Quantum Coherent Energy Transfer over Varying Pathv Complexes

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Citation Report

#	Article	IF	Citations
4	Exploring quantum control landscape structure. Physical Review A, 2013, 88, .	1.0	12
5	Energy Transfer Observed in Live Cells Using Two-Dimensional Electronic Spectroscopy. Journal of Physical Chemistry Letters, 2013, 4, 3636-3640.	2.1	34
6	Quantum Process Tomography Quantifies Coherence Transfer Dynamics in Vibrational Exciton. Journal of Physical Chemistry B, 2013, 117, 13631-13638.	1.2	11
7	Does the Reconstitution of RC-LH1 Complexes from Rhodopseudomonas acidophila Strain 10050 into a Phospholipid Bilayer Yield the Optimum Environment for Optical Spectroscopy?. Journal of Physical Chemistry B, 2013, 117, 15004-15013.	1.2	8
8	Wavelet analysis of molecular dynamics: Efficient extraction of time-frequency information in ultrafast optical processes. Journal of Chemical Physics, 2013, 139, 224103.	1.2	22
9	Origin of long-lived oscillations in 2D-spectra of a quantum vibronic model: Electronic versus vibrational coherence. Journal of Chemical Physics, 2013, 139, 235102.	1.2	119
10	Plasmonic antennas as design elements for coherent ultrafast nanophotonics. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18386-18390.	3.3	55
11	Probing energy transfer events in the light harvesting complex 2 (LH2) of Rhodobacter sphaeroides with two-dimensional spectroscopy. Journal of Chemical Physics, 2013, 139, 155101.	1.2	29
12	Simulation of femtosecond â€œdouble-slitâ€•experiments for a chromophore in a dissipative environment. Journal of Chemical Physics, 2013, 139, 214302.	1.2	19
13	Constrained geometric dynamics of the Fennaâ€“Matthewsâ€“Olson complex: the role of correlated motion in reducing uncertainty in excitation energy transfer. Photosynthesis Research, 2014, 122, 275-292.	1.6	18
14	Realistic and verifiable coherent control of excitonic states in a light-harvesting complex. New Journal of Physics, 2014, 16, 045007.	1.2	35
15	L1â€“2 roots block with psoas compartment block?. British Journal of Anaesthesia, 2014, 112, 592-593.	1.5	0
16	Shaping and spatiotemporal characterization of sub-10-fs pulses focused by a high-NA objective. Optics Express, 2014, 22, 31496.	1.7	15
17	Phase control of femtosecond pulses on the nanoscale using second harmonic nanoparticles. Light: Science and Applications, 2014, 3, e143-e143.	7.7	47
18	Influence of intra-pigment vibrations on dynamics of photosynthetic exciton. Journal of Chemical Physics, 2014, 141, 185102.	1.2	14
19	Models of fluorescence and photosynthesis for interpreting measurements of solarâ€induced chlorophyll fluorescence. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 2312-2327.	1.3	281
20	Chromophores in Molecular Nanorings: When Is a Ring a Ring?. Journal of Physical Chemistry Letters, 2014, 5, 4356-4361.	2.1	68
21	Path induced coherent energy transfer in light-harvesting complexes in purple bacteria. Journal of Chemical Physics, 2014, 141, 124103.	1.2	17

#	Article	IF	Citations
22	Two-dimensional fluorescence-detected coherent spectroscopy with absolute phasing by confocal imaging of a dynamic grating and 27-step phase-cycling. Journal of Chemical Physics, 2014, 140, 194201.	1.2	50
23	Thermally induced creation of quantum coherence. Physical Review A, 2014, 90, .	1.0	3
24	Investigation of the Frohlich hypothesis with high intensity terahertz radiation. , 2014, , .		4
25	Consciousness in the universe. Physics of Life Reviews, 2014, 11, 39-78.	1.5	463
26	Energy costs of carbon dioxide concentrating mechanisms in aquatic organisms. Photosynthesis Research, 2014, 121, 111-124.	1.6	199
27	A Little Coherence in Photosynthetic Light Harvesting. BioScience, 2014, 64, 14-25.	2.2	34
28	Dynamic localization of electronic excitation in photosynthetic complexes revealed with chiral two-dimensional spectroscopy. Nature Communications, 2014, 5, 3286.	5.8	65
29	Intramolecular radiationless transitions dominate exciton relaxation dynamics. Chemical Physics Letters, 2014, 599, 23-33.	1.2	38
30	Photosynthetic light harvesting: excitons and coherence. Journal of the Royal Society Interface, 2014, 11, 20130901.	1.5	225
31	Emergence of Coherence through Variation of Intermolecular Distances in a Series of Molecular Dimers. Journal of Physical Chemistry Letters, 2014, 5, 262-269.	2.1	37
32	Resonant Coherence in Photosynthetic Electronic Energy Transfer by Site-Dependent Pigmentâ€“Protein Interactions. Journal of Physical Chemistry B, 2014, 118, 1229-1233.	1.2	2
33	Ultrafast dynamics of single molecules. Chemical Society Reviews, 2014, 43, 2476-2491.	18.7	83
34	Single LÃ©vy Statesâ€“Disorder Induced Energy Funnels in Molecular Aggregates. Nano Letters, 2014, 14, 6774-6781.	4.5	45
35	Single-molecule spectroscopy of photosynthetic proteins in solution: exploration of structureâ€“function relationships. Chemical Science, 2014, 5, 2933-2939.	3.7	26
36	Nanoantenna enhanced emission of light-harvesting complex 2: the role of resonance, polarization, and radiative and non-radiative rates. Physical Chemistry Chemical Physics, 2014, 16, 24739-24746.	1.3	16
37	Nanophotonic Enhancement of the FÃ¶rster Resonance Energy-Transfer Rate with Single Nanoapertures. Nano Letters, 2014, 14, 4707-4714.	4.5	86
38	Quantum biology of the retina. Clinical and Experimental Ophthalmology, 2014, 42, 582-589.	1.3	14
39	Supramolecular-Surface Photochemistry: Supramolecular Assembly Organized on a Clay Surface Facilitates Energy Transfer between an Encapsulated Donor and a Free Acceptor. Journal of Physical Chemistry C, 2014, 118, 10198-10203.	1.5	26

