

Darius Abramavicius

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.

140 papers	4,126 citations	34 h-index	60 g-index
164 ext. papers	4,540 ext. citations	5.3 avg, IF	5.62 L-index

#	Paper	IF	Citations
140	Excitonic structure and charge separation in the heliobacterial reaction center probed by multispectral multidimensional spectroscopy. <i>Nature Communications</i> , 2021 , 12, 2801	17.4	4
139	Vibration-mediated energy transport in bacterial reaction center: Simulation study. <i>Journal of Chemical Physics</i> , 2021 , 154, 214115	3.9	
138	Second harmonic generation theory for a helical macromolecule with high sensitivity to structural disorder. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 20201-20217	3.6	1
137	Unusual temperature dependence of the fluorescence decay in heterostructured stilbene. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 3447-3454	3.6	2
136	Two-dimensional electronic Stark spectroscopy of a photosynthetic dimer. <i>Journal of Chemical Physics</i> , 2020 , 153, 144203	3.9	3
135	Long memory effects in excitonic systems dynamics: Spectral relations and excitation transport. <i>Journal of Chemical Physics</i> , 2020 , 152, 244114	3.9	1
134	Characterization of thymine microcrystals by CARS and SHG microscopy. <i>Scientific Reports</i> , 2020 , 10, 17023	4.7	3
133	Modeling irreversible molecular internal conversion using the time-dependent variational approach with sD ansatz. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 8952-8962	3.6	2
132	The full dynamics of energy relaxation in large organic molecules: from photo-excitation to solvent heating. <i>Chemical Science</i> , 2019 , 10, 4792-4804	9.4	19
131	Simulations of pump probe spectra of a molecular complex at high excitation intensity. <i>Chemical Physics</i> , 2019 , 527, 110458	2.3	1
130	Excitation dynamics of two level quantum systems coupled to Morse vibrations. <i>Lithuanian Journal of Physics</i> , 2019 , 58,	1.1	1
129	Two-dimensional electronic spectroscopy of anharmonic molecular potentials. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 1642-1652	3.6	13
128	Tracing feed-back driven exciton dynamics in molecular aggregates. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 21225-21240	3.6	6
127	Vibrational damping effects on electronic energy relaxation in molecular aggregates. <i>Chemical Physics</i> , 2018 , 515, 193-202	2.3	4
126	Role of Bath Fluctuations in the Double-Excitation Manifold in Shaping the 2DES of Bacterial Reaction Centers at Low Temperature. <i>Journal of Physical Chemistry B</i> , 2018 , 122, 1348-1366	3.4	7
125	Effects of tunable excitation in carotenoids explained by the vibrational energy relaxation approach. <i>Photosynthesis Research</i> , 2018 , 135, 55-64	3.7	4
124	Origin of non-Gaussian site energy disorder in molecular aggregates. <i>Chemical Physics Letters</i> , 2017 , 674, 120-124	2.5	8

