

Sergei F. Burlatsky

List of Publications by Year in descending order

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57
papers

1,355
citations

331670

21
h-index

345221

36
g-index

57
all docs

57
docs citations

57
times ranked

1010
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanical endurance of polymer electrolyte membrane and PEM fuel cell durability. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 2346-2357.	2.1	287
2	Motion of a driven tracer particle in a one-dimensional symmetric lattice gas. Physical Review E, 1996, 54, 3165-3172.	2.1	65
3	Surface tension model for surfactant solutions at the critical micelle concentration. Journal of Colloid and Interface Science, 2013, 393, 151-160.	9.4	65
4	Intermittent random walks for an optimal search strategy: one-dimensional case. Journal of Physics Condensed Matter, 2007, 19, 065142.	1.8	58
5	Directed walk in a one-dimensional lattice gas. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 166, 230-234.	2.1	55
6	Degradation of Polymer-Electrolyte Membranes in Fuel Cells. Journal of the Electrochemical Society, 2009, 156, B657.	2.9	54
7	Efficient search by optimized intermittent random walks. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 434008.	2.1	49
8	Degradation of Polymer-Electrolyte Membranes in Fuel Cells. Journal of the Electrochemical Society, 2010, 157, B1542.	2.9	47
9	A mathematical model for predicting the life of polymer electrolyte fuel cell membranes subjected to hydration cycling. Journal of Power Sources, 2012, 215, 135-144.	7.8	42
10	Sample-size dependence of the ground-state energy in a one-dimensional localization problem. Physical Review E, 1996, 54, 231-242.	2.1	41
11	Spreading of a thin wetting film: Microscopic approach. Physical Review E, 1996, 54, 3832-3845.	2.1	40
12	The impact of thermal conductivity and diffusion rates on water vapor transport through gas diffusion layers. Journal of Power Sources, 2009, 190, 485-492.	7.8	38
13	The Dynamics of Platinum Precipitation in an Ion Exchange Membrane. Journal of the Electrochemical Society, 2011, 158, B322.	2.9	37
14	Aspects of PEMFC Degradation. ECS Transactions, 2006, 1, 239-246.	0.5	33
15	Fluctuation-induced kinetics of reversible reactions. Journal of Physics A, 1989, 22, L977-L982.	1.6	28
16	Non-Fickian steady flux in a one-dimensional Sinai-type disordered system. Physical Review A, 1992, 45, R6955-R6957.	2.5	27
17	Diffusion-controlled reactions with polymers. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 145, 61-65.	2.1	26
18	Fluctuation-induced kinetics of reversible coagulation. Journal of Physics A, 1989, 22, L973-L976.	1.6	25

#	ARTICLE	IF	CITATIONS
19	Adsorption of reactive particles on a random catalytic chain: An exact solution. <i>Physical Review E</i> , 2003, 67, 016115.	2.1	25
20	Fluctuation-dominated kinetics of incoherent excitation quenching. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1989, 139, 241-244.	2.1	23
21	Direct Mechanism of OH Radicals Formation in PEM Fuel Cells. <i>ECS Transactions</i> , 2008, 6, 69-74.	0.5	22
22	Direct energy transfer in polymer systems. <i>Physical Review Letters</i> , 1990, 65, 3205-3208.	7.8	21
23	Fluctuation kinetics of diffusion-controlled processes: Strong effects due to correlations and fluctuations. <i>Journal of Statistical Physics</i> , 1991, 65, 1095-1107.	1.2	21
24	Single-species reactions on a random catalytic chain. <i>Journal of Physics A</i> , 2002, 35, L695-L705.	1.6	21
25	The potential of catalytic particle in ion exchange membrane. <i>Journal of Electroanalytical Chemistry</i> , 2007, 601, 251-259.	3.8	20
26	Metastable states in diffusion-controlled processes. <i>Journal of Physics A</i> , 1989, 22, 531-535.	1.6	19
27	Apparent rate constant for diffusion-controlled three-molecule reactions. <i>Physical Review E</i> , 1995, 51, 2363-2367.	2.1	17
28	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
29	Reaction kinetics in polymer systems. <i>Journal of Statistical Physics</i> , 1991, 65, 1109-1122.	1.2	15
30	Anomalous Steady-State Properties of Long-Range $A + A \rightarrow \text{O}$ Reactions. <i>The Journal of Physical Chemistry</i> , 1994, 98, 7390-7394.	2.9	14
31	Comment on "Pair and Triple Correlations in the $A+B \rightarrow \text{BDiffusion-Controlled Reaction}$ ". <i>Physical Review Letters</i> , 1995, 75, 585-585.	7.8	14
32	The Model of Stress Distribution in Polymer Electrolyte Membrane. <i>Journal of the Electrochemical Society</i> , 2013, 160, F1129-F1137.	2.9	13
33	Combined Hydrophobicity and Mechanical Durability through Surface Nanoengineering. <i>Scientific Reports</i> , 2015, 5, 9260.	3.3	12
34	Molecular Dynamic Study of Water-Cluster Structure in PFSA and PFIA Ionomers. <i>Journal of the Electrochemical Society</i> , 2017, 164, F1265-F1271.	2.9	10
35	Probability distribution for trajectories of a polymer chain segment. <i>Theoretical and Mathematical Physics (Russian Federation)</i> , 1988, 75, 659-663.	0.9	9
36	Long-time asymptotics for the reaction of static recombination. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1990, 145, 56-60.	2.1	9

