics, 2015, 143, 025102.	3.0	6
108	Protein search for multiple targets on DNA. Journal of Chemical Physics, 2015, 143, 105102.	3.0	22

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109	Sequence heterogeneity accelerates protein search for targets on DNA. Journal of Chemical Physics, 2015, 143, 245101.	3.0	29
110	Hydrolysis of Guanosine Triphosphate (GTP) by the RasÂ·GAP Protein Complex: Reaction Mechanism and Kinetic Scheme. Journal of Physical Chemistry B, 2015, 119, 12838-12845.	2.6	50
111	Theoretical analysis of dynamic processes for interacting molecular motors. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 065001.	2.1	59
112	Protein-Assisted DNA Looping: A Delicate Balance among Interactions, Mechanics, and Entropy. Biophysical Journal, 2015, 109, 459-460.	0.5	2
113	Correlations and symmetry of interactions influence collective dynamics of molecular motors. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P04013.	2.3	41
114	The Role of Multifilament Structures and Lateral Interactions in Dynamics of Cytoskeleton Proteins and Assemblies. Journal of Physical Chemistry B, 2015, 119, 4653-4661.	2.6	12
115	Dynamics of the Protein Search for Targets on DNA in the Presence of Traps. Journal of Physical Chemistry B, 2015, 119, 12410-12416.	2.6	24
116	Staying Together: Protein Molecules in Mesoscopic Clusters. Biophysical Journal, 2015, 109, 1759-1760.	0.5	2
117	Theoretical analysis of selectivity mechanisms in molecular transport through channels and nanopores. Journal of Chemical Physics, 2015, 142, 044705.	3.0	15
118	The role of source delocalization in the development of morphogen gradients. Physical Biology, 2015, 12, 026006.	1.8	7
119	Unimolecular Submersible Nanomachines. Synthesis, Actuation, and Monitoring. Nano Letters, 2015, 15, 8229-8239.	9.1	47
120	Molecular Motor Dynamics, Modeling. , 2015, , 961-965.		0
121	Development of morphogen gradient: The role of dimension and discreteness. Journal of Chemical Physics, 2014, 140, 085102.	3.0	13
122	Pathway structure determination in complex stochastic networks with non-exponential dwell times. Journal of Chemical Physics, 2014, 140, 184102.	3.0	6
123	Unveiling the hidden structure of complex stochastic biochemical networks. Journal of Chemical Physics, 2014, 140, 064101.	3.0	13
124	Theoretical Analysis of Microtubule Dynamics at All Times. Journal of Physical Chemistry B, 2014, 118, 13777-13784.	2.6	10
125	Positive and negative impacts of nonspecific sites during target location by a sequence-specific DNA-binding protein: origin of the optimal search at physiological ionic strength. Nucleic Acids Research, 2014, 42, 7039-7046.	14.5	65
126	Single-Molecule FRET Studies of HIV TARâ€“DNA Hairpin Unfolding Dynamics. Journal of Physical Chemistry B, 2014, 118, 12130-12139.	2.6	18