123	Multistep Photoluminescence Decay Reveals Dissociation of Geminate Charge Pairs in Organolead Trihalide Perovskites. <i>Advanced Energy Materials</i> , 2017 , 7, 1700405	21.8	8
122	Discrimination of Diverse Coherences Allows Identification of Electronic Transitions of a Molecular Nanoring. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 2344-2349	6.4	36
121	Ultrafast energy transfer within the photosystem II core complex. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 15356-15367	3.6	20
120	Spectroscopic properties of photosystem II reaction center revisited. <i>Journal of Chemical Physics</i> , 2017 , 147, 115102	3.9	12
119	Temporal dynamics of excitonic states with nonlinear electron-vibrational coupling. <i>Journal of Chemical Physics</i> , 2017 , 147, 074114	3.9	8
118	Absorption and Fluorescence Lineshape Theory for Polynomial Potentials. <i>Journal of Chemical Theory and Computation</i> , 2016 , 12, 5979-5989	6.4	19
117	Role of coherence and delocalization in photo-induced electron transfer at organic interfaces. <i>Scientific Reports</i> , 2016 , 6, 32914	4.9	31
116	Band Structure of the Rhodobacter sphaeroides Photosynthetic Reaction Center from Low-Temperature Absorption and Hole-Burned Spectra. <i>Journal of Physical Chemistry B</i> , 2016 , 120, 5601-5614	3.4	12
115	Role of coherent vibrations in energy transfer and conversion in photosynthetic pigment-protein complexes. <i>Photosynthesis Research</i> , 2016 , 127, 33-47	3.7	42
114	Polaronic effects at finite temperatures in the B850 ring of the LH2 complex. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 7966-77	3.6	21
113	Disorder-Induced Quantum Beats in Two-Dimensional Spectra of Excitonically Coupled Molecules. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 277-82	6.4	6
112	Benchmarking the stochastic time-dependent variational approach for excitation dynamics in molecular aggregates. <i>Chemical Physics</i> , 2016 , 481, 108-116	2.3	8
111	Artificial Photosynthesis: Theoretical Background. <i>Advances in Botanical Research</i> , 2016 , 79, 129-167	2.2	1
110	A Unified Picture of S* in Carotenoids. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 3347-52	6.4	36
109	Mutation-Induced Changes in the Protein Environment and Site Energies in the (M)L214G Mutant of the Rhodobacter sphaeroides Bacterial Reaction Center. <i>Journal of Physical Chemistry B</i> , 2016 , 120, 7859-71	3.4	6
108	Vibronic energy relaxation approach highlighting deactivation pathways in carotenoids. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 19491-9	3.6	27
107	Absorption lineshapes of molecular aggregates revisited. <i>Journal of Chemical Physics</i> , 2015 , 142, 154107	3.9	25
106	Probing environment fluctuations by two-dimensional electronic spectroscopy of molecular systems at temperatures below 5 K. <i>Journal of Chemical Physics</i> , 2015 , 142, 212428	3.9	17

105	Coherence and population dynamics of chlorophyll excitations in FCP complex: Two-dimensional spectroscopy study. <i>Journal of Chemical Physics</i> , 2015 , 142, 212414	3.9	24
104	Modeling of ultrafast time-resolved fluorescence applied to a weakly coupled chromophore pair. <i>Journal of Chemical Physics</i> , 2015 , 143, 074101	3.9	6
103	Mapping energy transfer channels in fucoxanthin-chlorophyll protein complex. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2015 , 1847, 241-247	4.6	45
102	Vibronic phenomena and exciton-vibrational interference in two-dimensional spectra of molecular aggregates. <i>Journal of Chemical Physics</i> , 2014 , 140, 034306	3.9	79
101	Excitation transfer pathways in excitonic aggregates revealed by the stochastic Schrödinger equation. <i>Journal of Chemical Physics</i> , 2014 , 140, 065103	3.9	14
100	Carrier motion in as-spun and annealed P3HT:PCBM blends revealed by ultrafast optical electric field probing and Monte Carlo simulations. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 2686-92	3.6	24
99	Vibronic coherence in oxygenic photosynthesis. <i>Nature Chemistry</i> , 2014 , 6, 706-11	17.6	287
98	Vibronic models for nonlinear spectroscopy simulations. <i>Photosynthesis Research</i> , 2014 , 121, 95-106	3.7	22
97	Static and Dynamic Disorder in Bacterial Light-Harvesting Complex LH2: A 2DES Simulation Study. <i>Journal of Physical Chemistry B</i> , 2014 , 118, 7533-7540	3.4	40
96	An Oscillator Coupled to a Harmonic Bath 2014 , 189-208		
95	Dynamics of exciton-polaron transition in molecular assemblies: the variational approach. <i>Journal of Chemical Physics</i> , 2014 , 140, 244108	3.9	20
94	Visualizing charge separation in bulk heterojunction organic solar cells. <i>Nature Communications</i> , 2013 , 4, 2334	17.4	140
93	Exciton-exciton scattering in a one-dimensional J aggregate. <i>Europhysics Letters</i> , 2013 , 101, 57007	1.6	7
92	Manifestation of protein conformations in the B850 absorption band of light-harvesting complex LH2. <i>Chemical Physics</i> , 2013 , 423, 9-14	2.3	9
91	Simulations of the two-dimensional electronic spectroscopy of the photosystem II reaction center. <i>Journal of Physical Chemistry A</i> , 2013 , 117, 34-41	2.8	25
90	Distinctive character of electronic and vibrational coherences in disordered molecular aggregates. <i>Chemical Physics Letters</i> , 2013 , 587, 93-98	2.5	86
89	Excitation energy transfer and quenching in a heterodimer: applications to the carotenoid-phthalocyanine dyads. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 11031-41	3.4	18
88	Excitons in the LH3 complexes from purple bacteria. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 11058-68	3.4	13

