

Vladimir Chernyak

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

96
papers

4,694
citations

36
h-index

67
g-index

103
ext. papers

4,932
ext. citations

4.7
avg, IF

5.2
L-index

#	Paper	IF	Citations
96	Stochastic equation of motion approach to fermionic dissipative dynamics. I. Formalism. <i>Journal of Chemical Physics</i> , 2020 , 152, 204105	3.9	7
95	Stochastic equation of motion approach to fermionic dissipative dynamics. II. Numerical implementation. <i>Journal of Chemical Physics</i> , 2020 , 152, 204106	3.9	6
94	Stochastic Representation of Non-Markovian Fermionic Quantum Dissipation. <i>Physical Review Letters</i> , 2019 , 123, 050601	7.4	9
93	Solvent effects and charge transfer states in organic photovoltaics: a time-dependent density functional theory study on the PCPDTBT:PCBM low band gap system. <i>Journal of Photonics for Energy</i> , 2018 , 8, 1	1.2	
92	Ensemble of Thermostatically Controlled Loads: Statistical Physics Approach. <i>Scientific Reports</i> , 2017 , 7, 8673	4.9	12
91	Utilizing Microcavities To Suppress Third-Order Cascades in Fifth-Order Raman Spectra. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 3387-3391	6.4	6
90	Symmetry and the critical phase of the two-bath spin-boson model: Ground-state properties. <i>Physical Review B</i> , 2015 , 91,	3.3	21
89	Polaron dynamics with a multitude of Davydov D2 trial states. <i>Journal of Chemical Physics</i> , 2015 , 143, 014113	3.9	52
88	Ground-state properties of sub-Ohmic spin-boson model with simultaneous diagonal and off-diagonal coupling. <i>Physical Review B</i> , 2014 , 90,	3.3	21
87	Communication: spin-boson model with diagonal and off-diagonal coupling to two independent baths: ground-state phase transition in the deep sub-Ohmic regime. <i>Journal of Chemical Physics</i> , 2014 , 140, 161105	3.9	12
86	Disorder influenced absorption line shapes of a chromophore coupled to two-level systems. <i>Journal of Physical Chemistry A</i> , 2013 , 117, 12320-31	2.8	2
85	Disorder and spectral line shapes in two-level systems. <i>Chemical Physics Letters</i> , 2013 , 582, 66-70	2.5	1
84	Nonadiabatic excited-state molecular dynamics: numerical tests of convergence and parameters. <i>Journal of Chemical Physics</i> , 2012 , 136, 054108	3.9	80
83	Nonadiabatic excited-state molecular dynamics modeling of photoinduced dynamics in conjugated molecules. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 5402-14	3.4	155
82	Lanczos Algorithm for Electron Transfer Rates in Solvents with Complex Spectral Densities. <i>Advances in Chemical Physics</i> , 2007 , 515-551		1
81	Coherence and correlations in multitime quantum measurements of stochastic quantum trajectories. <i>Physical Review E</i> , 2006 , 73, 036119	2.4	9
80	Exciton sizes of conducting polymers predicted by time-dependent density functional theory. <i>Physical Review B</i> , 2005 , 71,	3.3	179

