

Uwe Manthe

List of Publications by Year in descending order

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145
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10,155
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26567

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33814

99
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158
all docs

158
docs citations

158
times ranked

3016
citing authors

#	ARTICLE	IF	CITATIONS
1	The multi-configurational time-dependent Hartree approach. Chemical Physics Letters, 1990, 165, 73-78.	1.2	1,678
2	Wavepacket dynamics within the multiconfiguration Hartree framework: General aspects and application to NOCl. Journal of Chemical Physics, 1992, 97, 3199-3213.	1.2	879
3	A multilayer multiconfigurational time-dependent Hartree approach for quantum dynamics on general potential energy surfaces. Journal of Chemical Physics, 2008, 128, 164116.	1.2	339
4	First-Principles Theory for the H + CH ₄ -> H ₂ + CH ₃ Reaction. Science, 2004, 306, 2227-2229.	6.0	238
5	Predicting Catalysis: Understanding Ammonia Synthesis from First-Principles Calculations. Journal of Physical Chemistry B, 2006, 110, 17719-17735.	1.2	192
6	Full dimensional quantum calculations of the CH ₄ +H ⁺ CH ₃ +H ₂ reaction rate. Journal of Chemical Physics, 2000, 113, 5115.	1.2	178
7	Dynamics on potential energy surfaces with a conical intersection: Adiabatic, intermediate, and diabatic behavior. Journal of Chemical Physics, 1990, 93, 1658-1669.	1.2	166
8	The cumulative reaction probability as eigenvalue problem. Journal of Chemical Physics, 1993, 99, 3411-3419.	1.2	165
9	Full-dimensional quantum mechanical calculation of the rate constant for the H ₂ +OH ⁺ H ₂ O+H reaction. Journal of Chemical Physics, 1993, 99, 10078-10081.	1.2	165
10	A time-dependent discrete variable representation for (multiconfiguration) Hartree methods. Journal of Chemical Physics, 1996, 105, 6989-6994.	1.2	164
11	New method for calculating wave packet dynamics: Strongly coupled surfaces and the adiabatic basis. Journal of Chemical Physics, 1990, 93, 345-356.	1.2	163
12	Multiconfigurational time-dependent Hartree study of complex dynamics: Photodissociation of NO ₂ . Journal of Chemical Physics, 1992, 97, 9062-9071.	1.2	162
13	Time-dependent photodissociation of methyl iodide with five active modes. Journal of Chemical Physics, 1994, 101, 5623-5646.	1.2	162
14	Quantum mechanical calculations of the rate constant for the H ₂ +OH ⁺ H ₂ O reaction: Full-dimensional results and comparison to reduced dimensionality models. Journal of Chemical Physics, 1994, 101, 4759-4768.	1.2	150
15	Accurate quantum calculations of thermal rate constants employing MCTDH: H ₂ +OH ⁺ H ₂ O and D ₂ +OH ⁺ D+DOH. Journal of Chemical Physics, 1998, 108, 4828-4836.	1.2	140
16	Comparison of Quantum Dynamics and Quantum Transition State Theory Estimates of the H + CH ₄ Reaction Rate. Journal of Physical Chemistry A, 2009, 113, 4468-4478.	1.1	140
17	Quantum Dynamics of the CH ₄ + H ⁺ CH ₃ + H ₂ Reaction: Full-Dimensional and Reduced Dimensionality Rate Constant Calculations. Journal of Physical Chemistry A, 2001, 105, 2522-2529.	1.1	120
18	The ground state tunneling splitting of malonaldehyde: Accurate full dimensional quantum dynamics calculations. Journal of Chemical Physics, 2004, 121, 9207-9210.	1.2	116

