

Gleb Oshanin

List of Publications by Year in descending order

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151
papers

4,478
citations

76322

40
h-index

149686

56
g-index

152
all docs

152
docs citations

152
times ranked

2070
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral density of individual trajectories of an active Brownian particle. <i>New Journal of Physics</i> , 2022, 24, 013018.	2.9	10
2	Ionic liquids in conducting nanoslits: how important is the range of the screened electrostatic interactions?. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 26LT01.	1.8	4
3	Exact first-passage time distributions for three random diffusivity models. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 04LT01.	2.1	9
4	Time-dependence of the effective temperatures of a two-dimensional Brownian gyrator with cold and hot components. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 105002.	2.1	6
5	Exact distributions of the maximum and range of random diffusivity processes. <i>New Journal of Physics</i> , 2021, 23, 023014.	2.9	8
6	Superionic Liquids in Conducting Nanoslits: Insights from Theory and Simulations. <i>Journal of Physical Chemistry C</i> , 2021, 125, 4968-4976.	3.1	11
7	Recognition capabilities of a Hopfield model with auxiliary hidden neurons. <i>Physical Review E</i> , 2021, 103, L060401.	2.1	1
8	Binary lattice-gases of particles with soft exclusion: exact phase diagrams for tree-like lattices. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 385003.	2.1	0
9	A molecular relay race: sequential first-passage events to the terminal reaction centre in a cascade of diffusion controlled processes. <i>New Journal of Physics</i> , 2021, 23, 093004.	2.9	4
10	Distribution of first-reaction times with target regions on boundaries of shell-like domains. <i>New Journal of Physics</i> , 2021, 23, 123049.	2.9	7
11	Field-driven tracer diffusion through curved bottlenecks: fine structure of first passage events. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18414-18422.	2.8	7
12	Equilibrium properties of two-species reactive lattice gases on random catalytic chains. <i>Physical Review E</i> , 2020, 102, 032121.	2.1	1
13	Tracer diffusion on a crowded random Manhattan lattice. <i>New Journal of Physics</i> , 2020, 22, 033024.	2.9	10
14	Passive advection of fractional Brownian motion by random layered flows. <i>New Journal of Physics</i> , 2020, 22, 053052.	2.9	6
15	Universal spectral features of different classes of random-diffusivity processes. <i>New Journal of Physics</i> , 2020, 22, 063056.	2.9	32
16	From single-particle stochastic kinetics to macroscopic reaction rates: fastest first-passage time of N random walkers. <i>New Journal of Physics</i> , 2020, 22, 103004.	2.9	32
17	Covariance of the running range of a Brownian trajectory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2019, 52, 345003.	2.1	4
18	Single-trajectory spectral analysis of scaled Brownian motion. <i>New Journal of Physics</i> , 2019, 21, 073043.	2.9	36

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19	Special issue on transport in narrow channels. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 270201.	1.8	4
20	Spectral Content of a Single Non-Brownian Trajectory. <i>Physical Review X</i> , 2019, 9, .	8.9	65
21	Trapping of diffusing particles by periodic absorbing rings on a cylindrical tube. <i>Journal of Chemical Physics</i> , 2019, 150, 206101.	3.0	3
22	Polymer Translocation Across a Corrugated Channel: Fick's-Jacobs Approximation Extended Beyond the Mean First-Passage Time. <i>Polymers</i> , 2019, 11, 251.	4.5	14
23	Current-mediated synchronization of a pair of beating non-identical flagella. <i>New Journal of Physics</i> , 2019, 21, 033036.	2.9	9
24	Superionic liquids in conducting nanoslits: A variety of phase transitions and ensuing charging behavior. <i>Journal of Chemical Physics</i> , 2019, 151, 184105.	3.0	9
25	Full distribution of first exit times in the narrow escape problem. <i>New Journal of Physics</i> , 2019, 21, 122001.	2.9	50
26	Bath-mediated interactions between driven tracers in dense single files. <i>Physical Review Research</i> , 2019, 1, .	3.6	7
27	Order-disorder transitions in lattice gases with annealed reactive constraints. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2018, 2018, 043206.	2.3	5
28	Strong defocusing of molecular reaction times results from an interplay of geometry and reaction control. <i>Communications Chemistry</i> , 2018, 1, .	4.5	93
29	Power spectral density of a single Brownian trajectory: what one can and cannot learn from it. <i>New Journal of Physics</i> , 2018, 20, 023029.	2.9	62
30	Asymmetry relations and effective temperatures for biased Brownian gyrators. <i>Physical Review E</i> , 2018, 98, .	2.1	22
31	Tracer diffusion in crowded narrow channels. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 443001.	1.8	34
32	Spectral content of fractional Brownian motion with stochastic reset. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 435001.	2.1	46
33	Nonequilibrium Fluctuations and Enhanced Diffusion of a Driven Particle in a Dense Environment. <i>Physical Review Letters</i> , 2018, 120, 200606.	7.8	26
34	Towards a full quantitative description of single-molecule reaction kinetics in biological cells. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16393-16401.	2.8	50
35	N -tag probability law of the symmetric exclusion process. <i>Physical Review E</i> , 2018, 97, 062119.	2.1	5
36	Smoluchowski rate for diffusion-controlled reactions of molecules with antenna. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 264004.	2.1	5