#	Article	IF	Citations
40	Quantum coherence in photosynthesis for efficient solar-energy conversion. Nature Physics, 2014, 10, 676-682.	6.5	481
41	Universally optimal noisy quantum walks on complex networks. New Journal of Physics, 2014, 16, 055015.	1.2	39
42	Quantum Coherence and its Impact on Biomimetic Light-Harvesting. Australian Journal of Chemistry, 2014, 67, 729.	0.5	2
43	Atomistic Study of Energy Funneling in the Light-Harvesting Complex of Green Sulfur Bacteria. Journal of the American Chemical Society, 2014, 136, 2048-2057.	6.6	78
44	Noisy Quantum Cellular Automata for Quantum versus Classical Excitation Transfer. Physical Review Letters, 2014, 112, 170403.	2.9	9
45	Light Harvesting in a Fluctuating Antenna. Journal of the American Chemical Society, 2014, 136, 8963-8972.	6.6	46
46	Strong antenna-enhanced fluorescence of a single light-harvesting complex shows photon antibunching. Nature Communications, 2014, 5, 4236.	5.8	112
47	Single-Molecule Spectroscopy Unmasks the Lowest Exciton State of the B850 Assembly in LH2 from Rps. acidophila. Biophysical Journal, 2014, 106, 2008-2016.	0.2	18
48	Ultrafast Energy Transfer in Biomimetic Multistrand Nanorings. Journal of the American Chemical Society, 2014, 136, 8217-8220.	6.6	82
49	Natural strategies for photosynthetic light harvesting. Nature Chemical Biology, 2014, 10, 492-501.	3.9	745
50	Practical witness for electronic coherences. Journal of Chemical Physics, 2014, 141, 244109.	1.2	14
51	Population inversion in two-level systems possessing permanent dipoles. Physical Review A, 2015, 92, .	1.0	15
52	Manipulation and visualization of two-dimensional phase distribution of vibrational wave functions in solid parahydrogen crystal. Physical Review B, 2015, 92, .	1.1	6
53	Dephasing-assisted selective incoherent quantum transport. Physical Review E, 2015, 92, 042103.	0.8	3
54	Observation of Noise-Assisted Transport in an All-Optical Cavity-Based Network. Physical Review Letters, 2015, 115, 083601.	2.9	52
55	Universality at Breakdown of Quantum Transport on Complex Networks. Physical Review Letters, 2015, 115, 120602.	2.9	21
56	Measures of electronic-vibrational entanglement and quantum coherence in a molecular system. Physical Review A, 2015, 92, .	1.0	10
57	Fluorescence polarization measures energy funneling in single light-harvesting antennasâ€”LH2 vs conjugated polymers. Scientific Reports, 2015, 5, 15080.	1.6	22