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19	Layered discrete variable representations and their application within the multiconfigurational time-dependent Hartree approach. <i>Journal of Chemical Physics</i> , 2009, 130, 054109.	1.2	115
20	Vibrational excitation in the transition state: The $\text{CH}_4 + \text{H} \rightarrow \text{CH}_3 + \text{H}_2$ reaction rate constant in an extended temperature interval. <i>Journal of Chemical Physics</i> , 2002, 116, 2863-2869.	1.2	109
21	Accurate quantum dynamics of a combustion reaction: Thermal rate constants of $\text{O}(^3\text{P}) + \text{CH}_4 \rightarrow \text{OH} + \text{CH}_3$. <i>Journal of Chemical Physics</i> , 2002, 117, 4635-4638.	1.2	103
22	Accurate potential energy surface and quantum reaction rate calculations for the $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ reaction. <i>Journal of Chemical Physics</i> , 2006, 124, 164307.	1.2	101
23	A multi-configurational time-dependent Hartree approach to the direct calculation of thermal rate constants. <i>Journal of Chemical Physics</i> , 1997, 106, 2646-2653.	1.2	97
24	The state averaged multiconfigurational time-dependent Hartree approach: Vibrational state and reaction rate calculations. <i>Journal of Chemical Physics</i> , 2008, 128, 064108.	1.2	94
25	The importance of an accurate CH_4 vibrational partition function in full dimensionality calculations of the $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ reaction. <i>Journal of Chemical Physics</i> , 2001, 114, 9683-9684.	1.2	89
26	Quantum dynamics of the $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ reaction in curvilinear coordinates: Full-dimensional and reduced dimensional calculations of reaction rates. <i>Journal of Chemical Physics</i> , 2010, 132, 084103.	1.2	89
27	Intramolecular proton transfer in malonaldehyde: Accurate multilayer multi-configurational time-dependent Hartree calculations. <i>Journal of Chemical Physics</i> , 2011, 134, 224305.	1.2	87
28	Accurate reaction rate calculations including internal and rotational motion: A statistical multi-configurational time-dependent Hartree approach. <i>Journal of Chemical Physics</i> , 1999, 110, 88-96.	1.2	85
29	Communication: Ro-vibrational control of chemical reactivity in $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$: Full-dimensional quantum dynamics calculations and a sudden model. <i>Journal of Chemical Physics</i> , 2014, 141, 051102.	1.2	84
30	A transition state view on reactive scattering: Initial state-selected reaction probabilities for the $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ reaction studied in full dimensionality. <i>Journal of Chemical Physics</i> , 2010, 133, 174124.	1.2	83
31	Loss of Memory in $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ State-to-State Reactive Scattering. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 338-342.	2.1	82
32	Rotational effects in the $\text{H}_2 + \text{OH} \rightarrow \text{H} + \text{H}_2\text{O}$ reaction rate: Full-dimensional close-coupling results. <i>Journal of Chemical Physics</i> , 2000, 113, 5725-5731.	1.2	81
33	Dissociation and predissociation on coupled electronic potential energy surfaces: A three-dimensional wave packet dynamical study. <i>Journal of Chemical Physics</i> , 1991, 95, 1708-1720.	1.2	79
34	Quantum-classical Liouville description of multidimensional nonadiabatic molecular dynamics. <i>Journal of Chemical Physics</i> , 2001, 114, 2001-2012.	1.2	79
35	Iterative diagonalization in the state-averaged multi-configurational time-dependent Hartree approach: Excited state tunneling splittings in malonaldehyde. <i>Journal of Chemical Physics</i> , 2012, 136, 054105.	1.2	78
36	Photoionization-induced dynamics of ammonia: Ab initio potential energy surfaces and time-dependent wave packet calculations for the ammonia cation. <i>Journal of Chemical Physics</i> , 2006, 124, 214306.	1.2	77

