

# Alexander L Burin

## List of Publications by Citations

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101  
papers

2,737  
citations

26  
h-index

49  
g-index

111  
ext. papers

2,946  
ext. citations

4.3  
avg, IF

5.27  
L-index

#	Paper	IF	Citations
101	Charge hopping in DNA. <i>Journal of the American Chemical Society</i> , <b>2001</b> , 123, 260-8	16.4	295
100	Elementary steps for charge transport in DNA: thermal activation vs. tunneling. <i>Chemical Physics</i> , <b>2002</b> , 275, 61-74	2.3	202
99	On the Long-Range Charge Transfer in DNA. <i>Journal of Physical Chemistry A</i> , <b>2000</b> , 104, 443-445	2.8	149
98	DNA as a molecular wire. <i>Superlattices and Microstructures</i> , <b>2000</b> , 28, 241-252	2.8	92
97	Exciton Migration and Cathode Quenching in Organic Light Emitting Diodes. <i>Journal of Physical Chemistry A</i> , <b>2000</b> , 104, 4704-4710	2.8	92
96	Tunneling Time for Electron Transfer Reactions. <i>Journal of Physical Chemistry B</i> , <b>2000</b> , 104, 5661-5665	3.4	86
95	DNA Electron Transfer Processes: Some Theoretical Notions. <i>Topics in Current Chemistry</i> , 1-36		85
94	Random lasers with coherent feedback. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2003</b> , 9, 111-119	3.8	80
93	Model for a random laser. <i>Physical Review Letters</i> , <b>2001</b> , 87, 215503	7.4	79
92	Direct measurement of the dynamics of hole hopping in extended DNA G-tracts. An unbiased random walk. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 14388-90	16.4	77
91	Dipole gap effects in low energy excitation spectrum of amorphous solids. Theory for dielectric relaxation. <i>Journal of Low Temperature Physics</i> , <b>1995</b> , 100, 309-337	1.3	71
90	Conformationally Gated Rate Processes in Biological Macromolecules. <i>Journal of Physical Chemistry A</i> , <b>2001</b> , 105, 5666-5678	2.8	68
89	Many-body delocalization in a strongly disordered system with long-range interactions: Finite-size scaling. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	64
88	Stability of Bose-Einstein condensates of hot magnons in yttrium iron garnet films. <i>Physical Review Letters</i> , <b>2008</b> , 100, 257202	7.4	57
87	Localization in a random XY model with long-range interactions: Intermediate case between single-particle and many-body problems. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	56
86	Spin effects on the luminescence yield of organic light emitting diodes. <i>Journal of Chemical Physics</i> , <b>1998</b> , 109, 6092-6102	3.9	53
85	Guiding optical modes in chains of dielectric particles. <i>Optics Express</i> , <b>2007</b> , 15, 17380-91	3.3	46