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127	A New Theoretical Approach to Analyze Complex Processes in Cytoskeleton Proteins. Journal of Physical Chemistry B, 2014, 118, 2966-2972.	2.6	4
128	Stochastic Kinetics on Networks: When Slow Is Fast. Journal of Physical Chemistry B, 2014, 118, 10419-10425.	2.6	3
129	Dissecting the Effect of Morphology on the Rates of Singlet Fission: Insights from Theory. Journal of Physical Chemistry C, 2014, 118, 19608-19617.	3.1	80
130	A Simple Kinetic Model for Singlet Fission: A Role of Electronic and Entropic Contributions to Macroscopic Rates. Journal of Physical Chemistry C, 2014, 118, 5188-5195.	3.1	116
131	Bulk induced phase transition in driven diffusive systems. Scientific Reports, 2014, 4, 5459.	3.3	41
132	Theoretical Analysis of Microtubules Dynamics Using a Physicalâ€“Chemical Description of Hydrolysis. Journal of Physical Chemistry B, 2013, 117, 9217-9223.	2.6	11
133	Analysis of Cooperative Behavior in Multiple Kinesins Motor Protein Transport by Varying Structural and Chemical Properties. Cellular and Molecular Bioengineering, 2013, 6, 38-47.	2.1	12
134	Mechanisms and topology determination of complex chemical and biological network systems from first-passage theoretical approach. Journal of Chemical Physics, 2013, 139, 144106.	3.0	30
135	Motor proteins and molecular motors: how to operate machines at the nanoscale. Journal of Physics Condensed Matter, 2013, 25, 463101.	1.8	85
136	Through the eye of the needle: recent advances in understanding biopolymer translocation. Journal of Physics Condensed Matter, 2013, 25, 413101.	1.8	50
137	Speed-Selectivity Paradox in the Protein Search for Targets on DNA: Is It Real or Not?. Journal of Physical Chemistry B, 2013, 117, 12695-12701.	2.6	85
138	Physics of protein motility and motor proteins. Journal of Physics Condensed Matter, 2013, 25, 370301.	1.8	1
139	Dynamics of force generation by confined actin filaments. Soft Matter, 2013, 9, 2389.	2.7	6
140	Measuring forces at the leading edge: a force assay for cell motility. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 22	1.3	18
141	Mechanisms of Protein Binding to DNA: Statistical Interactions are Important. Biophysical Journal, 2013, 104, 966-967.	0.5	4
142	Synthesis and Single-Molecule Imaging of Highly Mobile Adamantane-Wheeled Nanocars. ACS Nano, 2013, 7, 35-41.	14.6	79
143	All-time dynamics of continuous-time random walks on complex networks. Journal of Chemical Physics, 2013, 138, 084110.	3.0	4
144	Phase diagram structures in a periodic one-dimensional exclusion process. Physical Review E, 2013, 87, 012107.	2.1	39

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145	How to accelerate protein search on DNA: Location and dissociation. Journal of Chemical Physics, 2012, 136, 125101.	3.0	28
146	Charge Transfer and Chemisorption of Fullerene Molecules on Metal Surfaces: Application to Dynamics of Nanocars. Journal of Physical Chemistry C, 2012, 116, 13816-13826.	3.1	37
147	Unidirectional Rolling Motion of Nanocars Induced by Electric Field. Journal of Physical Chemistry C, 2012, 116, 22595-22601.	3.1	44
148	Random Hydrolysis Controls the Dynamic Instability of Microtubules. Biophysical Journal, 2012, 102, 1274-1283.	0.5	58
149	Random Hydrolysis Controls Dynamic Instability of Microtubules. Biophysical Journal, 2012, 102, 698a.	0.5	0
150	How the Interplay between Mechanical and Nonmechanical Interactions Affects Multiple Kinesin Dynamics. Journal of Physical Chemistry B, 2012, 116, 8846-8855.	2.6	23
151	Theoretical Analysis of Molecular Transport Across Membrane Channels and Nanopores. Biological and Medical Physics Series, 2012, , 297-308.	0.4	0
152	Molecular Dynamics Study of Crystalline Molecular Gyroscopes. Journal of Physical Chemistry C, 2011, 115, 13584-13591.	3.1	23
153	Dynamics of Single-Molecule Rotations on Surfaces that Depend on Symmetry, Interactions, and Molecular Sizes. Journal of Physical Chemistry C, 2011, 115, 125-131.	3.1	16
154	Formation of a Morphogen Gradient: Acceleration by Degradation. Journal of Physical Chemistry Letters, 2011, 2, 1502-1505.	4.6	30
155	A Micromechanical Model of Cargo Transport by Multiple Microtubule Motors. Biophysical Journal, 2011, 100, 121a.	0.5	0
156	Productive Cooperation among Processive Motors Depends Inversely on Their Mechanochemical Efficiency. Biophysical Journal, 2011, 101, 386-395.	0.5	74
157	On the Mechanism of Carborane Diffusion on a Hydrated Silica Surface. Journal of Physical Chemistry C, 2011, 115, 108-111.	3.1	13
158	Recursive Taylor Series Expansion Method for Rigid-Body Molecular Dynamics. Journal of Chemical Theory and Computation, 2011, 7, 3062-3071.	5.3	10
159	Physics of proteinâ€“DNA interactions: mechanisms of facilitated target search. Physical Chemistry Chemical Physics, 2011, 13, 2088-2095.	2.8	178
160	How Interactions Control Molecular Transport inÂChannels. Journal of Statistical Physics, 2011, 142, 1268-1276.	1.2	18
161	Spontaneous symmetry breaking on a mutiple-channel hollow cylinder. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 318-323.	2.1	11
162	Current reversal and exclusion processes with history-dependent random walks. Europhysics Letters, 2011, 95, 30004.	2.0	6