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37	Universal Long Ranged Correlations in Driven Binary Mixtures. <i>Physical Review Letters</i> , 2017, 118, 118002.	7.8	39
38	Diffusive escape through a narrow opening: new insights into a classic problem. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 2723-2739.	2.8	62
39	Cooperative behavior of biased probes in crowded interacting systems. <i>Soft Matter</i> , 2017, 13, 7617-7624.	2.7	15
40	Active colloids in the context of chemical kinetics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 134001.	2.1	47
41	Effects of the target aspect ratio and intrinsic reactivity onto diffusive search in bounded domains. <i>New Journal of Physics</i> , 2017, 19, 103025.	2.9	25
42	A single predator charging a herd of prey: effects of self volume and predator's prey decision-making. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 225601.	2.1	21
43	Phase behaviour and structure of a superionic liquid in nonpolarized nanoconfinement. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 464007.	1.8	18
44	Temporal Correlations of the Running Maximum of a Brownian Trajectory. <i>Physical Review Letters</i> , 2016, 117, 080601.	7.8	24
45	Nonlinear response and emerging nonequilibrium microstructures for biased diffusion in confined crowded environments. <i>Physical Review E</i> , 2016, 93, 032128.	2.1	37
46	Random pure states: Quantifying bipartite entanglement beyond the linear statistics. <i>Physical Review E</i> , 2016, 93, 052106.	2.1	42
47	Joint distributions of partial and global maxima of a Brownian bridge. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 335002.	2.1	11
48	Sample-to-sample fluctuations of power spectrum of a random motion in a periodic Sinai model. <i>Physical Review E</i> , 2016, 94, 032131.	2.1	19
49	Diffusion and Subdiffusion of Interacting Particles on Comblike Structures. <i>Physical Review Letters</i> , 2015, 115, 220601.	7.8	48
50	Distribution of the position of a driven tracer in a hardcore lattice gas. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015, 2015, P11016.	2.3	11
51	Microscopic Theory for Negative Differential Mobility in Crowded Environments. <i>Physical Review Letters</i> , 2014, 113, 268002.	7.8	62
52	Charging dynamics of supercapacitors with narrow cylindrical nanopores. <i>Nanotechnology</i> , 2014, 25, 315401.	2.6	41
53	Velocity Anomaly of a Driven Tracer in a Confined Crowded Environment. <i>Physical Review Letters</i> , 2014, 113, 030603.	7.8	17
54	Approach to asymptotically diffusive behavior for Brownian particles in periodic potentials: Extracting information from transients. <i>Physical Review E</i> , 2014, 90, 022112.	2.1	11