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37	Communications: A rigorous transition state based approach to state-specific reaction dynamics: Full-dimensional calculations for $\text{H}+\text{CH}_4 \rightarrow \text{H}_2+\text{CH}_3$. <i>Journal of Chemical Physics</i> , 2010, 132, 191101.	1.2	77
38	Iterative diagonalization within the multi-configurational time-dependent Hartree approach: calculation of vibrationally excited states and reaction rates. <i>Chemical Physics Letters</i> , 1996, 252, 71-76.	1.2	75
39	Quantum-mechanical calculation of the thermal rate constant for the $\text{H}_2+\text{Cl} \rightarrow \text{H}+\text{HCl}$ reaction. <i>Chemical Physics Letters</i> , 1999, 313, 647-654.	1.2	74
40	A new time-dependent approach to the direct calculation of reaction rates. <i>Journal of Chemical Physics</i> , 1995, 102, 9205-9213.	1.2	72
41	Combined iterative diagonalization and statistical sampling in accurate reaction rate calculations: Rotational effects in $\text{O}+\text{HCl} \rightarrow \text{OH}+\text{Cl}$. <i>Journal of Chemical Physics</i> , 2000, 112, 130-136.	1.2	72
42	Wavepacket dynamics in five dimensions. Photodissociation of methyl iodide. <i>Chemical Physics Letters</i> , 1993, 211, 7-14.	1.2	71
43	Multiconfigurational time-dependent Hartree calculations for tunneling splittings of vibrational states: Theoretical considerations and application to malonaldehyde. <i>Journal of Chemical Physics</i> , 2009, 131, 224109.	1.2	70
44	Reaction dynamics with the multi-layer multi-configurational time-dependent Hartree approach: $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ rate constants for different potentials. <i>Journal of Chemical Physics</i> , 2012, 137, 244106.	1.2	68
45	Full-dimensional and reduced-dimensional calculations of initial state-selected reaction probabilities studying the $\text{H} + \text{CH}_4 \rightarrow \text{H}_2 + \text{CH}_3$ reaction on a neural network PES. <i>Journal of Chemical Physics</i> , 2015, 142, 064309.	1.2	68
46	Resonances in the Entrance Channel of the Elementary Chemical Reaction of Fluorine and Methane. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 1122-1126.	7.2	66
47	Photoinduced dynamics of the valence states of ethene: A six-dimensional potential-energy surface of three electronic states with several conical intersections. <i>Journal of Chemical Physics</i> , 2003, 119, 1397-1411.	1.2	65
48	Quantum mechanical calculation of the $\text{OH}+\text{HCl} \rightarrow \text{H}_2\text{O}+\text{Cl}$ reaction rate: Full-dimensional accurate, centrifugal sudden, and J-shifting results. <i>Journal of Chemical Physics</i> , 2003, 118, 8261-8267.	1.2	62
49	A potential energy surface construction scheme for accurate reaction rate calculations: General approach and a test for the $\text{H}+\text{CH}_4 \rightarrow \text{H}_2+\text{CH}_3$ reaction. <i>Journal of Chemical Physics</i> , 2003, 119, 14-23.	1.2	61
50	Multidimensional time-dependent discrete variable representations in multiconfiguration Hartree calculations. <i>Journal of Chemical Physics</i> , 2005, 123, 064106.	1.2	61
51	The ground state tunneling splitting and the zero point energy of malonaldehyde: A quantum Monte Carlo determination. <i>Journal of Chemical Physics</i> , 2007, 126, 024308.	1.2	61
52	Accurate quantum calculations of the reaction rates for $\text{H} + \text{D} + \text{CH}_4$. <i>Journal of Chemical Physics</i> , 2007, 126, 084303.	1.2	61
53	Quantum calculations of thermal rate constants and reaction probabilities: $\text{H}_2+\text{CN} \rightarrow \text{H}+\text{HCN}$. <i>Chemical Physics Letters</i> , 1998, 282, 442-449.	1.2	60
54	Photoinduced dynamics of ethene in the N, V, and Z valence states: A six-dimensional nonadiabatic quantum dynamics investigation. <i>Journal of Chemical Physics</i> , 2004, 120, 11000-11010.	1.2	60