87	Ultrafast Energy Transfer from Chlorophyll c2 to Chlorophyll a in Fucoxanthin-Chlorophyll Protein Complex. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 3590-3595	6.4	28
86	Tight-binding model of the photosystem II reaction center: application to two-dimensional electronic spectroscopy. <i>New Journal of Physics</i> , 2013 , 15, 075013	2.9	42
85	Exchange narrowing and exciton delocalization in disordered J aggregates: simulated peak shapes in the two dimensional spectra. <i>Journal of Chemical Physics</i> , 2013 , 139, 034313	3.9	13
84	Coherent electronic and vibrational dynamics in the electronic 2D spectra of molecular dimers 2013 , ,		1
83	Nonclassical energy transfer in photosynthetic FMO complex. <i>EPJ Web of Conferences</i> , 2013 , 41, 08014	0.3	
82	Phase relationships of spectral oscillations in 2D molecular spectroscopy. <i>EPJ Web of Conferences</i> , 2013 , 41, 05021	0.3	
81	2013 ,		123
80	Insight into the structure of photosynthetic LH2 aggregate from spectroscopy simulations. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 7803-14	3.4	23
79	Excitation dynamics and relaxation in a molecular heterodimer. <i>Chemical Physics</i> , 2012 , 404, 94-102	2.3	25
78	Vibrational vs. electronic coherences in 2D spectrum of molecular systems. <i>Chemical Physics Letters</i> , 2012 , 545, 40-43	2.5	172
77	Weak exciton scattering in molecular nanotubes revealed by double-quantum two-dimensional electronic spectroscopy. <i>Physical Review Letters</i> , 2012 , 108, 067401	7.4	22
76	Molecular vibrations-induced quantum beats in two-dimensional electronic spectroscopy. <i>Journal of Chemical Physics</i> , 2012 , 137, 044513	3.9	51
75	Non-Markovian effects in time-resolved fluorescence spectrum of molecular aggregates: Tracing polaron formation. <i>Physical Review B</i> , 2011 , 84,	3.3	42
74	Interplay of Exciton Coherence and Dissipation in Molecular Aggregates. <i>Semiconductors and Semimetals</i> , 2011 , 3-46	0.6	5
73	Direct evidence of quantum transport in photosynthetic light-harvesting complexes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 20908-12	11.5	176
72	Coherent control protocol for separating energy-transfer pathways in photosynthetic complexes by chiral multidimensional signals. <i>Journal of Physical Chemistry A</i> , 2011 , 115, 4624-9	2.8	9
71	Advancing Hierarchical Equations of Motion for Efficient Evaluation of Coherent Two-dimensional Spectroscopy. <i>Chinese Journal of Chemical Physics</i> , 2011 , 24, 497-506	0.9	25
70	Exciton dynamics in chromophore aggregates with correlated environment fluctuations. <i>Journal of Chemical Physics</i> , 2011 , 134, 174504	3.9	61