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55	Diffusion in periodic, correlated random forcing landscapes. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 372001.	2.1	26
56	Trajectory-to-Trajectory Fluctuations in First-Passage Phenomena in Bounded Domains. , 2014, , 203-225.		7
57	First-Passage Phenomena and Their Applications. , 2014, , .		186
58	Active Transport in Dense Diffusive Single-File Systems. <i>Physical Review Letters</i> , 2013, 111, 038102.	7.8	63
59	Anomalous field-induced growth of fluctuations in dynamics of a biased intruder moving in a quiescent medium. <i>Physical Review E</i> , 2013, 87, 020103.	2.1	14
60	Optimal least-squares estimators of the diffusion constant from a single Brownian trajectory. <i>European Physical Journal: Special Topics</i> , 2013, 216, 57-71.	2.6	8
61	Geometry-Induced Superdiffusion in Driven Crowded Systems. <i>Physical Review Letters</i> , 2013, 111, 260601.	7.8	74
62	On the non-equivalence of two standard random walks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013, 392, 3909-3911.	2.6	4
63	Fluctuations and correlations of a driven tracer in a hard-core lattice gas. <i>Physical Review E</i> , 2013, 87, .	2.1	14
64	Anomalous Fluctuations of Currents in Sinai-Type Random Chains with Strongly Correlated Disorder. <i>Physical Review Letters</i> , 2013, 110, 100602.	7.8	31
65	The shadow principle: An optimal survival strategy for a prey chased by random predators. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013, 392, 2837-2846.	2.6	1
66	Distribution of the least-squares estimators of a single Brownian trajectory diffusion coefficient. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013, 2013, P04017.	2.3	13
67	A biased intruder in a dense quiescent medium: looking beyond the force-velocity relation. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013, 2013, P05008.	2.3	27
68	Distribution of Schmidt-like eigenvalues for Gaussian ensembles of the random matrix theory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 115002.	2.1	2
69	Two-temperature Langevin dynamics in a parabolic potential. <i>Physical Review E</i> , 2013, 87, 062130.	2.1	59
70	On the structure and phase transitions of power-law Poissonian ensembles. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2012, 45, 405003.	2.1	7
71	Two stock options at the races: Black-Scholes forecasts. <i>Quantitative Finance</i> , 2012, 12, 1325-1333.	1.7	18
72	Optimal fits of diffusion constants from single-time data points of Brownian trajectories. <i>Physical Review E</i> , 2012, 86, 060101.	2.1	13

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73	Precursor films in wetting phenomena. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 243102.	1.8	136
74	First passages in bounded domains: When is the mean first passage time meaningful?. <i>Physical Review E</i> , 2012, 86, 031143.	2.1	124
75	Optimal estimates of the diffusion coefficient of a single Brownian trajectory. <i>Physical Review E</i> , 2012, 85, 031136.	2.1	44
76	Bias- and bath-mediated pairing of particles driven through a quiescent medium. <i>Soft Matter</i> , 2011, 7, 993-1000.	2.7	52
77	First passages for a search by a swarm of independent random searchers. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P06022.	2.3	100
78	Proportionate vs disproportionate distribution of wealth of two individuals in a tempered Paretian ensemble. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011, 390, 4340-4346.	2.6	14
79	Symmetry breaking between statistically equivalent, independent channels in few-channel chaotic scattering. <i>Physical Review E</i> , 2011, 84, 035203.	2.1	22
80	Ballistic deposition patterns beneath a growing Kardar-Parisi-Zhang interface. <i>Physical Review E</i> , 2010, 82, 061107.	2.1	14
81	Intermittent search strategies revisited: effect of the jump length and biased motion. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 345001.	2.1	19
82	Narrow-escape times for diffusion in microdomains with a particle-surface affinity: Mean-field results. <i>Journal of Chemical Physics</i> , 2010, 132, 235101.	3.0	40
83	Post-Tanner stages of droplet spreading: the energy balance approach revisited. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 464131.	1.8	10
84	Helix or coil? Fate of a melting heteropolymer. <i>Europhysics Letters</i> , 2009, 85, 10008.	2.0	33
85	Survival of an evasive prey. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 13696-13701.	7.1	101
86	Dynamics of wetting. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 460302.	1.8	0
87	Finding passwords by random walks: how long does it take?. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 434016.	2.1	4
88	Efficient search by optimized intermittent random walks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 434008.	2.1	49
89	Confinement effects on diffusiophoretic self-propellers. <i>Journal of Chemical Physics</i> , 2009, 130, 194702.	3.0	73
90	Post-Tanner spreading of nematic droplets. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 464134.	1.8	7