84	Dephasing Rate in Dielectric Glasses at Ultralow Temperatures. <i>Physical Review Letters</i> , <b>1998</b> , 80, 2945-2948	2.4	41
83	Ballistic Energy Transport in Oligomers. <i>Accounts of Chemical Research</i> , <b>2015</b> , 48, 2547-55	24.3	40
82	Nanometer-Scale Dielectric Self-assembly Process for Anode Modification in Organic Light-Emitting Diodes. Consequences for Charge Injection and Enhanced Luminous Efficiency. <i>Chemistry of Materials</i> , <b>2002</b> , 14, 3054-3065	9.6	40
81	Structure dependent energy transport: relaxation-assisted 2DIR measurements and theoretical studies. <i>Journal of Physical Chemistry B</i> , <b>2011</b> , 115, 11063-73	3.4	37
80	Comment on "Tunneling in mesoscopic magnetic molecules". <i>Physical Review Letters</i> , <b>1996</b> , 76, 3040	7.4	37
79	Spectroscopy of proteins at low temperature. Part I: Experiments with molecular ensembles. <i>Physics of Life Reviews</i> , <b>2006</b> , 3, 262-292	2.1	34
78	Absorption-induced confinement of lasing modes in diffusive random media. <i>Optics Letters</i> , <b>2005</b> , 30, 2430-2	3	30
77	Band-selective ballistic energy transport in alkane oligomers: toward controlling the transport speed. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 6448-56	3.4	28
76	Temperature and field dependence of the charge injection from metal electrodes into random organic media. <i>Journal of Chemical Physics</i> , <b>2000</b> , 113, 3941-3944	3.9	28
75	Projected Dipole Moments of Individual Two-Level Defects Extracted Using Circuit Quantum Electrodynamics. <i>Physical Review Letters</i> , <b>2016</b> , 116, 167002	7.4	26
74	Theoretical study of internal vibrational relaxation and energy transport in polyatomic molecules. <i>Journal of Physical Chemistry A</i> , <b>2013</b> , 117, 315-23	2.8	26
73	Diffusion in one-dimensional disordered systems. <i>Chemical Physics Letters</i> , <b>1996</b> , 257, 665-673	2.5	26
72	Spectral diffusion and scaling of many-body delocalization transitions. <i>Annalen Der Physik</i> , <b>2017</b> , 529, 1600360	2.6	24
71	Semiclassical Model for Vibrational Dynamics in Polyatomic Molecules: Investigation of Internal Vibrational Relaxation. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 20510-20517	3.8	24
70	Hierarchically constrained dynamics of the configurational coordinate for rate processes in complex systems. <i>Chemical Physics Letters</i> , <b>1997</b> , 267, 234-243	2.5	24
69	Ballistic and diffusive vibrational energy transport in molecules. <i>Journal of Chemical Physics</i> , <b>2019</b> , 150, 020901	3.9	23
68	Room-temperature ballistic energy transport in molecules with repeating units. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 212412	3.9	23
67	Two-photon pumping of a random laser. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2003</b> , 9, 124-127	3.8	23

66	Sum rules and determination of exciton coupling using absorption and circular dichroism spectra of biological polymers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 989-94	11.5	22
65	Kinetics of charge separation in poly(A)-poly(T) DNA hairpins. <i>Journal of Physical Chemistry B</i> , <b>2010</b> , 114, 6732-9	3.4	21
64	Semiclassical Theory for Tunneling of Electrons Interacting with Media. <i>Journal of Physical Chemistry A</i> , <b>2001</b> , 105, 2652-2659	2.8	21
63	Physics of Proteins at Low Temperature. <i>Journal of Low Temperature Physics</i> , <b>2004</b> , 137, 289-317	1.3	20
62	The Hund paradox and stabilization of molecular chiral states. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , <b>1996</b> , 37, 333-339		20
61	On the nature of the universal properties of amorphous solids. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1996</b> , 215, 191-196	2.3	20
60	Communication: fast transport and relaxation of vibrational energy in polymer chains. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 011101	3.9	19
59	Charge injection into disordered molecular films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2003</b> , 41, 2601-2621	2.6	19
58	Light propagation in a solid with resonant atoms at random positions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1994</b> , 184, 360-365	2.3	19
57	Low-temperature 1/f noise in microwave dielectric constant of amorphous dielectrics in Josephson qubits. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	18
56	Field and intensity correlations in amplifying random media. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	18
55	Localization and chaos in a quantum spin glass model in random longitudinal fields: Mapping to the localization problem in a Bethe lattice with a correlated disorder. <i>Annalen Der Physik</i> , <b>2017</b> , 529, 1600292	2.6	17
54	Temperature dependence of the ballistic energy transport in perfluoroalkanes. <i>Journal of Physical Chemistry B</i> , <b>2014</b> , 118, 8381-7	3.4	17
53	Phenomenological model for reaction kinetics coupled to a relaxing environment. <i>Chemical Physics</i> , <b>1997</b> , 220, 25-41	2.3	16
52	Understanding and control of random lasing. <i>Physica B: Condensed Matter</i> , <b>2003</b> , 338, 212-214	2.8	16
51	Energy Transport in PEG Oligomers: Contributions of Different Optical Bands. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 26663-26677	3.8	15
50	Light propagation in linear arrays of spherical particles. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2008</b> , 372, 5250-5253	2.3	14
49	Interactions Between Tunneling Defects in Amorphous Solids <b>1998</b> , 223-315		14

