

# Markus Mk Kowalewski

## List of Publications by Year in descending order

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65  
papers

1,593  
citations

304368

22  
h-index

301761

39  
g-index

69  
all docs

69  
docs citations

69  
times ranked

1417  
citing authors

#	ARTICLE	IF	CITATIONS
1	Cavity Femtochemistry: Manipulating Nonadiabatic Dynamics at Avoided Crossings. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2050-2054.	2.1	158
2	Catching Conical Intersections in the Act: Monitoring Transient Electronic Coherences by Attosecond Stimulated X-Ray Raman Signals. <i>Physical Review Letters</i> , 2015, 115, 193003.	2.9	127
3	Non-adiabatic dynamics of molecules in optical cavities. <i>Journal of Chemical Physics</i> , 2016, 144, 054309.	1.2	121
4	Simulating Coherent Multidimensional Spectroscopy of Nonadiabatic Molecular Processes: From the Infrared to the X-ray Regime. <i>Chemical Reviews</i> , 2017, 117, 12165-12226.	23.0	107
5	Novel photochemistry of molecular polaritons in optical cavities. <i>Faraday Discussions</i> , 2016, 194, 259-282.	1.6	83
6	Cavity Cooling of Internal Molecular Motion. <i>Physical Review Letters</i> , 2007, 99, 073001.	2.9	67
7	Monotonic Convergent Optimal Control Theory with Strict Limitations on the Spectrum of Optimized Laser Fields. <i>Physical Review Letters</i> , 2008, 101, 073002.	2.9	67
8	Optimal control theory – closing the gap between theory and experiment. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 14460.	1.3	63
9	Monitoring molecular nonadiabatic dynamics with femtosecond X-ray diffraction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6538-6547.	3.3	58
10	Manipulating molecules with quantum light. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 3278-3280.	3.3	52
11	Monitoring nonadiabatic avoided crossing dynamics in molecules by ultrafast X-ray diffraction. <i>Structural Dynamics</i> , 2017, 4, 054101.	0.9	47
12	A molecular conveyor belt by controlled delivery of single molecules into ultrashort laser pulses. <i>Nature Physics</i> , 2012, 8, 238-242.	6.5	38
13	Ultrafast dynamics in the vicinity of quantum light-induced conical intersections. <i>New Journal of Physics</i> , 2019, 21, 093040.	1.2	36
14	Monitoring Nonadiabatic Electron-Nuclear Dynamics in Molecules by Attosecond Streaking of Photoelectrons. <i>Physical Review Letters</i> , 2016, 117, 043201.	2.9	35
15	Multidimensional resonant nonlinear spectroscopy with coherent broadband x-ray pulses. <i>Physica Scripta</i> , 2016, T169, 014002.	1.2	30
16	X-Ray Sum Frequency Diffraction for Direct Imaging of Ultrafast Electron Dynamics. <i>Physical Review Letters</i> , 2018, 120, 243902.	2.9	30
17	Simulating photodissociation reactions in bad cavities with the Lindblad equation. <i>Journal of Chemical Physics</i> , 2020, 153, 234304.	1.2	30
18	Direct Transition from Triplet Excitons to Hybrid Light-Matter States via Triplet-Triplet Annihilation. <i>Journal of the American Chemical Society</i> , 2021, 143, 7501-7508.	6.6	27

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19	Nucleophilic Substitution Dynamics: Comparing Wave Packet Calculations with Experiment. <i>Journal of Physical Chemistry A</i> , 2014, 118, 4661-4669.	1.1	26
20	Nonadiabatic Dynamics May Be Probed through Electronic Coherence in Time-Resolved Photoelectron Spectroscopy. <i>Journal of Chemical Theory and Computation</i> , 2016, 12, 740-752.	2.3	25
21	Photoinduced molecular chirality probed by ultrafast resonant X-ray spectroscopy. <i>Structural Dynamics</i> , 2017, 4, 044006.	0.9	23
22	Atom Assisted Photochemistry in Optical Cavities. <i>Journal of Physical Chemistry A</i> , 2020, 124, 4672-4677.	1.1	23
23	Chemoselective quantum control of carbonyl bonds in Grignard reactions using shaped laser pulses. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 15780.	1.3	22
24	Electron Dynamics and Its Control in Molecules: From Diatomics to Larger Molecular Systems. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012, 18, 119-129.	1.9	21
25	Probing electronic and vibrational dynamics in molecules by time-resolved photoelectron, Auger-electron, and X-ray photon scattering spectroscopy. <i>Faraday Discussions</i> , 2015, 177, 405-428.	1.6	20
26	Time-Resolved Photoelectron Spectroscopy of Conical Intersections with Attosecond Pulse Trains. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 8103-8108.	2.1	19
27	Quantum Dynamics of a Photochemical Bond Cleavage Influenced by the Solvent Environment: A Dynamic Continuum Approach. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3480-3485.	2.1	18
28	Stimulated Raman signals at conical intersections: <i>Ab initio</i> surface hopping simulation protocol with direct propagation of the nuclear wave function. <i>Journal of Chemical Physics</i> , 2015, 143, 044117.	1.2	17
29	Quantum control with quantum light of molecular nonadiabaticity. <i>Physical Review A</i> , 2019, 100, .	1.0	17
30	Attosecond X-ray Diffraction Triggered by Core or Valence Ionization of a Dipeptide. <i>Journal of Chemical Theory and Computation</i> , 2018, 14, 329-338.	2.3	16
31	Searching for pathways involving dressed states in optimal control theory. <i>Faraday Discussions</i> , 2011, 153, 159.	1.6	14
32	Controlling the Photostability of Pyrrole with Optical Nanocavities. <i>Journal of Physical Chemistry A</i> , 2021, 125, 1142-1151.	1.1	14
33	Phase Cycling RT-TDDFT Simulation Protocol for Nonlinear XUV and X-ray Molecular Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 1072-1078.	2.1	13
34	Comment on "Self-Referenced Coherent Diffraction X-Ray Movie of Å...ngstrom- and Femtosecond-Scale Atomic Motion". <i>Physical Review Letters</i> , 2017, 119, 069301.	2.9	12
35	Transition-Metal-Free Boron-Carbon Bond Activation: Insertion of an NNP Fragment into a Boron-Carbon Bond. <i>European Journal of Inorganic Chemistry</i> , 2007, 2007, 5319-5322.	1.0	11
36	Cavity cooling of translational and ro-vibrational motion of molecules: <i>ab initio</i> -based simulations for OH and NO. <i>Applied Physics B: Lasers and Optics</i> , 2007, 89, 459-467.	1.1	10