#	ARTICLE	IF	CITATIONS
37	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
38	Solid friction in gel electrophoresis. <i>Journal of Chemical Physics</i> , 1995, 103, 8216-8227.	3.0	7
39	The effect of the nonuniform distribution of reactants on the kinetics of bimolecular recombination. <i>Theoretical and Experimental Chemistry</i> , 1979, 14, 373-377.	0.8	4
40	Scaling model of annihilation-diffusion kinetics for charged particles with long-range interactions. <i>Physical Review E</i> , 1996, 54, R1056-R1057.	2.1	4
41	Stalled phase transition model of high-elastic polymer. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013, 2013, P02004.	2.3	3
42	Spreading of molecularly thin wetting films on solid interfaces. <i>Nonlinear Phenomena and Complex Systems</i> , 2000, , 233-267.	0.0	3
43	Transient relaxation of a charged polymer chain subject to an external field in a random tube. <i>Journal of Chemical Physics</i> , 1998, 109, 2572-2578.	3.0	2
44	Decay kinetics of p-benzosemiquinone radicals and reaction with iron salts. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1975, 24, 870-871.	0.0	1
45	Asymptotics of random walk displacement in a percolation system under threshold. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1991, 161, 147-152.	2.1	1
46	Response. <i>Science</i> , 1994, 264, 113-113.	12.6	1
47	Spreading of a macroscopic lattice gas. <i>Physical Review E</i> , 1996, 54, 1489-1496.	2.1	1
48	Types of variations in the geomagnetic field spectrum. <i>Izvestiya, Physics of the Solid Earth</i> , 2006, 42, 207-224.	0.9	1
49	A Novel Kinetic Model to Simulate Evacuation Dynamics. , 2010, , 611-618.		1
50	Destruction rate of 2,6-diphenyl-4-(3',5'-diphenyl-4'-hydroxyphenyl)phenoxy and 2,6-di-tert-butyl-4-(3',5'-di-tert-butyl-4'-hydroxy phenyl)-phenoxy radicals. <i>Bulletin of the Academy of Sciences of the USSR Division of Chemical Science</i> , 1978, 27, 1902-1904.	0.0	0
51	Kinetics of diffusion-controlled reactions of particles with a nonuniform reactive surface. <i>Theoretical and Experimental Chemistry</i> , 1981, 16, 538-542.	0.8	0
52	Kinetics of reactions in random solid mixtures. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1992, 171, 137-140.	2.1	0
53	The fine structure of the geomagnetic field. <i>Izvestiya, Physics of the Solid Earth</i> , 2006, 42, 510-520.	0.9	0
54	Phase boundary dynamics in a one-dimensional non-equilibrium lattice gas. <i>Nonlinear Phenomena and Complex Systems</i> , 2004, , 69-108.	0.0	0

#	ARTICLE	IF	CITATIONS
55	The Model of Platinum Agglomeration in PAFC Electrodes. ECS Meeting Abstracts, 2011, , .	0.0	0
56	Correlation Effects in Many-Body Reactive Systems. Research Reports in Physics, 1991, , 129-134.	0.0	0
57	Anomalous Transport Through Thin Disordered Layers. Research Reports in Physics, 1991, , 121-128.	0.0	0