48	One-dimensional confinement of electric field and humidity dependent DNA conductivity. <i>Journal of Chemical Physics</i> , <b>2009</b> , 131, 245102	3.9	12
47	Charge recombination in DNA hairpins controlled by counterions. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 400-1	16.4	11
46	Localization and propagation of phonons in crystals with heavy impurities. <i>Physics Reports</i> , <b>1997</b> , 288, 205-222	27.7	11
45	Universal dielectric loss in glass from simultaneous bias and microwave fields. <i>Physical Review Letters</i> , <b>2013</b> , 110, 157002	7.4	10
44	Temperature dependence for the rate of hole transfer in DNA: Nonadiabatic regime. <i>Chemical Physics</i> , <b>2012</b> , 393, 13-18	2.3	10
43	Low-temperature dipolar echoes in amorphous dielectrics: Significance of relaxation and decoherence free two-level systems. <i>Europhysics Letters</i> , <b>2013</b> , 104, 57006	1.6	10
42	Nonadiabatic cooling and optimal control in off-resonance dipole optical potentials. <i>Physical Review A</i> , <b>1998</b> , 58, 1346-1351	2.6	10
41	Revealing the nonlinear response of a tunneling two-level system ensemble using coupled modes. <i>Physical Review Materials</i> , <b>2017</b> , 1,	3.2	10
40	Cavity quantum electrodynamics using a near-resonance two-level system: Emergence of the Glauber state. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 172601	3.4	9
39	Many-body localization in spin chains with long-range transverse interactions: Scaling of critical disorder with system size. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	8
38	Slow relaxation of conductance of amorphous hopping insulators. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 244135	1.8	8
37	Energy transport induced by an external alternating field in strongly disordered media. <i>Physical Review Letters</i> , <b>2001</b> , 86, 5616-9	7.4	8
36	The phonon transport in crystals with heavy defects. <i>Physica B: Condensed Matter</i> , <b>1995</b> , 210, 49-54	2.8	8
35	Ballistic Transport of Vibrational Energy through an Amide Group Bridging Alkyl Chains. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 3381-3392	3.8	7
34	Random-Defect Laser: Manipulating Lossy Two-Level Systems to Produce a Circuit with Coherent Gain. <i>Physical Review Letters</i> , <b>2016</b> , 116, 163601	7.4	6
33	Interference of guiding modes in circular waveguides composed of dielectric spherical particles. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2009</b> , 373, 1396-1400	2.3	6
32	Many electron theory of 1/f -noise in hopping conductivity. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2008</b> , 5, 800-808		6
31	Effect of Nuclear Quadrupole Interaction on the Relaxation in Amorphous Solids. <i>Journal of Low Temperature Physics</i> , <b>2005</b> , 140, 355-376	1.3	6