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37	Cavity sideband cooling of trapped molecules. <i>Physical Review A</i> , 2011, 84, .	1.0	10
38	Diffraction-Detected Sum Frequency Generation: Novel Ultrafast X-ray Probe of Molecular Dynamics. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 3392-3396.	2.1	9
39	Triplet-triplet Annihilation Dynamics of Naphthalene. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	9
40	Capturing fingerprints of conical intersection: Complementary information of non-adiabatic dynamics from linear x-ray probes. <i>Structural Dynamics</i> , 2021, 8, 034101.	0.9	8
41	Multi-wave mixing in the high harmonic regime: monitoring electronic dynamics. <i>Optics Express</i> , 2021, 29, 4746.	1.7	7
42	Sustainable packaging of quantum chemistry software with the Nix package manager. <i>International Journal of Quantum Chemistry</i> , 2022, 122, .	1.0	7
43	Probing nonadiabatic dynamics with attosecond pulse trains and soft x-ray Raman spectroscopy. <i>Structural Dynamics</i> , 2022, 9, .	0.9	7
44	Impulsive UV-pump/X-ray probe study of vibrational dynamics in glycine. <i>Scientific Reports</i> , 2018, 8, 15466.	1.6	6
45	Reinvestigation of hydrazinium tetrafluoroborate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2006, 62, i248-i249.	0.2	5
46	Current vs Charge Density Contributions to Nonlinear X-ray Spectroscopy. <i>Journal of Chemical Theory and Computation</i> , 2016, 12, 3959-3968.	2.3	5
47	An adaptive interpolation scheme for molecular potential energy surfaces. <i>Journal of Chemical Physics</i> , 2016, 145, 084104.	1.2	4
48	Imaging of transition charge densities involving carbon core excitations by all X-ray sum-frequency generation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20170470.	1.6	4
49	Molecular wave packet dynamics decelerated by solvent environment: A theoretical approach. <i>EPJ Web of Conferences</i> , 2013, 41, 05043.	0.1	3
50	Electronic and non-adiabatic dynamics: general discussion. <i>Faraday Discussions</i> , 2016, 194, 209-257.	1.6	3
51	Spectroscopic Investigations of High-Nitrogen Compounds for Near-Infrared Illuminants. <i>Propellants, Explosives, Pyrotechnics</i> , 2014, 39, 166-172.	1.0	2
52	Multiscale wavelet decomposition of time-resolved X-ray diffraction signals in cyclohexadiene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 10269-10274.	3.3	2
53	Photoinduced bond oscillations in ironpentacarbonyl give delayed synchronous bursts of carbonmonoxide release. <i>Nature Communications</i> , 2022, 13, 1337.	5.8	2
54	Wave packet simulations of antiproton scattering on molecular hydrogen. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 195204.	0.6	1

#	ARTICLE	IF	CITATIONS
55	Cavity-enhanced sideband cooling of molecules to the ground state of a harmonic trap. , 2009, , .		0
56	Femtosecond pump-probe spectroscopy for single trapped molecular ions. EPJ Web of Conferences, 2013, 41, 02028.	0.1	0
57	Structural dynamics: general discussion. Faraday Discussions, 2016, 194, 583-620.	1.6	0
58	Attosecond processes and X-ray spectroscopy: general discussion. Faraday Discussions, 2016, 194, 427-462.	1.6	0
59	Direct imaging of ultrafast electron dynamics by X-ray sum frequency generation. EPJ Web of Conferences, 2019, 205, 03004.	0.1	0
60	Monitoring nonadiabatic dynamics in molecules by ultrafast X-Ray diffraction. EPJ Web of Conferences, 2019, 205, 09032.	0.1	0
61	Coherent Signatures of Conical Intersections in Ultrafast Raman and Photoelectron Spectroscopy. , 2016, , .		0
62	Manipulating Ultrafast Nonadiabatic Dynamics of Molecules in Optical Cavities. , 2016, , .		0
63	Monitoring Ultrafast Nonadiabatic Dynamics in Molecules by Streaking of Photoelectrons. , 2016, , .		0
64	Nonlinear optical signals and spectroscopy with quantum light and in microcavities. , 2017, , .		0
65	Cover Feature: Triplet-Triplet Annihilation Dynamics of Naphthalene (Chem. Eur. J. 40/2022). Chemistry - A European Journal, 2022, 28, .	1.7	0