Akihito Ishizaki

List of Publications by Year
in descending order

48	5,092	218677	265206
papers	citations	26 h-index	42 g-index

48	48	48	2921
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Theoretical examination of quantum coherence in a photosynthetic system at physiological temperature. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17255-17260.	7.1	732
2	Unified treatment of quantum coherent and incoherent hopping dynamics in electronic energy transfer: Reduced hierarchy equation approach. Journal of Chemical Physics, 2009, 130, 234111.	3.0	581
3	Quantum entanglement in photosynthetic light-harvesting complexes. Nature Physics, 2010, 6, 462-467.	16.7	543
4	Using coherence to enhance function in chemical and biophysical systems. Nature, 2017, 543, 647-656.	27.8	477
5	Quantum Dynamics of System Strongly Coupled to Low-Temperature Colored Noise Bath: Reduced Hierarchy Equations Approach. Journal of the Physical Society of Japan, 2005, 74, 3131-3134.	1.6	403
6	On the adequacy of the Redfield equation and related approaches to the study of quantum dynamics in electronic energy transfer. Journal of Chemical Physics, 2009, 130, 234110.	3.0	346
7	Quantum coherence and its interplay with protein environments in photosynthetic electronic energy transfer. Physical Chemistry Chemical Physics, 2010, 12, 7319.	2.8	307
8	Quantum Coherence in Photosynthetic Light Harvesting. Annual Review of Condensed Matter Physics, 2012, 3, 333-361.	14.5	224
9	Two-dimensional electronic spectroscopy and photosynthesis: Fundamentals and applications to photosynthetic light-harvesting. Chemical Physics, 2011, 386, 1-22.	1.9	157
10	Elucidation of the timescales and origins of quantum electronic coherence in LHCII. Nature Chemistry, 2012, 4, 389-395.	13.6	156
11	Nonperturbative non-Markovian quantum master equation: Validity and limitation to calculate nonlinear response functions. Chemical Physics, 2008, 347, 185-193.	1.9	105
12	Modeling vibrational dephasing and energy relaxation of intramolecular anharmonic modes for multidimensional infrared spectroscopies. Journal of Chemical Physics, 2006, 125, 084501.	3.0	104
13	On the Interpretation of Quantum Coherent Beats Observed in Two-Dimensional Electronic Spectra of Photosynthetic Light Harvesting Complexes. Journal of Physical Chemistry B, 2011, 115, 6227-6233.	2.6	95
14	Quantum superpositions in photosynthetic light harvesting: delocalization and entanglement. New Journal of Physics, 2010, 12, 055004.	2.9	89
15	Modeling, Calculating, and Analyzing Multidimensional Vibrational Spectroscopies. Accounts of Chemical Research, 2009, 42, 1270-1279.	15.6	82
16	Iterative path-integral algorithm versus cumulant time-nonlocal master equation approach for dissipative biomolecular exciton transport. New Journal of Physics, 2011, 13, 063040.	2.9	82
17	Dynamics of a Multimode System Coupled to Multiple Heat Baths Probed by Two-Dimensional Infrared Spectroscopy. Journal of Physical Chemistry A, 2007, 111, 9269-9276.	2.5	80
18	Impact of environmentally induced fluctuations on quantum mechanically mixed electronic and vibrational pigment states in photosynthetic energy transfer and 2D electronic spectra. Journal of Chemical Physics, 2015, 142, 212403.	3.0	80