#	Article	IF	Citations
59	Injection- Seeded Optoplasmonic Amplifier in the Visible. Scientific Reports, 2014, 4, 6168.	1.6	18
61	Optimal Energy Transfer in Light-Harvesting Systems. Molecules, 2015, 20, 15224-15272.	1.7	38
62	Scale-estimation of quantum coherent energy transport in multiple-minima systems. Scientific Reports, 2015, 4, 5520.	1.6	6
63	The molecular origin of high DNA-repair efficiency by photolyase. Nature Communications, 2015, 6, 7302.	5.8	59
64	Spatial modulation of light transmission through a single microcavity by coupling of photosynthetic complex excitations to surface plasmons. Nature Communications, 2015, 6, 7334.	5.8	20
65	Theory of femtosecond coherent double-pump single-molecule spectroscopy: Application to light harvesting complexes. Journal of Chemical Physics, 2015, 142, 164106.	1.2	24
66	Fiber-Based Optical Nanoantennas for Single-Molecule Imaging and Sensing. Journal of Lightwave Technology, 2015, 33, 2371-2377.	2.7	12
67	Experimental Implementations of Two-Dimensional Fourier Transform Electronic Spectroscopy. Annual Review of Physical Chemistry, 2015, 66, 667-690.	4.8	223
68	Synchronous Measurement of Ultrafast Anisotropy Decay of the B850 in Bacterial LH2 Complex. Chinese Physics Letters, 2015, 32, 023101.	1.3	1
69	â€˜Momentum rejuvenationâ€™ underlies the phenomenon of noise-assisted quantum energy flow. New Journal of Physics, 2015, 17, 013057.	1.2	18
70	Effects of Different Quantum Coherence on the Pumpâ€“Probe Polarization Anisotropy of Photosynthetic Light-Harvesting Complexes: A Computational Study. Journal of Physical Chemistry Letters, 2015, 6, 1954-1960.	2.1	18
71	Statistical theory of designed quantum transport across disordered networks. Physical Review E, 2015, 91, 042137.	0.8	15
72	Quantum mechanics of excitation transport in photosynthetic complexes: a key issues review. Reports on Progress in Physics, 2015, 78, 082001.	8.1	46
73	Surface-Enhanced Hyper-Raman Scattering: A New Road to the Observation of Low Energy Molecular Vibrations. Journal of Physical Chemistry C, 2015, 119, 15547-15556.	1.5	19
74	Shaped and Feedback-Controlled Excitation of Single Molecules in the Weak-Field Limit. Journal of Physical Chemistry Letters, 2015, 6, 4032-4037.	2.1	26
75	Optical Signatures of Quantum Delocalization over Extended Domains in Photosynthetic Membranes. Journal of Physical Chemistry A, 2015, 119, 9043-9050.	1.1	3
76	Chlorine Doping Reduces Electronâ€“Hole Recombination in Lead Iodide Perovskites: Time-Domain Ab Initio Analysis. Journal of Physical Chemistry Letters, 2015, 6, 4463-4469.	2.1	103
77	Matching Nanoantenna Field Confinement to FRET Distances Enhances FÃ¶rster Energy Transfer Rates. Nano Letters, 2015, 15, 6193-6201.	4.5	85

#	Article	IF	Citations
78	Exploring the complexity of quantum control optimization trajectories. Physical Chemistry Chemical Physics, 2015, 17, 334-347.	1.3	6
79	Gap-filling functionality of energy transmitter on cascade energy transfer in a unimolecular anthracene/perylene/rhodamine system. Tetrahedron Letters, 2015, 56, 430-433.	0.7	2
80	Electrically driven plasmon mediated energy transfer between ZnO microwires and Au nanoparticles. Nanoscale, 2015, 7, 1081-1089.	2.8	18
81	The Unified Spacememory Network: from Cosmogenesis to Consciousness. NeuroQuantology, 2016, 14, .	0.1	10
82	Ultrafast Stimulated Emission Nanoscopy for Charge Dynamics, fs-Detection and Nanolasing. , 2016, , .		0
83	Proposal for probing energy transfer pathway by single-molecule pump-dump experiment. Scientific Reports, 2016, 6, 27535.	1.6	12
84	Optimizing single-nanoparticle two-photon microscopy by in situ adaptive control of femtosecond pulses. Applied Physics Letters, 2016, 109, 021103.	1.5	1
85	Disorder and dephasing as control knobs for light transport in optical fiber cavity networks. Scientific Reports, 2016, 6, 37791.	1.6	12
86	Visualizing coherent intermolecular dipoleâ€“dipole coupling in real space. Nature, 2016, 531, 623-627.	13.7	284
87	Pushing the Photon Limit: Nanoantennas Increase Maximal Photon Stream and Total Photon Number. Journal of Physical Chemistry Letters, 2016, 7, 1604-1609.	2.1	20
88	Ultrafast Meets Ultrasmall: Controlling Nanoantennas and Molecules. ACS Photonics, 2016, 3, 1401-1414.	3.2	60
89	Strong Coupling of Localized Surface Plasmons to Excitons in Light-Harvesting Complexes. Nano Letters, 2016, 16, 6850-6856.	4.5	60
90	Research on resonant (1+1) two photon transition amplitude by shaped ultrashort laser pulses. Optik, 2016, 127, 7656-7662.	1.4	0
91	Organic Optoelectronic Materials: Mechanisms and Applications. Chemical Reviews, 2016, 116, 13279-13412.	23.0	1,205
92	Ultrafast Single-Molecule Spectroscopy. Biological and Medical Physics Series, 2016, , 61-76.	0.3	0
93	Material science lesson from the biological photosystem. Nano Convergence, 2016, 3, 19.	6.3	18
94	Single molecule fluorescence spectroscopy for quantitative biological applications. Quantitative Biology, 2016, 4, 177-191.	0.3	4
95	CONSCIOUSNESS IN THE UNIVERSE AN UPDATED REVIEW OF THE â€œORCH ORâ€•THEORY. , 2016, , 517-599.		8

