

# Michael Thorwart

## List of Publications by Year in descending order

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132  
papers

4,396  
citations

94433

37  
h-index

114465

63  
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134  
all docs

134  
docs citations

134  
times ranked

3534  
citing authors

#	ARTICLE	IF	CITATIONS
1	Bath-induced decoherence in finite-size Majorana wires at non-zero temperature. <i>New Journal of Physics</i> , 2022, 24, 013033.	2.9	3
2	Controlled creation of quantum skyrmions. <i>Physical Review Research</i> , 2022, 4, .	3.6	14
3	Unique Signatures of Topological Phases in Two-Dimensional THz Spectroscopy. <i>Physical Review Letters</i> , 2022, 129, .	7.8	4
4	Role of impurity clusters for the current-driven motion of magnetic skyrmions. <i>Physical Review B</i> , 2021, 103, .	3.2	13
5	Bosonic Continuum Theory of One-Dimensional Lattice Anyons. <i>Physical Review Letters</i> , 2021, 126, 163201.	7.8	16
6	Ultrafast Charge Transfer and Relaxation at a Donor–Acceptor Interface. <i>Journal of Physical Chemistry B</i> , 2021, 125, 8869-8875.	2.6	5
7	Dissociation and localization dynamics of charge transfer excitons at a donor-acceptor interface. <i>Chemical Physics</i> , 2020, 528, 110525.	1.9	5
8	Intermolecular vibrations mediate ultrafast singlet fission. <i>Science Advances</i> , 2020, 6, .	10.3	42
9	Photoinduced Vibrations Drive Ultrafast Structural Distortion in Lead Halide Perovskite. <i>Journal of the American Chemical Society</i> , 2020, 142, 16569-16578.	13.7	30
10	Rotating edge-field driven processing of chiral spin textures in racetrack devices. <i>Scientific Reports</i> , 2020, 10, 20400.	3.3	6
11	Steering of the Skyrmion Hall Angle by Gate Voltages. <i>Physical Review Letters</i> , 2020, 124, 207202.	7.8	6
12	Time-Resolved Probing of the Nonequilibrium Structural Solvation Dynamics by the Time-Dependent Stokes Shift. <i>Journal of Physical Chemistry B</i> , 2020, 124, 5717-5722.	2.6	2
13	Quantum biology revisited. <i>Science Advances</i> , 2020, 6, eaaz4888.	10.3	266
14	Charge Transfer through Redox Molecular Junctions in Nonequilibrated Solvents. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 1729-1737.	4.6	14
15	Intramolecular vibrations enhance the quantum efficiency of excitonic energy transfer. <i>Photosynthesis Research</i> , 2020, 144, 137-145.	2.9	9
16	Vortex Majorana braiding in a finite time. <i>Physical Review Research</i> , 2020, 2, .	3.6	14
17	Does electronic coherence enhance anticorrelated pigment vibrations under realistic conditions?. <i>Journal of Chemical Physics</i> , 2019, 151, 114115.	3.0	11
18	Dragging of Magnetic Domain Walls by Interlayer Exchange. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1800621.	1.5	0