#	Article	IF	Citations
19	Effect of high-frequency modes on singlet fission dynamics. Journal of Chemical Physics, 2017, 146, 044101.	3.0	61
20	Multidimensional vibrational spectroscopy for tunneling processes in a dissipative environment. Journal of Chemical Physics, 2005, 123, 014503.	3.0	35
21	Microscopic quantum coherence in a photosynthetic-light-harvesting antenna. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 3672-3691.	3.4	34
22	Fluctuations in Electronic Energy Affecting Singlet Fission Dynamics and Mixing with Charge-Transfer State: Quantum Dynamics Study. Journal of Physical Chemistry Letters, 2016, 7, 363-369.	4.6	32
23	Influence of weak vibrational-electronic couplings on 2D electronic spectra and inter-site coherence in weakly coupled photosynthetic complexes. Journal of Chemical Physics, 2015, 143, 065101.	3.0	31
24	Controlling the nonadiabatic electron-transfer reaction rate through molecular-vibration polaritons in the ultrastrong coupling regime. Scientific Reports, 2020, 10, 7318.	3.3	29
25	Spatial propagation of excitonic coherence enables ratcheted energy transfer. Physical Review E, 2012, 86, 041911.	2.1	28
26	Intramolecular Vibrations Complement the Robustness of Primary Charge Separation in a Dimer Model of the Photosystem II Reaction Center. Journal of Physical Chemistry Letters, 2018, 9, 4921-4929.	4.6	27
27	Quantum entanglement phenomena in photosynthetic light harvesting complexes. Procedia Chemistry, 2011, 3, 152-164.	0.7	25
28	An analytical continuation approach for evaluating emission lineshapes of molecular aggregates and the adequacy of multichromophoric FÃ¶rster theory. Journal of Chemical Physics, 2013, 138, 184107.	3.0	24
29	Control of Excitation Energy Transfer in Condensed Phase Molecular Systems by Floquet Engineering. Journal of Physical Chemistry Letters, 2018, 9, 1243-1248.	4.6	19
30	Non-Markovian Quantum-Classical Ratchet for Ultrafast Long-Range Electron-Hole Separation in Condensed Phases. Physical Review Letters, 2018, 121, 026001.	7.8	14
31	A variational master equation approach to quantum dynamics with off-diagonal coupling in a sub-Ohmic environment. Journal of Chemical Physics, 2016, 144, 204106.	3.0	13
32	Control of quantum dynamics of electron transfer in molecular loop structures: Spontaneous breaking of chiral symmetry under strong decoherence. Physical Review B, 2019, 99, .	3.2	12
33	Probing excited-state dynamics with quantum entangled photons: Correspondence to coherent multidimensional spectroscopy. Journal of Chemical Physics, 2020, 153, 051102.	3.0	10
34	Prerequisites for Relevant Spectral Density and Convergence of Reduced Density Matrices at Low Temperatures. Journal of the Physical Society of Japan, 2020, 89, 015001.	1.6	10
35	Generation of pseudo-sunlight via quantum entangled photons and the interaction with molecules. Physical Review Research, 2020, 2, .	3.6	10
36	Interactions between Quantum Mixing and the Environmental Dynamics Controlling Ultrafast Photoinduced Electron Transfer and Its Temperature Dependence. Chemistry Letters, 2013, 42, 1406-1408.	1.3	9

#	Article	IF	Citations
37	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.	2.6	9
38	Precise determination of excitation energies in condensed-phase molecular systems based on exciton-polariton measurements. Physical Review Research, 2019, 1, .	3.6	5
39	Achieving two-dimensional optical spectroscopy with temporal and spectral resolution using quantum entangled three photons. Journal of Chemical Physics, 2021, 155, 044101.	3.0	4
40	Influences of Quantum Mechanically Mixed Electronic and Vibrational Pigment States in 2D Electronic Spectra of Photosynthetic Systems: Strong Electronic Coupling Cases. Journal of the Chinese Chemical Society, 2016, 63, 49-56.	1.4	3
41	Application of indirect Hamiltonian tomography to complex systems with short coherence times. Quantum Information and Computation, 2012, 12, 763-774.	0.3	3
42	Open quantum system approaches to biological systems. , 0, , 14-52.		1
43	Tribute to Yoshitaka Tanimura. Journal of Physical Chemistry B, 2021, 125, 11785-11786.	2.6	1
44	Interpreting Coherence Beats in Numerically Exact Simulations of 2D Electronic Spectra. , 2014, , .		0
45	Interpreting Oscillations in Numerically Exact Simulations of 2D Electronic Spectra. Springer Proceedings in Physics, 2015, , 553-556.	0.2	0
46	Electronic Energy Transfer and Quantum Coherence in Photosynthetic Light Harvesting. The Review of Laser Engineering, 2013, 41, 391.	0.0	0
47	Interpreting Coherence Beats in Numerically Exact Simulations of 2D Electronic Spectra. , 2014, , .		0
48	Revealing the Excited State Dynamics of Betaine-30 using Two-dimensional Electronic-Vibrational Spectroscopy. , 2016, , .		0