#	Article	IF	Citations
96	Simultaneously giant enhancement of FÃ¶rster resonance energy transfer rate and efficiency based on plasmonic excitations. Physical Review B, 2016, 94, .	1.1	30
97	Phase-dependent exciton transport and energy harvesting from thermal environments. Physical Review A, 2016, 93, .	1.0	28
98	Quantum-control-landscape structure viewed along straight paths through the space of control fields. Physical Review A, 2016, 93, .	1.0	7
99	Monotonic convergent quantum optimal control method with exact equality constraints on the optimized control fields. Physical Review A, 2016, 93, .	1.0	18
100	Complex quantum networks: From universal breakdown to optimal transport. Physical Review E, 2016, 93, 022304.	0.8	22
101	Frequency domain quantum optimal control under multiple constraints. Physical Review A, 2016, 93, .	1.0	33
102	Electron Spin Resonance (ESR) Based Quantum Computing. Biological Magnetic Resonance, 2016, , .	0.4	19
103	Optical absorption and electronic spectra of chlorophylls a and b. RSC Advances, 2016, 6, 109778-109785.	1.7	21
104	Can the Excited State Energy of a Pyrenyl Unit Be Directly Transferred to a Perylene Bisimide Moiety?. Journal of Physical Chemistry B, 2016, 120, 11961-11969.	1.2	5
105	Effect of Pulse Shaping on Observing Coherent Energy Transfer in Single Light-Harvesting Complexes. Journal of Physical Chemistry B, 2016, 120, 11637-11643.	1.2	3
106	Molecular Spins in Biological Systems. Biological Magnetic Resonance, 2016, , 51-77.	0.4	1
107	Fluorescence-excitation and Emission Spectroscopy on Single FMO Complexes. Scientific Reports, 2016, 6, 31875.	1.6	9
108	Linguistics and Quantum Theory: Epistemological Perspectives. , 2016, , .		1
109	Chain mapping approach of Hamiltonian for FMO complex using associated, generalized and exceptional Jacobi polynomials. International Journal of Modern Physics B, 2016, 30, 1650107.	1.0	2
110	Engineering nanometre-scale coherence in soft matter. Nature Chemistry, 2016, 8, 941-945.	6.6	51
111	Plasmonic nanofocusing â€“ grey holes for light. Advances in Physics: X, 2016, 1, 297-330.	1.5	23
112	Quantum Coherence Facilitates Efficient Charge Separation at a MoS₂/MoSe₂ van der Waals Junction. Nano Letters, 2016, 16, 1996-2003.	4.5	225
113	Ultrafast energy relaxation in single light-harvesting complexes. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2934-2939.	3.3	35

#	Article	IF	Citations
114	Quantum Transport on Disordered and Noisy Networks: An Interplay of Structural Complexity and Uncertainty. Annual Review of Condensed Matter Physics, 2016, 7, 223-248.	5.2	30
115	Quantum metrology and its application in biology. Physics Reports, 2016, 615, 1-59.	10.3	274
116	Protein Configuration Landscape Fluctuations Revealed by Exciton Transition Polarizations in Single Light Harvesting Complexes. Journal of Physical Chemistry B, 2016, 120, 724-732.	1.2	4
117	Breaking the Symmetry in Molecular Nanorings. Journal of Physical Chemistry Letters, 2016, 7, 332-338.	2.1	20
118	The ultrafast coherent control of fine green emission in Er3+ ion system by the shaped ultra-short laser pulses. Optics Communications, 2016, 359, 216-220.	1.0	0
119	Quantum Chemical Studies of Light Harvesting. Chemical Reviews, 2017, 117, 294-343.	23.0	262
120	Single-Molecule Fluorescence Spectroscopy of Photosynthetic Systems. Chemical Reviews, 2017, 117, 860-898.	23.0	87
121	Theory of coherent control with quantum light. New Journal of Physics, 2017, 19, 013009.	1.2	32
122	Regulating the Energy Flow in a Cyanobacterial Light-Harvesting Antenna Complex. Journal of Physical Chemistry B, 2017, 121, 1240-1247.	1.2	23
123	The quantum basis of spatiotemporality in perception and consciousness. Progress in Biophysics and Molecular Biology, 2017, 130, 15-25.	1.4	41
124	Rapid and robust control of single quantum dots. Light: Science and Applications, 2017, 6, e16239-e16239.	7.7	18
125	Light fields in complex media: Mesoscopic scattering meets wave control. Reviews of Modern Physics, 2017, 89, .	16.4	403
126	Revisiting the combined photon echo and single-molecule studies of low-temperature dynamics in a dye-doped polymer. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600414.	1.2	19
127	Ultrafast coherent energy transfer with high efficiency based on plasmonic nanostructures. Journal of Chemical Physics, 2017, 146, 144101.	1.2	9
128	Atomistic non-adiabatic dynamics of the LH2 complex with a GPU-accelerated ab initio exciton model. Physical Chemistry Chemical Physics, 2017, 19, 14924-14936.	1.3	64
129	DNA Lipoplexâ€Based Lightâ€Harvesting Antennae. Advanced Functional Materials, 2017, 27, 1700212.	7.8	10
130	Quantum design of photosynthesis for bio-inspired solar-energy conversion. Nature, 2017, 543, 355-365.	13.7	319
131	Quantum Coherent Excitation Energy Transfer by Carotenoids in Photosynthetic Light Harvesting. Journal of Physical Chemistry Letters, 2017, 8, 5141-5147.	2.1	23