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19	Lack of long-lived quantum coherence in the photosynthetic energy transfer. EPJ Web of Conferences, 2019, 205, 09035.	0.3	2
20	Evidence and implications for exciton dissociation in lead halide perovskites. EPJ Web of Conferences, 2019, 205, 06018.	0.3	0
21	Winding Up Quantum Spin Helices: How Avoided Level Crossings Exile Classical Topological Protection. Physical Review Letters, 2019, 122, 097204.	7.8	11
22	Ultrafast Energy Transfer in Excitonically Coupled Molecules Induced by a Nonlocal Peierls Phonon. Journal of Physical Chemistry Letters, 2019, 10, 1206-1211.	4.6	15
23	Spectroscopic Signatures of the Dynamical Hydrophobic Solvation Shell Formation. Journal of Physical Chemistry B, 2019, 123, 2106-2113.	2.6	3
24	Tuning the order of the nonequilibrium quantum phase transition in a hybrid atom-optomechanical system. New Journal of Physics, 2019, 21, 113037.	2.9	6
25	Origin of poor doping efficiency in solution processed organic semiconductors. Chemical Science, 2018, 9, 4468-4476.	7.4	18
26	Nonequilibrium Quantum Phase Transition in a Hybrid Atom-Optomechanical System. Physical Review Letters, 2018, 120, 063605.	7.8	20
27	Direct Observation of Ultrafast Exciton Dissociation in Lead Iodide Perovskite by 2D Electronic Spectroscopy. ACS Photonics, 2018, 5, 852-860.	6.6	57
28	Implications of a temperature-dependent magnetic anisotropy for superparamagnetic switching. Journal of Magnetism and Magnetic Materials, 2018, 447, 96-100.	2.3	12
29	Nonequilibrium Quantum Dynamics of Current-Driven Magnetic Domain Walls and Skyrmions. Nanoscience and Technology, 2018, , 325-342.	1.5	0
30	Enhancing nanomechanical squeezing by atomic interactions in a hybrid atom-optomechanical system. Physical Review A, 2018, 98, .	2.5	12
31	Signature of the geometric phase in the wave packet dynamics on hypersurfaces. Chemical Physics, 2018, 515, 21-27.	1.9	9
32	Molecular polarizability anisotropy of liquid water revealed by terahertz-induced transient orientation. Nature Communications, 2018, 9, 2142.	12.8	63
33	Quantum mechanical response to a driven Caldeira-Leggett bath. Physical Review E, 2018, 98, 012122.	2.1	11
34	Toward tailoring Majorana bound states in artificially constructed magnetic atom chains on elemental superconductors. Science Advances, 2018, 4, eaar5251.	10.3	233
35	Antiresonant quantum transport in ac-driven molecular nanojunctions. Physical Review B, 2018, 97, .	3.2	2
36	Nonequilibrium quantum solvation with a time-dependent Onsager cavity. Journal of Chemical Physics, 2018, 148, 164301.	3.0	7

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37	Linear photoabsorption spectra and vertical excitation energies of microsolvated DNA nucleobases in aqueous solution. <i>Journal of Theoretical and Computational Chemistry</i> , 2017, 16, 1750028.	1.8	2
38	Primary Charge Separation in the Photosystem II Reaction Center Revealed by a Global Analysis of the Two-dimensional Electronic Spectra. <i>Scientific Reports</i> , 2017, 7, 12347.	3.3	34
39	Tracking an electronic wave packet in the vicinity of a conical intersection. <i>Journal of Chemical Physics</i> , 2017, 147, 074101.	3.0	15
40	Nature does not rely on long-lived electronic quantum coherence for photosynthetic energy transfer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 8493-8498.	7.1	235
41	Driven Bose-Hubbard model with a parametrically modulated harmonic trap. <i>Physical Review A</i> , 2017, 95, .	2.5	4
42	Second quantization of Leinaas-Myrheim anyons in one dimension and their relation to the Lieb-Liniger model. <i>Physical Review B</i> , 2017, 96, .	3.2	9
43	Skyrmion-“Anti-Skyrmion Pair Creation by in-Plane Currents. <i>Physical Review Letters</i> , 2017, 118, 267203.	7.8	50
44	Stueckelberg Oscillations in a Two-“State Two-“Path Model of a Conical Intersection. <i>Annalen Der Physik</i> , 2017, 529, 1600147.	2.4	5
45	Exploiting the magnetomechanical interaction for cooling magnetic molecular junctions by spin-polarized currents. <i>New Journal of Physics</i> , 2016, 18, 023026.	2.9	2
46	Dissipative dynamics of a quantum two-state system in presence of nonequilibrium quantum noise. <i>European Physical Journal B</i> , 2016, 89, 1.	1.5	2
47	Nonequilibrium Response of Nanosystems Coupled to Driven Quantum Baths. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2015-2019.	4.6	12
48	Dynamics of a quantum two-state system in a linearly driven quantum bath. <i>Physical Review A</i> , 2016, 94, .	2.5	11
49	Impact of Vibrational Coherence on the Quantum Yield at a Conical Intersection. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3491-3496.	4.6	25
50	BCS theory of driven superconductivity. <i>European Physical Journal B</i> , 2016, 89, 1.	1.5	35
51	Two-dimensional photon echoes reveal non-Markovian energy transfer in an excitonic dimer. <i>Physical Review E</i> , 2016, 94, 052146.	2.1	0
52	Quantum Mechanical Wave Packet Dynamics at a Conical Intersection with Strong Vibrational Dissipation. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 382-386.	4.6	37
53	Spin vibronics in interacting nonmagnetic molecular nanojunctions. <i>Physical Review B</i> , 2015, 92, .	3.2	9
54	Nonlocal spin torques in Rashba quantum wires with steep magnetic textures. <i>Physical Review B</i> , 2015, 92, .	3.2	4