79	Semiclassical scattering on conical intersections. <i>Physical Review Letters</i> , 2005 , 95, 223001	7.4	17
78	Effect of quantum collapse on the distribution of work in driven single molecules. <i>Physical Review Letters</i> , 2004 , 93, 048302	7.4	37
77	Extreme outages caused by polarization mode dispersion. <i>Optics Letters</i> , 2003 , 28, 2159-61	3	2
76	Compensation for extreme outages caused by polarization mode dispersion and amplifier noise. <i>Optics Express</i> , 2003 , 11, 1607-12	3.3	4
75	Mechanical response functions of finite-temperature Bose-Einstein condensates. <i>Physical Review A</i> , 2003 , 67,	2.6	2
74	Geometric picture for coupled electron-nuclear dynamics. <i>International Journal of Quantum Chemistry</i> , 2002 , 90, 799-811	2.1	1
73	Multitime correlation functions for single molecule kinetics with fluctuating bottlenecks. <i>Journal of Chemical Physics</i> , 2002 , 116, 4240-4251	3.9	46
72	Quantum quadratic brownian oscillator model for absorption lineshapes. <i>Israel Journal of Chemistry</i> , 2002 , 42, 143-149	3.4	3
71	Vibrational-exciton relaxation probed by three-pulse echoes in polypeptides. <i>Chemical Physics</i> , 2001 , 266, 285-294	2.3	29
70	Two-dimensional correlation spectroscopies of localized vibrations. <i>Chemical Physics</i> , 2001 , 266, 311-322.	2.3	24
69	Quadratic Brownian-oscillator model for solvation dynamics in optical response. <i>Journal of Chemical Physics</i> , 2001 , 114, 10430-10435	3.9	14
68	Time-resolved x-ray spectroscopies: Nonlinear response functions and Liouville-space pathways. <i>Physical Review A</i> , 2001 , 63,	2.6	79
67	Simulations of energy funneling and time- and frequency-gated fluorescence in dendrimers. <i>Journal of Chemical Physics</i> , 2001 , 114, 2419-2429	3.9	58
66	Collective Electronic Oscillators for Second-Order Polarizabilities of PushPull Carotenoids. <i>Journal of Physical Chemistry A</i> , 2001 , 105, 5692-5703	2.8	16
65	Excited-State Molecular Dynamics Simulations of Conjugated Oligomers Using the Electronic Density Matrix. <i>Journal of Physical Chemistry A</i> , 2001 , 105, 7057-7071	2.8	7
64	Molecular Dynamics Simulations of Collective Electronic and Nuclear Modes in Conjugated Systems. <i>Springer Series in Chemical Physics</i> , 2001 , 595-597	0.3	
63	Energy funneling in the dendrimeric nanostar probed by time-resolved nonlinear spectroscopies. <i>Springer Series in Chemical Physics</i> , 2001 , 610-612	0.3	
62	Optical Absorption of Long Range Electron Transfer Systems in Intense Fields. <i>Journal of the Chinese Chemical Society</i> , 2000 , 47, 615-623	1.5	2

61	Simulations of two-dimensional femtosecond infrared photon echoes of glycine dipeptide. <i>Journal of Raman Spectroscopy</i> , 2000 , 31, 125-135	2.3	64
60	Electronic versus vibrational optical nonlinearities of push-pull polymers. <i>Chemical Physics Letters</i> , 2000 , 319, 261-264	2.5	22
59	Coherent-state representation of reduced density matrices of correlated electronic systems. <i>Chemical Physics Letters</i> , 2000 , 327, 29-37	2.5	3
58	Frenkel-exciton Hamiltonian for dendrimeric nanostar. <i>Journal of Luminescence</i> , 2000 , 87-89, 115-118	3.8	33
57	Excitonic funneling in extended dendrimers with nonlinear and random potentials. <i>Physical Review Letters</i> , 2000 , 85, 282-5	7.4	36
56	Density-matrix representation of nonadiabatic couplings in time-dependent density functional (TDDFT) theories. <i>Journal of Chemical Physics</i> , 2000 , 112, 3572-3579	3.9	161
55	Krylov-space algorithms for time-dependent Hartree-Fock and density functional computations. <i>Journal of Chemical Physics</i> , 2000 , 113, 36-43	3.9	74
54	Exciton transport in molecular aggregates probed by time and frequency gated optical spectroscopy. <i>Journal of Chemical Physics</i> , 2000 , 112, 7953-7963	3.9	32
53	Exciton Hamiltonian for the Bacteriochlorophyll System in the LH2 Antenna Complex of Purple Bacteria. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 4519-4528	3.4	102
52	Exciton-Wave Packet Dynamics in Molecular Aggregates Studied with Pump-Probe Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 3976-3983	3.4	21
51	Size Scaling of Third-Order Off-Resonant Polarizabilities. Electronic Coherence in Organic Oligomers. <i>Journal of the American Chemical Society</i> , 2000 , 122, 452-459	16.4	83
50	Through-Space Charge Transfer and Nonlinear Optical Properties of Substituted Paracyclophane. <i>Journal of the American Chemical Society</i> , 2000 , 122, 11956-11962	16.4	188
49	Off-Resonant Electronic and Vibrational Molecular Polarizabilities. Time-Dependent Collective-Oscillator Expansion. <i>Journal of Physical Chemistry A</i> , 2000 , 104, 4263-4271	2.8	4
48	Bacteriochlorophyll and Carotenoid Excitonic Couplings in the LH2 System of Purple Bacteria. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 9540-9553	3.4	115
47	LOCALIZED AND DELOCALIZED ELECTRONIC EXCITATIONS IN BIOLOGICAL AND ARTIFICIAL ANTENNA COMPLEXES 2000 ,		2
46	Complete Determination of Relaxation Parameters From Two-Dimensional Raman Spectroscopy. <i>Laser Chemistry</i> , 1999 , 19, 109-116		6
45	Two-exciton states and spectroscopy of phenylacetylene dendrimers. <i>Journal of Chemical Physics</i> , 1999 , 111, 4158-4168	3.9	29
44	Stochastic-trajectories and non-Poisson kinetics in single-molecule spectroscopy. <i>Journal of Chemical Physics</i> , 1999 , 111, 7416-7425	3.9	30