#	Article	IF	Citations
132	Direct single-molecule measurements of phycocyanobilin photophysics in monomeric C-phycocyanin. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9779-9784.	3.3	39
133	Controlling FRET Enhancement Using Plasmon Modes on Gold Nanogratings. Journal of Physical Chemistry C, 2017, 121, 22353-22360.	1.5	7
134	Bio-Optics and Bio-Inspired Optical Materials. Chemical Reviews, 2017, 117, 12705-12763.	23.0	286
135	Ultrafast fluorescent decay induced by metal-mediated dipoleâ€“dipole interaction in two-dimensional molecular aggregates. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10017-10022.	3.3	14
136	Optical determination of the electronic coupling and intercalation geometry of thiazole orange homodimer in DNA. Journal of Chemical Physics, 2017, 147, 055101.	1.2	17
137	Exciton Transport in Molecular Aggregates â€“ From Natural Antennas to Synthetic Chromophore Systems. Advanced Energy Materials, 2017, 7, 1700236.	10.2	249
138	Highly efficient FRET from aggregation-induced emission to BODIPY emission based on hostâ€“guest interaction for mimicking the light-harvesting system. RSC Advances, 2017, 7, 36021-36025.	1.7	26
139	Quantum Redirection of Antenna Absorption to Photosynthetic Reaction Centers. Journal of Physical Chemistry Letters, 2017, 8, 6015-6021.	2.1	13
140	Ultrafast Plasmonics. World Scientific Series in Nanoscience and Nanotechnology, 2017, , 255-306.	0.1	1
141	Direct Imaging of Frenkel Exciton Transport by Ultrafast Microscopy. Accounts of Chemical Research, 2017, 50, 1725-1733.	7.6	38
142	Peculiarities of migration and capture of a quantum particle in a chain with traps. Chemical Physics Letters, 2017, 682, 77-81.	1.2	3
143	Importance and Nature of Short-Range Excitonic Interactions in Light Harvesting Complexes and Organic Semiconductors. Journal of Chemical Theory and Computation, 2017, 13, 3754-3763.	2.3	25
144	Vibronic coupling in organic semiconductors for photovoltaics. Physical Chemistry Chemical Physics, 2017, 19, 18813-18830.	1.3	70
145	Perfect quantum excitation energy transport via single edge perturbation in a complete network. European Physical Journal B, 2017, 90, 1.	0.6	2
147	Trapped Ion Spectroscopy. Springer Theses, 2017, , 205-232.	0.0	0
148	Quantum-Enhanced Nonlinear Spectroscopy. Springer Theses, 2017, , .	0.0	1
149	Scattering theory of efficient quantum transport across finite networks. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 224003.	0.6	2
150	Room-temperature ultrafast nonlinear spectroscopy of single molecules with broadband detection. , 2017, , .		0

#	Article	IF	Citations
151	In-line interferometer for broadband near-field scanning optical spectroscopy. Optics Express, 2017, 25, 15504.	1.7	1
152	Optimal and robust control of quantum state transfer by shaping the spectral phase of ultrafast laser pulses. Physical Chemistry Chemical Physics, 2018, 20, 9498-9506.	1.3	27
153	Artificial light harvesting by dimerized MÃ¶bius ring. Physical Review E, 2018, 97, 042124.	0.8	13
154	Photosynthetic Energy Transfer at the Quantum/Classical Border. Trends in Plant Science, 2018, 23, 497-506.	4.3	18
155	Robust light harvesting by a noisy antenna. Physical Chemistry Chemical Physics, 2018, 20, 4360-4372.	1.3	13
156	Time-resolved single-molecule fluorescence microscopy: Pumpâ€“probe scheme employing bursts of pulses and gated photon counting. Optics Communications, 2018, 420, 215-218.	1.0	3
157	Quantum modeling of ultrafast photoinduced charge separation. Journal of Physics Condensed Matter, 2018, 30, 013002.	0.7	29
158	Strong Lightâ€“Matter Interaction in Quantum Emitter/Metal Hybrid Nanostructures. ACS Photonics, 2018, 5, 2-23.	3.2	168
159	From isolated light-harvesting complexes to the thylakoid membrane: a single-molecule perspective. Nanophotonics, 2018, 7, 81-92.	2.9	12
160	The future of quantum biology. Journal of the Royal Society Interface, 2018, 15, 20180640.	1.5	136
161	Probing quantum features of photosynthetic organisms. Npj Quantum Information, 2018, 4, .	2.8	25
162	Adaptive Quantum Optics with Spatially Entangled Photon Pairs. Physical Review Letters, 2018, 121, 233601.	2.9	42
163	Coherent phenomena in photosynthetic light harvesting: part twoâ€”observations in biological systems. Biophysical Reviews, 2018, 10, 1443-1463.	1.5	14
164	Spatially-resolved fluorescence-detected two-dimensional electronic spectroscopy probes varying excitonic structure in photosynthetic bacteria. Nature Communications, 2018, 9, 4219.	5.8	86
165	Characterization of Vibrational Coherence in Monomeric Bacteriochlorophyll a by Two-Dimensional Electronic Spectroscopy. Journal of Physical Chemistry Letters, 2018, 9, 6631-6637.	2.1	25
166	Efficient quantum simulation of photosynthetic light harvesting. Npj Quantum Information, 2018, 4, .	2.8	92
167	Excitation energy transport with noise and disorder in a model of the selectivity filter of an ion channel. Journal of Physics Condensed Matter, 2018, 30, 415101.	0.7	4
168	Inhomogeneity of the Ultrafast Excited State Dynamics in Organic Photovoltaic Materials Measured at Nanoscale. Journal of Physical Chemistry C, 2018, 122, 22201-22209.	1.5	6