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91	Survival probability of a particle in a sea of mobile traps: A tale of tails. <i>Physical Review E</i> , 2008, 78, 021105.	2.1	50
92	Contact line stability of ridges and drops. <i>Europhysics Letters</i> , 2007, 80, 66002.	2.0	24
93	Binary reactive adsorbate on a random catalytic substrate. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 065126.	1.8	4
94	Intermittent random walks for an optimal search strategy: one-dimensional case. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 065142.	1.8	58
95	On the Distribution of Surface Extrema in Several One- and Two-dimensional Random Landscapes. <i>Journal of Statistical Physics</i> , 2007, 126, 243-279.	1.2	10
96	Microscopic model of charge carrier transfer in complex media. <i>Chemical Physics</i> , 2005, 319, 16-27.	1.9	3
97	Reversible diffusion-limited reactions: "Chemical Equilibrium" state and the Law of Mass Action revisited. <i>Europhysics Letters</i> , 2005, 69, 177-183.	2.0	8
98	Saltatory drift in a randomly driven two-wave potential. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S3697-S3707.	1.8	7
99	Diffusive spreading and mixing of fluid monolayers. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S4189-S4198.	1.8	7
100	Kinetics of diffusion-limited catalytically activated reactions: An extension of the Wilemski-Fixman approach. <i>Journal of Chemical Physics</i> , 2005, 123, 194506.	3.0	24
101	Molecular motor with a built-in escapement device. <i>Europhysics Letters</i> , 2004, 68, 26-32.	2.0	17
102	Exactly Solvable Model of Monomer-Monomer Reactions on a Two-Dimensional Random Catalytic Substrate. <i>Physical Review Letters</i> , 2004, 93, 020602.	7.8	14
103	Catalytic reactions with bulk-mediated excursions: Mixing fails to restore chemical equilibrium. <i>Physical Review E</i> , 2004, 69, 036115.	2.1	11
104	Lattice theory of trapping reactions with mobile species. <i>Physical Review E</i> , 2004, 69, 046101.	2.1	42
105	Biased Tracer Diffusion in Hard-Core Lattice Gases: Some Notes on the Validity of the Einstein Relation. <i>Nonlinear Phenomena and Complex Systems</i> , 2004, , 33-74.	0.0	8
106	Exactly Solvable Model of Reactions on a Random Catalytic Chain. <i>Journal of Statistical Physics</i> , 2003, 112, 541-586.	1.2	17
107	Stochastic theory of diffusion-controlled reactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 327, 99-104.	2.6	7
108	Adsorption of reactive particles on a random catalytic chain: An exact solution. <i>Physical Review E</i> , 2003, 67, 016115.	2.1	25

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109	Pascal principle for diffusion-controlled trapping reactions. <i>Physical Review E</i> , 2003, 67, 045104.	2.1	54
110	Exactly solvable model of $A + A \rightarrow 0$ reactions on a heterogeneous catalytic chain. <i>Europhysics Letters</i> , 2003, 62, 69-75.	2.0	8
111	Ultraslow vacancy-mediated tracer diffusion in two dimensions: The Einstein relation verified. <i>Physical Review E</i> , 2002, 66, 031101.	2.1	49
112	Single-species reactions on a random catalytic chain. <i>Journal of Physics A</i> , 2002, 35, L695-L705.	1.6	21
113	Trapping reactions with randomly moving traps: Exact asymptotic results for compact exploration. <i>Physical Review E</i> , 2002, 66, 060101.	2.1	56
114	Dynamical disorder in diffusion-limited reactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002, 306, 169-179.	2.6	3
115	Intrinsic friction of adsorbed monolayers. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 4835-4851.	1.8	1
116	Force-velocity relation and density profiles for biased diffusion in an adsorbed monolayer. <i>Physical Review B</i> , 2001, 63, .	3.2	26
117	Influence of auto-organization and fluctuations on the kinetics of a monomer-monomer catalytic scheme. <i>Physical Review E</i> , 2001, 63, 021110.	2.1	16
118	Atomic slide puzzle: Self-diffusion of an impure atom. <i>Physical Review E</i> , 2001, 64, 020103.	2.1	9
119	Anchoring of Polymers by Traps Randomly Placed on a Line. <i>Journal of Statistical Physics</i> , 2000, 98, 281-303.	1.2	13
120	Stokes Formula and Density Perturbances for Driven Tracer Diffusion in an Adsorbed Monolayer. <i>Physical Review Letters</i> , 2000, 84, 511-514.	7.8	32
121	Polymer dynamics in time-dependent Matheron de Marsily flows: An exactly solvable model. <i>Physical Review E</i> , 2000, 63, 011801.	2.1	11
122	Generalized model for dynamic percolation. <i>Physical Review E</i> , 2000, 62, 3327-3339.	2.1	24
123	Kinetics of stochastically gated diffusion-limited reactions and geometry of random walk trajectories. <i>Physical Review E</i> , 2000, 61, 3388-3406.	2.1	66
124	Directed random walk in adsorbed monolayer. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1999, 272, 56-86.	2.6	13
125	Biased Diffusion in a One-Dimensional Adsorbed Monolayer. <i>Journal of Statistical Physics</i> , 1999, 97, 351-371.	1.2	29
126	Droplet Spreading: Partial Wetting Regime Revisited. <i>Langmuir</i> , 1999, 15, 2209-2216.	3.5	230