43	Exciton-scaling and optical excitations of self-similar phenylacetylene dendrimers. <i>Journal of Chemical Physics</i> , 1999 , 110, 8161-8175	3.9	83
42	Bosonized squeezed-state coupled-cluster approach to electron correlations in nonlinear spectroscopy. <i>Journal of Chemical Physics</i> , 1999 , 111, 4383-4396	3.9	10
41	Semiclassical simulations of multidimensional Raman echoes. <i>Journal of Chemical Physics</i> , 1999 , 110, 1711-1725	3.9	31
40	Intraband terahertz emission from coupled semiconductor quantum wells: A model study using the exciton representation. <i>Physical Review B</i> , 1999 , 60, 2599-2609	3.3	8
39	Scaling of Fluorescence Stokes Shift and Superradiance Coherence Size in Disordered Molecular Aggregates. <i>Journal of Physical Chemistry A</i> , 1999 , 103, 10294-10299	2.8	35
38	Multidimensional femtosecond correlation spectroscopies of electronic and vibrational excitons. <i>Journal of Chemical Physics</i> , 1999 , 110, 5011-5028	3.9	146
37	Electronic screening in second order optical polarizabilities of elongated Donor/Acceptor polyenes. <i>Chemical Physics</i> , 1999 , 245, 145-163	2.3	8
36	Two-Dimensional Raman Echoes: Femtosecond View of Molecular Structure and Vibrational Coherence. <i>Accounts of Chemical Research</i> , 1999 , 32, 145-154	24.3	128
35	Superradiance Coherence Sizes in Single-Molecule Spectroscopy of LH2 Antenna Complexes. <i>Journal of Physical Chemistry B</i> , 1999 , 103, 3954-3962	3.4	72
34	Origin, scaling, and saturation of second order polarizabilities in donor/acceptor polyenes. <i>Chemical Physics Letters</i> , 1998 , 287, 75-82	2.5	37
33	Real-space analysis of electronic excitations in free-base (H2P) and magnesium (MgP) porphins. <i>Chemical Physics Letters</i> , 1998 , 297, 357-364	2.5	14
32	Collective coordinates for semiclassical femtosecond dissipative dynamics in Liouville space. <i>Journal of Luminescence</i> , 1998 , 76-77, 15-21	3.8	1
31	Excited electronic states of carotenoids: Time-dependent density-matrix-response algorithm. <i>International Journal of Quantum Chemistry</i> , 1998 , 70, 711-727	2.1	30
30	Solvent Reorganization in Long-Range Electron Transfer: ρ -Density Matrix Approach. <i>Journal of Physical Chemistry A</i> , 1998 , 102, 1241-1251	2.8	103
29	Localized Electronic Excitations in Phenylacetylene Dendrimers. <i>Journal of Physical Chemistry B</i> , 1998 , 102, 3310-3315	3.4	180
28	Exciton-migration and three-pulse femtosecond optical spectroscopies of photosynthetic antenna complexes. <i>Journal of Chemical Physics</i> , 1998 , 108, 7763-7774	3.9	345
27	Stilbenoid Dimers: Dissection of a Paracyclophane Chromophore. <i>Journal of the American Chemical Society</i> , 1998 , 120, 9188-9204	16.4	203
26	Excitonic Interactions and Stark Spectroscopy of Light Harvesting Systems. <i>Journal of Physical Chemistry B</i> , 1998 , 102, 8893-8908	3.4	31