#	Article	IF	Citations
169	Probing quantum coherence in ultrafast molecular processes: An ab initio approach to open quantum systems. Journal of Chemical Physics, 2018, 148, 204112.	1.2	18
170	A synthetic biological quantum optical system. Nanoscale, 2018, 10, 13064-13073.	2.8	10
171	Coherent two-dimensional fluorescence micro-spectroscopy. Optics Express, 2018, 26, 3915.	1.7	44
172	Perspectives and Outline. Springer Theses, 2018, , 3-19.	0.0	0
173	Quantum Effects in Biological Systems. Springer Theses, 2018, , 171-195.	0.0	0
174	Simulation of Femtosecond Phase-Locked Double-Pump Signals of Individual Light-Harvesting Complexes LH2. Journal of Physical Chemistry Letters, 2018, 9, 4488-4494.	2.1	8
175	Ultrafast Coherent Control of Condensed Matter with Attosecond Precision. Accounts of Chemical Research, 2018, 51, 1174-1184.	7.6	11
176	Delocalized excitons in natural light-harvesting complexes. Reviews of Modern Physics, 2018, 90, .	16.4	150
177	Theory of Excitonic Delocalization for Robust Vibronic Dynamics in LH2. Journal of Physical Chemistry Letters, 2018, 9, 3446-3453.	2.1	20
178	Two-photon induced ultrafast coherence decay of highly excited states in single molecules. New Journal of Physics, 2019, 21, 045001.	1.2	7
179	Cavity-Modified Exciton Dynamics in Photosynthetic Units. Journal of Physical Chemistry Letters, 2019, 10, 4252-4258.	2.1	17
180	Signatures of Strong Vibronic Coupling Mediating Coherent Charge Transfer in Two-Dimensional Electronic Spectroscopy. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2019, 74, 721-737.	0.7	10
181	A Quantum Electrodynamics Description of Quantum Coherence and Damping in Condensed-Phase Energy Transfer. Journal of Physical Chemistry Letters, 2019, 10, 5654-5661.	2.1	13
182	Strongly Coupled Phenazineâ€“Porphyrin Dyads: Light-Harvesting Molecular Assemblies with Broad Absorption Coverage. ACS Applied Materials & Interfaces, 2019, 11, 8000-8008.	4.0	36
183	Strong Dipole Interaction between Chlorophyll-a Molecules and Surface Plasmon Polaritons. Journal of Physical Chemistry C, 2019, 123, 16965-16972.	1.5	6
184	Quantum coherences reveal excited-state dynamics in biophysical systems. Nature Reviews Chemistry, 2019, 3, 477-490.	13.8	51
185	Which-way interference within ringlike unit cells for efficient energy transfer. Physical Review A, 2019, 99, .	1.0	2
186	Vectorial near-field coupling. Nature Nanotechnology, 2019, 14, 698-704.	15.6	29

#	Article	IF	Citations
187	Intrinsic Photophysics of Lightâ€harvesting Chargeâ€tagged Chlorophyll a and b Pigments. Chemistry - A European Journal, 2019, 25, 9153-9158.	1.7	21
188	Ultrafast Dynamic Microscopy of Carrier and Exciton Transport. Annual Review of Physical Chemistry, 2019, 70, 219-244.	4.8	75
189	Waveâ€"Particle Duality in Complex Quantum Systems. Journal of Physical Chemistry Letters, 2019, 10, 2121-2129.	2.1	5
190	Monitoring of Nonadiabatic Effects in Individual Chromophores by Femtosecond Double-Pump Single-Molecule Spectroscopy: A Model Study. Molecules, 2019, 24, 231.	1.7	4
191	Ultralong UV/mechano-excited room temperature phosphorescence from purely organic cluster excitons. Nature Communications, 2019, 10, 5161.	5.8	216
192	Structure and Efficiency in Bacterial Photosynthetic Light Harvesting. Journal of Physical Chemistry Letters, 2019, 10, 7383-7390.	2.1	23
193	Ultrafast stimulated emission microscopy of single nanocrystals. Science, 2019, 366, 1240-1243.	6.0	10
194	Quantum Coherent Modulation-Enhanced Single-Molecule Imaging Microscopy. Journal of Physical Chemistry Letters, 2019, 10, 223-228.	2.1	11
195	Ultrafast measurements of the dynamics of single nanostructures: a review. Reports on Progress in Physics, 2019, 82, 016401.	8.1	50
196	Plasmonics-attended NSET and PRET for analytical applications. TrAC - Trends in Analytical Chemistry, 2020, 124, 115805.	5.8	37
197	Impact of a charged neighboring particle on FÃ¶rster resonance energy transfer (FRET). Journal of Physics Condensed Matter, 2020, 32, 095305.	0.7	5
198	Ultrafast Spectroscopy: State of the Art and Open Challenges. Journal of the American Chemical Society, 2020, 142, 3-15.	6.6	183
199	Coherent and incoherent theories for photosynthetic energy transfer. Science Bulletin, 2020, 65, 318-328.	4.3	26
200	Simulation of Nonradiative Energy Transfer in Photosynthetic Systems Using a Quantum Computer. Complexity, 2020, 2020, 1-12.	0.9	4
201	Effect of charge-transfer states on the vibrationally resolved absorption spectra and exciton dynamics in ZnPc aggregates: Simulations from a non-Makovian stochastic SchrÃ¶dinger equation. Journal of Chemical Physics, 2020, 153, 034116.	1.2	18
202	Investigating ultrafast two-pulse experiments on single DNQDI fluorophores: a stochastic quantum approach. Physical Chemistry Chemical Physics, 2020, 22, 16734-16746.	1.3	8
203	A Time-Dependent Quantum Approach to Allostery and a Comparison With Light-Harvesting in Photosynthetic Phenomenon. Frontiers in Molecular Biosciences, 2020, 7, 156.	1.6	1
204	Single-molecule confinement with uniform electrodynamic nanofluidics. Lab on A Chip, 2020, 20, 3249-3257.	3.1	6