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127	Dissipation Processes at the Mesoscopic and Molecular Scale. The Case of Polymer Films. <i>Langmuir</i> , 1999, 15, 1522-1527.	3.5	13
128	Microscopic model for spreading of a two-dimensional monolayer. <i>Journal of Molecular Liquids</i> , 1998, 76, 195-219.	4.9	19
129	Dynamics of Spreading of Liquid Microdroplets on Substrates of Increasing Surface Energies. <i>Langmuir</i> , 1998, 14, 5951-5958.	3.5	55
130	Kinetic description of diffusion-limited reactions in random catalytic media. <i>Journal of Chemical Physics</i> , 1998, 108, 1140-1147.	3.0	46
131	Molecular Weight Dependence of Spreading Rates of Ultrathin Polymeric Films. <i>Physical Review Letters</i> , 1998, 80, 5377-5380.	7.8	52
132	Dewetting, partial wetting, and spreading of a two-dimensional monolayer on solid surface. <i>Physical Review E</i> , 1998, 58, R20-R23.	2.1	27
133	Kinetics of anchoring of polymer chains on substrates with chemically active sites. <i>Physical Review E</i> , 1998, 58, 6134-6144.	2.1	14
134	Dynamics of a driven probe molecule in a liquid monolayer. <i>Europhysics Letters</i> , 1997, 38, 527-532.	2.0	18
135	Microscopic Model of Upward Creep of an Ultrathin Wetting Film. <i>Physical Review Letters</i> , 1996, 76, 86-89.	7.8	71
136	Dynamics and conformational properties of polyampholytes in external electrical fields: Influence of the charge distribution. <i>Macromolecular Theory and Simulations</i> , 1996, 5, 45-66.	1.4	27
137	Fluctuation-dominated $A+B \rightarrow O$ kinetics under short-ranged interparticle interactions. <i>Journal of Chemical Physics</i> , 1996, 105, 6304-6314.	3.0	10
138	Spreading of a thin wetting film: Microscopic approach. <i>Physical Review E</i> , 1996, 54, 3832-3845.	2.1	40
139	Sample-size dependence of the ground-state energy in a one-dimensional localization problem. <i>Physical Review E</i> , 1996, 54, 231-242.	2.1	41
140	Motion of a driven tracer particle in a one-dimensional symmetric lattice gas. <i>Physical Review E</i> , 1996, 54, 3165-3172.	2.1	65
141	Dynamics and conformational properties of Rouse polymers in random layered flows. <i>Macromolecular Theory and Simulations</i> , 1995, 4, 87-109.	1.4	18
142	Correlation-induced non-monotonic behavior of reversible chemical reactions. <i>Journal of Molecular Liquids</i> , 1995, 63, 175-197.	4.9	7
143	Influence of transport limitations on the kinetics of homopolymerization reactions. <i>Journal of Chemical Physics</i> , 1995, 102, 2977-2985.	3.0	38
144	Smoluchowski approach for three-body reactions in one dimension. <i>Physical Review E</i> , 1995, 52, 5800-5805.	2.1	20

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145	Comment on "Pair and Triple Correlations in the A+B Diffusion-Controlled Reaction", Physical Review Letters, 1995, 75, 585-585.	7.8	14
146	Direct energy transfer in solutions of ideal polymer chains. Journal of Chemical Physics, 1995, 103, 9864-9875.	3.0	11
147	Dynamics and conformational properties of polyampholytes in external electrical fields. Journal of Chemical Physics, 1995, 103, 5070-5074.	3.0	44
148	Rouse chain dynamics in layered random flows. Physical Review E, 1994, 49, 4185-4191.	2.1	23
149	Models of chemical reactions with participation of polymers. Advances in Colloid and Interface Science, 1994, 49, 1-46.	14.7	58
150	Behavior of transport characteristics in several one-dimensional disordered systems. Chemical Physics, 1993, 177, 803-819.	1.9	26
151	Steady flux in a continuous-space Sinai chain. Journal of Statistical Physics, 1993, 73, 379-388.	1.2	40