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163	Michaelisâ€“Menten relations for complex enzymatic networks. Journal of Chemical Physics, 2011, 134, 155101.	3.0	23
164	Polymer translocation through pores with complex geometries. Journal of Chemical Physics, 2010, 133, 024902.	3.0	17
165	Rigid-Body Molecular Dynamics of Fullerene-Based Nanocars on Metallic Surfaces. Journal of Chemical Theory and Computation, 2010, 6, 2581-2590.	5.3	38
166	Depolymerization of F-Actin Produces a Pulling Force At the Plasma Membrane in vivo. Biophysical Journal, 2010, 98, 19a.	0.5	0
167	Helix-Coil Kinetics of Individual Polyadenylic Acid Molecules in a Protein Channel. Physical Review Letters, 2010, 104, 158101.	7.8	23
168	Coupling between motor proteins determines dynamic behaviors of motor protein assemblies. Physical Chemistry Chemical Physics, 2010, 12, 10398.	2.8	60
169	Facilitated search of proteins on DNA: correlations are important. Physical Chemistry Chemical Physics, 2010, 12, 2999.	2.8	28
170	Continuous-time random walks at all times. Journal of Chemical Physics, 2009, 131, 234114.	3.0	4
171	Non-equilibrium dynamics of single polymer adsorption to solid surfaces. Journal of Physics Condensed Matter, 2009, 21, 242101.	1.8	24
172	Micrometer-Scale Translation and Monitoring of Individual Nanocars on Glass. ACS Nano, 2009, 3, 351-356.	14.6	69
173	Dynamics of Thioether Molecular Rotors: Effects of Surface Interactions and Chain Flexibility. Journal of Physical Chemistry C, 2009, 113, 10913-10920.	3.1	33
174	Dynamic properties of molecular motors in the divided-pathway model. Physical Chemistry Chemical Physics, 2009, 11, 4815.	2.8	9
175	How Polymers Translocate Through Pores: Memory is Important. Biophysical Journal, 2008, 94, 1547-1548.	0.5	11
176	Proteinâ^'DNA Interactions:â€‰ Reaching and Recognizing the Targets. Journal of Physical Chemistry B, 2008, 112, 4741-4750.	2.6	88
177	Molecular Dynamics of Surface-Moving Thermally Driven Nanocars. Journal of Chemical Theory and Computation, 2008, 4, 652-656.	5.3	81
178	Translational and Rotational Dynamics of Individual Single-Walled Carbon Nanotubes in Aqueous Suspension. ACS Nano, 2008, 2, 1770-1776.	14.6	58
179	Spatial Fluctuations Affect the Dynamics of Motor Proteins. Journal of Physical Chemistry B, 2008, 112, 11112-11121.	2.6	8
180	Inhomogeneous coupling in two-channel asymmetric simple exclusion processes. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 095002.	2.1	10

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181	Effect of charge distribution on the translocation of an inhomogeneously charged polymer through a nanopore. Journal of Chemical Physics, 2008, 128, 125104.	3.0	17
182	Parallel coupling of symmetric and asymmetric exclusion processes. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 465001.	2.1	27
183	Asymmetric exclusion processes with disorder: Effect of correlations. Physical Review E, 2008, 78, 061116.	2.1	31
184	Molecular motors interacting with their own tracks. Physical Review E, 2008, 77, 040901.	2.1	7
185	Interaction between motor domains can explain the complex dynamics of heterodimeric kinesins. Physical Review E, 2008, 77, 061912.	2.1	8
186	Effect of interactions on molecular fluxes and fluctuations in the transport across membrane channels. Journal of Chemical Physics, 2008, 128, 085101.	3.0	16
187	Discrete Stochastic Models of Single-Molecule Motor Proteins Dynamics. , 2008, , 313-335.		1
188	Translocation of polymers with folded configurations across nanopores. Journal of Chemical Physics, 2007, 127, 185103.	3.0	14
189	Spontaneous symmetry breaking in two-channel asymmetric exclusion processes with narrow entrances. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 2275-2286.	2.1	85
190	Dynamic properties of molecular motors in burnt-bridge models. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P08002-P08002.	2.3	2
191	Transport of molecular motor dimers in burnt-bridge models. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P12008-P12008.	2.3	8
192	Solutions of burnt-bridge models for molecular motor transport. Physical Review E, 2007, 75, 031910.	2.1	20
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