#	Article	IF	Citations
205	Excitonâ€“Exciton Annihilation as a Probe of Exciton Diffusion in Large Porphyrin Nanorings. Journal of Physical Chemistry C, 2020, 124, 18416-18425.	1.5	8
206	Role of the multiple-excitation manifold in a driven quantum simulator of an antenna complex. Physical Review A, 2020, 102, .	1.0	1
207	Coherent Effects in Charge Transport in Molecular Wires: Toward a Unifying Picture of Long-Range Hole Transfer in DNA. Journal of Physical Chemistry Letters, 2020, 11, 7769-7775.	2.1	16
208	Quantum simulation of clustered photosynthetic light harvesting in a superconducting quantum circuit. Quantum Engineering, 2020, 2, e53.	1.2	11
209	Photon Correlation Spectroscopy as a Witness for Quantum Coherence. Physical Review Letters, 2020, 124, 203601.	2.9	23
210	Excitation energy transport in DNA modelled by multi-chromophoric field-induced surface hopping. Physical Chemistry Chemical Physics, 2020, 22, 16536-16551.	1.3	9
211	Room-Temperature Excitationâ€“Emission Spectra of Single LH2 Complexes Show Remarkably Little Variation. Journal of Physical Chemistry Letters, 2020, 11, 2430-2435.	2.1	4
212	Non-covalent interaction controlled 2D organic semiconductor films: Molecular self-assembly, electronic and optical properties, and electronic devices. Surface Science Reports, 2020, 75, 100481.	3.8	24
213	System-Aufstellungen und ihre naturwissenschaftliche BegrÃ¼ndung. Systemaufstellungen in Wissenschaft Und Praxis, 2020, , .	0.0	4
214	Super-resolution nanoscopy by coherent control on nanoparticle emission. Science Advances, 2020, 6, eaaw6579.	4.7	10
215	Theoretical study of excitation energy transfer and nonlinear spectroscopy of photosynthetic lightâ€harvesting complexes using the nonperturbative reduced dynamics method. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2021, 11, e1498.	6.2	26
216	Supramolecular Ladder Assemblies as a Model for Probing Electronic Interactions between Multiple Stacked Ï€â€Conjugated Systems. ChemPhysChem, 2021, 22, 178-183.	1.0	1
217	Visualizing Quantum Coherence Based on Single-Molecule Coherent Modulation Microscopy. Nano Letters, 2021, 21, 1477-1483.	4.5	4
218	Bioinspired solar cells: contribution of biology to light harvesting systems. , 2021, , 593-632.		3
219	Do photosynthetic complexes use quantum coherence to increase their efficiency? Probably not. Science Advances, 2021, 7, .	4.7	19
220	Efficient quantum simulation of open quantum dynamics at various Hamiltonians and spectral densities. Frontiers of Physics, 2021, 16, 1.	2.4	24
221	Exploring the Spatial Features of Electronic Transitions in Molecular and Biomolecular Systems by Swift Electrons. Journal of Chemical Theory and Computation, 2021, 17, 2364-2373.	2.3	1
222	Insights into Photosynthetic Energy Transfer Gained from Free-Energy Structure: Coherent Transport, Incoherent Hopping, and Vibrational Assistance Revisited. Journal of Physical Chemistry B, 2021, 125, 3286-3295.	1.2	9