30	Comment on Many-body localization in Ising models with random long-range interactions. <i>Physical Review A</i> , <b>2017</b> , 96,	2.6	5
29	Low Temperature Sound Velocity of Thin SiO <sub>2</sub> Films. <i>Physical Review Letters</i> , <b>1997</b> , 79, 5038-5041	7.4	5
28	Molecular dynamics simulations of a single stranded (ss) DNA. <i>Molecular Simulation</i> , <b>2007</b> , 33, 573-576	2	5
27	A first-order transition in the charge-induced conformational changes of polymers. <i>Journal of Chemical Physics</i> , <b>2002</b> , 116, 9964-9974	3.9	5
26	Influence of radiative interatomic collisions on dark-state cooling. <i>Physical Review A</i> , <b>1996</b> , 54, 4332-4338.	6	5
25	Chaotic Dynamics in a Quantum Fermi-Pasta-Ulam Problem. <i>Entropy</i> , <b>2019</b> , 21,	2.8	4
24	Quantum coherent manipulation of two-level systems in superconducting circuits. <i>Superconductor Science and Technology</i> , <b>2014</b> , 27, 084001	3.1	4
23	Circular dichroism spectra of DNA hairpins studied by the green function method. <i>Journal of Physical Chemistry B</i> , <b>2007</b> , 111, 3982-9	3.4	4
22	The Long Range Interaction and the Relaxation in Glasses at Low Temperatures. <i>Journal of Low Temperature Physics</i> , <b>2004</b> , 137, 189-215	1.3	4
21	Lasing with resonant feedback in random media. <i>Physica B: Condensed Matter</i> , <b>2003</b> , 338, 215-218	2.8	4
20	Theory of nonlinear microwave absorption by interacting two-level systems. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	3
19	Low-Temperature Vibrational Energy Transport via PEG Chains. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 4578-4583	6.4	3
18	Electronic torsional sound in linear atomic chains: Chemical energy transport at 1000 km/s. <i>Journal of Chemical Physics</i> , <b>2016</b> , 145, 034903	3.9	3
17	Fluctuator Model of Memory Dip in Hopping Insulators. <i>Journal of Low Temperature Physics</i> , <b>2012</b> , 167, 318-328	1.3	2
16	On the theory of hopping between moving levels. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1995</b> , 204, 310-312	2.3	2
15	Novel mechanism of transverse relaxation in glasses at ultra low temperatures. <i>Physica B: Condensed Matter</i> , <b>1998</b> , 244, 180-185	2.8	1
14	Semiclassical Theory for Dissipative Tunneling Through a Molecular Wire. <i>Annals of the New York Academy of Sciences</i> , <b>2006</b> , 960, 240-247	6.5	1
13	Fluctuations in a near-critical steady state with temperature gradient. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1999</b> , 258, 413-417	2.3	1

12	Dipole gap effects in low energy excitation spectrum of amorphous solids. Theory for dielectric relaxation. <i>European Physical Journal D</i> , <b>1996</b> , 46, 2269-2270		1
11	The dephasing rate in glasses at ultra low temperatures. <i>European Physical Journal D</i> , <b>1996</b> , 46, 2271-2272		1
10	On the localization theory in the three-dimensional case. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1994</b> , 184, 481-486	2.3	1
9	Crucial effect of transverse vibrations on the transport through polymer chains. <i>Journal of Chemical Physics</i> , <b>2020</b> , 153, 134102	3.9	1
8	Polaronic effect of a metal layer on variable range hopping. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	1
7	Anomalous low-energy properties in amorphous solids and the interplay of electric and elastic interactions of tunneling two-level systems. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	1
6	Thermal Conductivity of Glasses Induced by Nuclear Quadrupole Interaction at Ultra Low Temperatures. <i>Journal of Low Temperature Physics</i> , <b>2011</b> , 162, 509-515	1.3	
5	Theory of relaxation phenomena in glasses and doped semiconductors at low temperatures. <i>Physica B: Condensed Matter</i> , <b>2000</b> , 280, 253-257	2.8	
4	A soft configuration model for wearless sliding friction. <i>Tribology Letters</i> , <b>1999</b> , 7, 109-111	2.8	
3	Nonadiabatic spin transitions in large magnetic fields. <i>European Physical Journal D</i> , <b>1996</b> , 46, 1917-1918		
2	The Kinetics of Charge Recombination in DNA Hairpins Controlled by Counterions. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 189-196	0.9	
1	Competition of Several Energy-Transport Initiation Mechanisms Defines the Ballistic Transport Speed. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 7546-7555	3.4	