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55	Efficient tool to calculate two-dimensional optical spectra for photoactive molecular complexes. <i>Physical Review E</i> , 2015, 92, 042708.	2.1	14
56	Observation of a Superradiant Mott Insulator in the Dicke-Hubbard Model. <i>Physical Review Letters</i> , 2015, 115, 230403.	7.8	165
57	Dissipative Landau-Zener quantum dynamics with transversal and longitudinal noise. <i>Physical Review A</i> , 2015, 91, .	2.5	36
58	Vibronically coherent speed-up of the excitation energy transfer in the Fenna-Matthews-Olson complex. <i>Physical Review E</i> , 2015, 91, 022706.	2.1	54
59	Focus on nonequilibrium fluctuation relations: from classical to quantum. <i>New Journal of Physics</i> , 2015, 17, 020201.	2.9	4
60	Nonequilibrium Phase Transition of Interacting Bosons in an Intra-Cavity Optical Lattice. <i>Physical Review Letters</i> , 2015, 114, 123601.	7.8	72
61	On the origin of oscillations in two-dimensional spectra of excitonically-coupled molecular systems. <i>New Journal of Physics</i> , 2015, 17, 072002.	2.9	31
62	Temperature and non-linear response of cantilever-type mechanical oscillators used in atomic force microscopes with interferometric detection. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	5
63	Two-Dimensional Electronic Spectroscopy of Light-Harvesting Complex II at Ambient Temperature: A Joint Experimental and Theoretical Study. <i>Journal of Physical Chemistry B</i> , 2015, 119, 12017-12027.	2.6	54
64	Probing chirality fluctuations in molecules by nonlinear optical spectroscopy. <i>Journal of Chemical Physics</i> , 2014, 141, 234305.	3.0	5
65	Hydration shell effects in the relaxation dynamics of photoexcited Fe-II complexes in water. <i>Journal of Chemical Physics</i> , 2014, 141, 044304.	3.0	9
66	Rashba-induced chirality switching of domain walls and suppression of the Walker breakdown. <i>Physical Review B</i> , 2014, 90, .	3.2	10
67	Cooling a Magnetic Nanoisland by Spin-Polarized Currents. <i>Physical Review Letters</i> , 2014, 113, 076602.	7.8	18
68	Photon-Assisted Confinement-Induced Resonances for Ultracold Atoms. <i>Physical Review Letters</i> , 2014, 112, 233201.	7.8	5
69	Nonequilibrium Quantum Dynamics of Biomolecular Excitons. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2014, , 61-78.	0.2	0
70	Iterative path integral summation for nonequilibrium quantum transport. <i>Physica Status Solidi (B): Basic Research</i> , 2013, 250, 2298-2314.	1.5	23
71	Enhanced quantum efficiency of light-harvesting in a biomolecular quantum "steam engine". <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 2693-2694.	7.1	16
72	Nonequilibrium Rashba field driven domain wall motion in ferromagnetic nanowires. <i>Physical Review B</i> , 2013, 87, .	3.2	9