69	Signatures of three-exciton correlations in the coherent and incoherent nonlinear optical response of photosynthetic complexes. <i>New Journal of Physics</i> , 2010 , 12, 065046	2.9	3
68	Energy-transfer and charge-separation pathways in the reaction center of photosystem II revealed by coherent two-dimensional optical spectroscopy. <i>Journal of Chemical Physics</i> , 2010 , 133, 184501	3.9	45
67	Ultraviolet spectroscopy of protein backbone transitions in aqueous solution: combined QM and MM simulations. <i>Journal of Physical Chemistry B</i> , 2010 , 114, 8270-7	3.4	51
66	Excitons and disorder in molecular nanotubes: a 2D electronic spectroscopy study and first comparison to a microscopic model. <i>Journal of Physical Chemistry A</i> , 2010 , 114, 8179-89	2.8	46
65	Simulation study of chiral two-dimensional ultraviolet spectroscopy of the protein backbone. <i>Journal of the American Chemical Society</i> , 2010 , 132, 7769-75	16.4	31
64	Simulation of two-dimensional ultraviolet spectroscopy of amyloid fibrils. <i>Journal of Physical Chemistry B</i> , 2010 , 114, 12150-6	3.4	18
63	Quantum oscillatory exciton migration in photosynthetic reaction centers. <i>Journal of Chemical Physics</i> , 2010 , 133, 064510	3.9	74
62	Interplay of slow bath fluctuations and energy transfer in 2D spectroscopy of the FMO light-harvesting complex: benchmarking of simulation protocols. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 108-14	3.6	12
61	Manipulation of two-dimensional spectra of excitonically coupled molecules by narrow-bandwidth laser pulses. <i>Chemical Physics</i> , 2010 , 372, 22-32	2.3	28
60	Two-dimensional optical spectroscopy of molecular aggregates. <i>Lithuanian Journal of Physics</i> , 2010 , 50, 267-303	1.1	13
59	Dephasing in semiconducting single-walled carbon nanotubes induced by exciton-exciton annihilation. <i>Physical Review B</i> , 2009 , 79,	3.3	19
58	Excitonic couplings and interband energy transfer in a double-wall molecular aggregate imaged by coherent two-dimensional electronic spectroscopy. <i>Journal of Chemical Physics</i> , 2009 , 131, 054510	3.9	42
57	Lindblad equations for strongly coupled populations and coherences in photosynthetic complexes. <i>Journal of Chemical Physics</i> , 2009 , 130, 204512	3.9	89
56	Tracing exciton dynamics in molecular nanotubes with 2D electronic spectroscopy. <i>Chemical Physics Letters</i> , 2009 , 469, 130-134	2.5	34
55	Coherent multidimensional optical probes for electron correlations and exciton dynamics: from NMR to X-rays. <i>Accounts of Chemical Research</i> , 2009 , 42, 553-62	24.3	78
54	Exciton delocalization and transport in photosystem I of cyanobacteria <i>Synechococcus elongatus</i> : simulation study of coherent two-dimensional optical signals. <i>Journal of Physical Chemistry B</i> , 2009 , 113, 6097-108	3.4	21
53	Coherent multidimensional optical spectroscopy of excitons in molecular aggregates; quasiparticle versus supermolecule perspectives. <i>Chemical Reviews</i> , 2009 , 109, 2350-408	68.1	386
52	Double-Quantum Coherence Spectroscopy of Chromophore Aggregates. <i>Springer Series in Chemical Physics</i> , 2009 , 412-414	0.3	1

51	Coherent Control of Chirality-Induced 2D Electronic Spectroscopy Signals. <i>Springer Series in Chemical Physics</i> , 2009 , 550-552	0.3	1
50	Dissecting Exciton Dynamics Pathways in Electronic Multidimensional Spectroscopy by Pulse Polarizations. <i>Springer Series in Chemical Physics</i> , 2009 , 601-603	0.3	
49	Extracting single and two-exciton couplings in photosynthetic complexes by coherent two-dimensional electronic spectra. <i>Chemical Physics</i> , 2008 , 357, 79-84	2.3	45
48	Unravelling coherent dynamics and energy dissipation in photosynthetic complexes by 2D spectroscopy. <i>Biophysical Journal</i> , 2008 , 94, 3613-9	2.9	49
47	Chirality-based signatures of local protein environments in two-dimensional optical spectroscopy of two species photosynthetic complexes of green sulfur bacteria: simulation study. <i>Biophysical Journal</i> , 2008 , 95, 4896-907	2.9	11
46	Probing electron correlations in molecules by two-dimensional coherent optical spectroscopy. <i>Journal of the American Chemical Society</i> , 2008 , 130, 3509-15	16.4	27
45	Double-quantum resonances and exciton-scattering in coherent 2D spectroscopy of photosynthetic complexes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 8525-30	11.5	50
44	Many-body effects in two-dimensional optical spectra of semiconductor quantum dot pairs; time-dependent Hartree-Fock approximation and beyond. <i>Journal of Physics Condensed Matter</i> , 2008 , 20, 045206	1.8	4
43	Manipulating multidimensional electronic spectra of excitons by polarization pulse shaping. <i>Journal of Chemical Physics</i> , 2007 , 126, 044508	3.9	26
42	Two Dimensional Electronic Correlation Spectroscopy of the np π^* and pi π^* Protein Backbone Transitions: A Simulation Study. <i>Chemical Physics</i> , 2007 , 341, 29-36	2.3	27
41	Simulation of two-dimensional infrared spectroscopy of amyloid fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 14233-6	11.5	27
40	Transport and correlated fluctuations in the nonlinear optical response of excitons. <i>Europhysics Letters</i> , 2007 , 80, 17005	1.6	42
39	Sum-over-states versus quasiparticle pictures of coherent correlation spectroscopy of excitons in semiconductors: Femtosecond analogs of multidimensional NMR. <i>Physical Review B</i> , 2007 , 75,	3.3	28
38	Manipulating Multidimensional Nonlinear Spectra of Excitons by Coherent Control with Polarization Pulse Shaping. <i>Springer Series in Chemical Physics</i> , 2007 , 383-385	0.3	
37	Coherent Infrared Pulse Sequences for Probing Molecular Chirality. <i>Springer Series in Chemical Physics</i> , 2007 , 252-254	0.3	
36	Coherent control of pump-probe signals of helical structures by adaptive pulse polarizations. <i>Journal of Chemical Physics</i> , 2006 , 124, 034104	3.9	22
35	Chirality-induced signals in coherent multidimensional spectroscopy of excitons. <i>Journal of Chemical Physics</i> , 2006 , 124, 034113	3.9	33
34	Probing molecular chirality via excitonic nonlinear response. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006 , 39, 5051-5066	1.3	19