25	Multidimensional femtosecond spectroscopies of molecular aggregates and semiconductor nanostructures: The nonlinear exciton equations. <i>Journal of Chemical Physics</i> , 1998 , 109, 9587-9601	3.9	116
24	Simulation of three-pulse echo and fluorescence depolarization in photosynthetic aggregates. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 1998 , 356, 405-419	3	33
23	Two-Dimensional Raman-Echo Spectroscopy; Femtosecond View of Vibrational Coherence. <i>Springer Series in Chemical Physics</i> , 1998 , 541-543	0.3	1
22	Two-Dimensional Femtosecond Spectroscopies of Coupled Chromophores. <i>Springer Series in Chemical Physics</i> , 1998 , 663-665	0.3	2
21	Excited electronic states of carotenoids: Time-dependent density-matrix-response algorithm 1998 , 70, 711		1
20	Two-Dimensional Real-Space Analysis of Optical Excitations in Acceptor-Substituted Carotenoids. <i>Journal of the American Chemical Society</i> , 1997 , 119, 11408-11419	16.4	110
19	Electronic Coherence and Collective Optical Excitations of Conjugated Molecules. <i>Science</i> , 1997 , 277, 781-787	33.3	315
18	Third-order optical response of intermediate excitons with fractional nonlinear statistics. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1996 , 13, 1302	1.7	43
17	Interplay of multiple vibrational spectral densities in femtosecond nonlinear spectroscopy of liquids. <i>Journal of Chemical Physics</i> , 1996 , 105, 8543-8555	3.9	33
16	Collective electronic oscillators for nonlinear optical response of conjugated molecules. <i>Chemical Physics Letters</i> , 1996 , 259, 55-61	2.5	72
15	Chemical Bonding and Size-Scaling of Nonlinear Polarizabilities of Conjugated Polymers. <i>Physical Review Letters</i> , 1996 , 77, 4656-4659	7.4	59
14	Classical chaos and fluctuation-dissipation relations for nonlinear response. <i>Physical Review E</i> , 1996 , 53, R1-R4	2.4	103
13	Size-consistent quasiparticle representation of nonlinear optical susceptibilities in many-electron systems. <i>Journal of Chemical Physics</i> , 1996 , 104, 444-459	3.9	71
12	Optical Stark spectroscopy of molecular aggregates. <i>Journal of Chemical Physics</i> , 1996 , 104, 5415-5423	3.9	4
11	Collective coordinates for nuclear spectral densities in energy transfer and femtosecond spectroscopy of molecular aggregates. <i>Journal of Chemical Physics</i> , 1996 , 105, 4565-4583	3.9	106
10	Recursive density-matrix-spectral-moment algorithm for molecular nonlinear polarizabilities. <i>Journal of Chemical Physics</i> , 1996 , 105, 8914-8928	3.9	66
9	Gauge invariant formulation of molecular electrodynamics and the multipolar Hamiltonian. <i>Chemical Physics</i> , 1995 , 198, 133-143	2.3	6
8	Generalized sum rules for optical nonlinearities of many-electron systems. <i>Journal of Chemical Physics</i> , 1995 , 103, 7640-7644	3.9	19

7	Two-exciton collective photon echoes in disordered molecular nanostructures. <i>Physical Review Letters</i> , 1995 , 74, 4895-4898	7.4	11
6	Four-wave mixing and luminescence of confined excitons in molecular aggregates and nanostructures. many-body green function approach. <i>Physics Reports</i> , 1995 , 263, 213-309	27.7	71
5	Cooperative ultrafast nonlinear optical response of molecular nanostructures. <i>Journal of Chemical Physics</i> , 1994 , 100, 2465-2480	3.9	14
4	Cooperative radiative decay of disordered molecular monolayers. <i>Physical Review B</i> , 1994 , 50, 5609-5619	3.3	4
3	Exciton confinement and nonlocal nonlinear optical response of organic quantum wells. <i>Physical Review B</i> , 1994 , 49, 17079-17091	3.3	3
2	Path integral formulation of retardation effects in nonlinear optics. <i>Journal of Chemical Physics</i> , 1994 , 100, 2953-2974	3.9	20
1	Cooperative radiative decay in the nonlinear optical response of excitonic nanostructures. <i>Physical Review B</i> , 1993 , 48, 2470-2478	3.3	26