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73	Nonequilibrium quantum fluctuation relations for harmonic systems in nonthermal environments. <i>New Journal of Physics</i> , 2013, 15, 105008.	2.9	6
74	Quantification of non-Markovian effects in the Fenna-Matthews-Olson complex. <i>Physical Review E</i> , 2013, 88, 062719.	2.1	30
75	Crossover from coherent to incoherent quantum dynamics due to sub-Ohmic dephasing. <i>Physical Review B</i> , 2013, 87, .	3.2	19
76	Organic $\pi$ -Conjugated Copolymers as Molecular Charge Qubits. <i>Physical Review Letters</i> , 2013, 111, 016802.	7.8	13
77	Non-equilibrium quantum dynamics of the magnetic Anderson model. <i>New Journal of Physics</i> , 2012, 14, 073049.	2.9	8
78	Quantum noise properties of multiphoton transitions in driven nonlinear resonators. <i>New Journal of Physics</i> , 2012, 14, 093024.	2.9	5
79	Noise-Induced Förster Resonant Energy Transfer between Orthogonal Dipoles in Photoexcited Molecules. <i>Physical Review Letters</i> , 2012, 108, 218302.	7.8	39
80	Iterative summation of path integrals for nonequilibrium molecular quantum transport. <i>Physical Review B</i> , 2012, 85, .	3.2	66
81	Quantum Coherence in Photosynthetic Exciton Dynamics. <i>Journal of Physics: Conference Series</i> , 2012, 376, 012025.	0.4	2
82	The role of discrete molecular modes in the coherent exciton dynamics in FMO. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 154009.	1.5	26
83	Exciton transfer dynamics and quantumness of energy transfer in the Fenna-Matthews-Olson complex. <i>Physical Review E</i> , 2011, 84, 041926.	2.1	119
84	Iterative path-integral algorithm versus cumulant time-nonlocal master equation approach for dissipative biomolecular exciton transport. <i>New Journal of Physics</i> , 2011, 13, 063040.	2.9	82
85	Qubit state detection using the quantum Duffing oscillator. <i>Physical Review B</i> , 2011, 84, .	3.2	5
86	Time-dependent transport through a correlated quantum dot with magnetic impurity. <i>Journal of Physics: Conference Series</i> , 2010, 245, 012021.	0.4	0
87	Dynamical bistability in the driven circuit QED. <i>Europhysics Letters</i> , 2010, 89, 17008.	2.0	22
88	Competition between relaxation and external driving in the dissipative Landau-Zener problem. <i>Chemical Physics</i> , 2010, 375, 234-242.	1.9	25
89	Quantum Coherence and Entanglement in Photosynthetic Light-Harvesting Complexes. <i>Semiconductors and Semimetals</i> , 2010, , 39-75.	0.7	3
90	Ultraslow quantum dynamics in a sub-Ohmic heat bath. <i>Physical Review B</i> , 2010, 81, .	3.2	58

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91	Comparative study of theoretical methods for non-equilibrium quantum transport. <i>New Journal of Physics</i> , 2010, 12, 043042.	2.9	111
92	Multiphonon transitions in the biomolecular energy transfer dynamics. <i>Journal of Chemical Physics</i> , 2010, 132, 194111.	3.0	44
93	Quantum coherent biomolecular energy transfer with spatially correlated fluctuations. <i>New Journal of Physics</i> , 2010, 12, 065043.	2.9	122
94	Quasienergy description of the driven Jaynes-Cummings model. <i>Physical Review B</i> , 2010, 82, .	3.2	22
95	Landau-Zener Transitions in a Dissipative Environment: Numerically Exact Results. <i>Physical Review Letters</i> , 2009, 103, 220401.	7.8	92
96	Enhanced quantum entanglement in the non-Markovian dynamics of biomolecular excitons. <i>Chemical Physics Letters</i> , 2009, 478, 234-237.	2.6	172
97	Coherent control of an effective two-level system in a non-Markovian biomolecular environment. <i>New Journal of Physics</i> , 2009, 11, 085001.	2.9	40
98	Molecular architectures based on $\pi$ -conjugated block copolymers for global quantum computation. <i>Journal of Physics: Conference Series</i> , 2009, 167, 012061.	0.4	1
99	Iterative real-time path integral approach to nonequilibrium quantum transport. <i>Physical Review B</i> , 2008, 77, .	3.2	190
100	Ultracold bosons in lattices with binary disorder. <i>Physical Review A</i> , 2008, 77, .	2.5	26
101	Interaction-Induced Harmonic Frequency Mixing in Quantum Dots. <i>Physical Review Letters</i> , 2008, 101, 036806.	7.8	3
102	Spin-boson dynamics: A unified approach from weak to strong coupling. <i>Europhysics Letters</i> , 2007, 80, 40005.	2.0	9
103	Current-induced nonadiabatic spin torques and domain-wall motion with spin relaxation in a ferromagnetic metallic wire. <i>Physical Review B</i> , 2007, 76, .	3.2	18
104	Spin-boson dynamics beyond conventional perturbation theories. <i>Physical Review B</i> , 2007, 76, .	3.2	24
105	Charge qubit entanglement in double quantum dots. <i>Europhysics Letters</i> , 2006, 76, 905-911.	2.0	12
106	Dynamics of the quantum Duffing oscillator in the driving induced bistable regime. <i>Chemical Physics</i> , 2006, 322, 135-143.	1.9	35
107	Phonon-induced decoherence and dissipation in donor-based charge qubits. <i>European Physical Journal B</i> , 2006, 53, 91-98.	1.5	19
108	Nonlinear response of a driven vibrating nanobeam in the quantum regime. <i>New Journal of Physics</i> , 2006, 8, 21-21.	2.9	46