33	Two-dimensional vibrational optical probes for peptide fast folding investigation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 18934-8	11.5	28
32	Coherent control of cross-peaks in chirality-induced two-dimensional optical signals of excitons. <i>Journal of Chemical Physics</i> , 2006 , 125, 224504	3.9	19
31	Simulation protocols for coherent femtosecond vibrational spectra of peptides. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 3362-74	3.4	123
30	Time-domain chirally-sensitive three-pulse coherent probes of vibrational excitons in proteins. <i>Chemical Physics</i> , 2005 , 318, 50-70	2.3	17
29	Coherent third-order spectroscopic probes of molecular chirality. <i>Journal of Chemical Physics</i> , 2005 , 122, 134305	3.9	41
28	Dissecting coherent vibrational spectra of small proteins into secondary structural elements by sensitivity analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 7443-8	11.5	34
27	Disentangling multidimensional femtosecond spectra of excitons by pulse shaping with coherent control. <i>Journal of Chemical Physics</i> , 2004 , 120, 8373-8	3.9	29
26	Quartic Interband Exciton Couplings in Pump-Probe Spectroscopy of Light Harvesting Complexes. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 10295-10300	3.4	7
25	Many-body approaches for simulating coherent nonlinear spectroscopies of electronic and vibrational excitons. <i>Chemical Reviews</i> , 2004 , 104, 2073-98	68.1	234
24	Exciton dynamics in ring-like photosynthetic light-harvesting complexes: a hopping model. <i>Physical Chemistry Chemical Physics</i> , 2004 , 6, 3097	3.6	20
23	Peptide Secondary Structure Determination by Three-Pulse Coherent Vibrational Spectroscopies: A Simulation Study. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 18034-18045	3.4	34
22	Charge separation in molecular compounds from the charge transfer states: density matrix approach 2003 , 5122, 244		
21	Acceleration of charge separation by oscillations of the environment polarization. <i>Chemical Physics Letters</i> , 2003 , 368, 480-485	2.5	9
20	Geminate pair recombination in molecular systems with correlated disorder. <i>Physical Review B</i> , 2003 , 68,	3.3	4
19	Molecular Twisting and Relaxation in the Excited State of Triarylpyrylium Cations. <i>Journal of Physical Chemistry A</i> , 2002 , 106, 8864-8869	2.8	11
18	The Role of the Initial Charge Separation in the Geminate Pair Recombination in Disordered Molecular Systems. <i>Molecular Crystals and Liquid Crystals</i> , 2001 , 355, 127-148		2
17	Charge separation and geminate recombination in sensitized photoconducting polymers. <i>Synthetic Metals</i> , 2000 , 109, 39-42	3.6	5
16	Geminate charge pair recombination in sensitized photoconducting polymer. <i>Journal of Chemical Physics</i> , 1999 , 111, 5611-5616	3.9	13

15 Geminate Pair Recombination in Sensitized Polymers (Monte-Carlo simulations). *Molecular Crystals and Liquid Crystals*, **1998**, 324, 275-283 3

14 Projection Operator Approach to Open Quantum Systems 209-222

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