#	Article	IF	Citations
223	Model-Independent Simulation Complexity of Complex Quantum Dynamics. Physical Review Letters, 2021, 126, 150402.	2.9	2
224	Single organic molecules for photonic quantum technologies. Nature Materials, 2021, 20, 1615-1628.	13.3	79
225	Roadmap on bio-nano-photonics. Journal of Optics (United Kingdom), 2021, 23, 073001.	1.0	4
226	Free Charge Carriers in Homo-Sorted Ï€-Stacks of Donorâ€“Acceptor Conjugates. Chemical Reviews, 2021, 121, 8234-8284.	23.0	64
227	Patterned silver island paths as high-contrast optical sensing platforms. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 268, 115124.	1.7	0
228	Optimization of selective two-photon absorption in cavity polaritons. Journal of Chemical Physics, 2021, 154, 214114.	1.2	6
229	Energy Transfer Dynamics in Light-Harvesting Complex 2 Variants Containing Oxidized B800 Bacteriochlorophyll a. Journal of Physical Chemistry B, 2021, 125, 6830-6836.	1.2	4
230	Perfect swap and transfer of arbitrary quantum states. Optics Communications, 2021, 496, 126870.	1.0	2
231	Quantum Biology: An Update and Perspective. Quantum Reports, 2021, 3, 80-126.	0.6	74
233	Topologically protected long-range coherent energy transfer. Photonics Research, 2020, 8, B39.	3.4	6
235	Self-Organization and Coherency in Biology and Medicine. Open Journal of Biophysics, 2014, 04, 119-146.	0.7	8
236	Design Principles for Long-Range Energy Transfer at Room Temperature. Physical Review X, 2021, 11, .	2.8	14
237	Further Extensions. Springer Theses, 2015, , 169-178.	0.0	0
238	Migration of a quantum particle in the chain with traps: quantum yields of capture. Reports National Academy of Science of Ukraine, 2017, , 44-51.	0.0	0
239	Molecular Mechanism of Self-Fueling in Biological Systems by Relativity of Code, Energy, and Mass. , 2018, , 71-87.		0
240	Coherent Energy Transfer and the Potential Implications for Consciousness. Journal of Cognitive Science, 2018, 19, 115-124.	0.2	5
241	Immune System and Mind-Body Medicine â€“ An Overview. , 2019, , 1-19.		2
243	Immune System and Mind-Body Medicine: An Overview. , 2020, , 97-115.		0

#	Article	IF	Citations
244	Coherent Processes in Photosynthetic Energy Transport and Transduction. Advances in Photosynthesis and Respiration, 2020, , 397-439.	1.0	2
245	Nonequilibrium Work Relations and Response Theories in Ensemble Quantum Systems. Journal of Physical Chemistry Letters, 2021, 12, 11151-11157.	2.1	0
246	Strong coupling between an optical microcavity and photosystems in single living cyanobacteria. Journal of Biophotonics, 2021, , e202100136.	1.1	3
247	Observation of robust energy transfer in the photosynthetic protein allophycocyanin using single-molecule pumpâ€“probe spectroscopy. Nature Chemistry, 2022, 14, 153-159.	6.6	16
248	Coherent Two-Dimensional and Broadband Electronic Spectroscopies. Chemical Reviews, 2022, 122, 4257-4321.	23.0	47
249	Active control of strong plasmonâ€“exciton coupling in biomimetic pigmentâ€“polymer antenna complexes grown by surface-initiated polymerisation from gold nanostructures. Chemical Science, 2022, 13, 2405-2417.	3.7	5
250	Light-Harvesting Crystals Formed from BODIPY-Proline Biohybrid Conjugates: Antenna Effects and Excitonic Coupling. Journal of Physical Chemistry A, 2022, 126, 1530-1541.	1.1	4
251	Trajectory Ensemble Methods Provide Single-Molecule Statistics for Quantum Dynamical Systems. Journal of Chemical Theory and Computation, 2022, 18, 2047-2061.	2.3	3
252	The hierarchy of Davydov's AnsÃtze and its applications. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2022, 12, .	6.2	22
253	Time-reversal-symmetry breaking and chiral quantum state manipulation in plasmonic nanorings. Physical Review A, 2022, 105, .	1.0	4
255	Quantum Coherence in Chemical and Photobiological Systems. ACS Symposium Series, 0, , 411-436.	0.5	1
256	Exact simulation of pigment-protein complexes unveils vibronic renormalization of electronic parameters in ultrafast spectroscopy. Nature Communications, 2022, 13, .	5.8	14
257	Wavelike electronic energy transfer in donorâ€“acceptor molecular systems through quantum coherence. Nature Nanotechnology, 2022, 17, 729-736.	15.6	19
258	Realâ€Time Feedbackâ€Driven Singleâ€Particle Tracking: A Survey and Perspective. Small, 2022, 18, .	5.2	10
259	Ab initio simulation of laser-induced electronic and vibrational coherence. Physical Review B, 2022, 106, .	1.1	5
260	Quantum Interference Paves the Way for Long-Lived Electronic Coherences. Physical Review Letters, 2022, 129, .	2.9	7
261	Controlling photosynthetic energy conversion by small conformational changes. Physiologia Plantarum, 2022, 174, .	2.6	2
262	Confinement-Tunable Transition Dipole Moment Orientation in Perovskite Nanoplatelet Solids and Binary Blends. ACS Nano, 2022, 16, 18459-18471.	7.3	2

#	Article	IF	Citations
263	Recent advances in quantum nanophotonics: plexcitonic and vibro-polaritonic strong coupling and its biomedical and chemical applications. Nanophotonics, 2023, 12, 413-439.	2.9	7
264	Quantum coherent energy transport in the Fennaâ€“Matthewsâ€“Olson complex at low temperature. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	9
265	Large-scale FRET simulations reveal the control parameters of phycobilisome light-harvesting complexes. Journal of the Royal Society Interface, 2022, 19, .	1.5	3
269	Progress and Prospects in Optical Ultrafast Microscopy in the Visible Spectral Region: Transient Absorption and Two-Dimensional Microscopy. Journal of Physical Chemistry C, 2023, 127, 14557-14586.	1.5	5