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109	Transport through Intrinsic Quantum Dots in Interacting Carbon Nanotubes. , 2006, , 229-249.		0
110	Spectroscopy of a driven solid-state qubit coupled to a structured environment. European Physical Journal B, 2005, 45, 405-417.	1.5	22
111	Correlated sequential tunneling through a double barrier for interacting one-dimensional electrons. Physical Review B, 2005, 72, .	3.2	12
112	Nanoscale atomic waveguides with suspended carbon nanotubes. Applied Physics B: Lasers and Optics, 2005, 81, 1075-1080.	2.2	12
113	Correlated sequential tunneling in Tomonaga-Luttinger liquid quantum dots. Physica Status Solidi (B): Basic Research, 2005, 242, 218-225.	1.5	0
114	Exact Results for One-Dimensional Disordered Bosons with Strong Repulsion. Physical Review Letters, 2005, 94, 060402.	7.8	28
115	Non-Markovian dynamics of double quantum dot charge qubits due to acoustic phonons. Physical Review B, 2005, 72, .	3.2	58
116	Confinement-induced resonances for a two-component ultracold atom gas in arbitrary quasi-one-dimensional traps. New Journal of Physics, 2005, 7, 192-192.	2.9	49
117	Entanglement Spectroscopy of a Driven Solid-State Qubit and Its Detector. Physical Review Letters, 2004, 93, 267005.	7.8	49
118	Macroscopic quantum effects in a strongly driven nanomechanical resonator. Physical Review B, 2004, 70, .	3.2	53
119	Dynamics of the spin-boson model with a structured environment. Chemical Physics, 2004, 296, 333-344.	1.9	91
120	Multiphoton Transitions in a Macroscopic Quantum Two-State System. Physical Review Letters, 2004, 93, 037001.	7.8	75
121	Correlated Tunneling in Intramolecular Carbon Nanotube Quantum Dots. Physical Review Letters, 2002, 89, 196402.	7.8	33
122	Luttinger correlations and resonant tunneling in carbon nanotube intramolecular dots. Chemical Physics, 2002, 281, 477-487.	1.9	1
123	Haigerloch Cave Survived the War. Physics Today, 2001, 54, 93-94.	0.3	0
124	Strong Coupling Theory for Tunneling and Vibrational Relaxation in Driven Bistable Systems. Annals of Physics, 2001, 293, 15-66.	2.8	43
125	Decoherence and dissipation during a quantum XOR gate operation. Physical Review A, 2001, 65, .	2.5	100
126	Strong Coupling Theory for Driven Tunneling and Vibrational Relaxation. Physical Review Letters, 2000, 85, 860-863.	7.8	46

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127	Iterative algorithm versus analytic solutions of the parametrically driven dissipative quantum harmonic oscillator. <i>Physical Review E</i> , 2000, 62, 5808-5817.	2.1	65
128	Controlling decoherence of a two-level atom in a lossy cavity. <i>Journal of Modern Optics</i> , 2000, 47, 2905-2919.	1.3	51
129	Controlling decoherence of a two-level atom in a lossy cavity. <i>Journal of Modern Optics</i> , 2000, 47, 2905-2919.	1.3	6
130	Quantum steps in hysteresis loops. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 239, 233-238.	2.1	15
131	Quantum hysteresis and resonant tunneling in bistable systems. <i>Chemical Physics</i> , 1998, 235, 61-80.	1.9	58
132	Dynamical Hysteresis in Bistable Quantum Systems. <i>Physical Review Letters</i> , 1997, 78, 2503-2506.	7.8	40