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55	On the integration of the multi-configurational time-dependent Hartree (MCTDH) equations of motion. <i>Chemical Physics</i> , 2006, 329, 168-178.	0.9	58
56	State-to-state reaction probabilities within the quantum transition state framework. <i>Journal of Chemical Physics</i> , 2012, 136, 064117.	1.2	58
57	The role of the transition state in polyatomic reactions: Initial state-selected reaction probabilities of the H + CH ₄ → H ₂ + CH ₃ reaction. <i>Journal of Chemical Physics</i> , 2014, 141, 174313.	1.2	58
58	The multi-configurational time-dependent Hartree approach revisited. <i>Journal of Chemical Physics</i> , 2015, 142, 244109.	1.2	57
59	Accurate calculations of reaction rates: predictive theory based on a rigorous quantum transition state concept. <i>Molecular Physics</i> , 2011, 109, 1415-1426.	0.8	51
60	Full-Dimensional Quantum Reaction Rate Calculations for H + CH ₄ → H ₂ + CH ₃ on a Recent Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , 2010, 114, 9617-9622.	1.1	50
61	Photodissociation of methyl iodide embedded in a host-guest complex: A full dimensional (189D) quantum dynamics study of CH ₃ I@resorc[4]arene. <i>Journal of Chemical Physics</i> , 2011, 135, 184102.	1.2	50
62	Fast Shepard interpolation on graphics processing units: Potential energy surfaces and dynamics for H + CH ₄ → H ₂ + CH ₃ . <i>Journal of Chemical Physics</i> , 2013, 138, 164118.	1.2	50
63	The reaction rate for dissociative adsorption of N ₂ on stepped Ru(0001): Six-dimensional quantum calculations. <i>Journal of Chemical Physics</i> , 2005, 122, 234702.	1.2	48
64	Communication: Mode specific quantum dynamics of the F + CHD ₃ → HF + CD ₃ reaction. <i>Journal of Chemical Physics</i> , 2016, 144, 171101.	1.2	47
65	Neural network based coupled diabatic potential energy surfaces for reactive scattering. <i>Journal of Chemical Physics</i> , 2017, 147, 084105.	1.2	46
66	Thermochemistry and Accurate Quantum Reaction Rate Calculations for H ₂ /HD/D ₂ + CH ₃ . <i>Journal of Physical Chemistry A</i> , 2007, 111, 10331-10337.	1.1	45
67	Partition functions for reaction rate calculations: statistical sampling and MCTDH propagation. <i>Chemical Physics Letters</i> , 2001, 349, 321-328.	1.2	43
68	Quantum dynamics of the CH ₃ fragment: A curvilinear coordinate system and kinetic energy operators. <i>Journal of Chemical Physics</i> , 2007, 127, 144302.	1.2	43
69	Communication: Reactivity borrowing in the mode selective chemistry of H + CHD ₃ → H ₂ + CD ₃ . <i>Journal of Chemical Physics</i> , 2017, 147, 241104.	1.2	43
70	Thermal Rate Constants for Polyatomic Reactions: First Principles Quantum Theory. <i>Zeitschrift Fur Physikalische Chemie</i> , 2007, 221, 171-213.	1.4	41
71	Coupled potential energy surface for the F(2P) + CH ₄ → HF + CH ₃ entrance channel and quantum dynamics of the CH ₄ photodetachment. <i>Journal of Chemical Physics</i> , 2013, 139, 014309.	1.2	40
72	REACTION RATES: ACCURATE QUANTUM DYNAMICAL CALCULATIONS FOR POLYATOMIC SYSTEMS. <i>Journal of Theoretical and Computational Chemistry</i> , 2002, 01, 153-172.	1.8	39

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73	Thermal flux based analysis of state-to-state reaction probabilities. <i>Molecular Physics</i> , 2012, 110, 703-715.	0.8	39
74	Calculation of initial state-selected reaction probabilities by a minimal number of wavepackets. <i>Chemical Physics Letters</i> , 1995, 241, 497-501.	1.2	37
75	Correlation functions for fully or partially state-resolved reactive scattering calculations. <i>Journal of Chemical Physics</i> , 2014, 140, 244113.	1.2	37
76	Calculating initial-state-selected reaction probabilities from thermal flux eigenstates: A transition-state-based approach. <i>Journal of Chemical Physics</i> , 2005, 123, 204114.	1.2	36
77	Photodissociation of CH ₃ : A Full-Dimensional (9D) Quantum Dynamics Study. <i>Journal of Physical Chemistry A</i> , 2011, 115, 5992-6001.	1.1	34
78	Full-dimensional quantum study of the vibrational predissociation of the I ₂ -Ne ₂ cluster. <i>Journal of Chemical Physics</i> , 2001, 115, 5477-5484.	1.2	33
79	The Sudden-Polarization Effect and its Role in the Ultrafast Photochemistry of Ethene. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 3434-3436.	7.2	33
80	Wavepacket dynamics and the multi-configurational time-dependent Hartree approach. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 253001.	0.7	33
81	Full-dimensional quantum dynamics calculations for H + CHD ₃ → H ₂ + CD ₃ : The effect of multiple vibrational excitations. <i>Journal of Chemical Physics</i> , 2018, 148, 224303.	1.2	33
82	CH ₅ ⁺ : Symmetry and the Entangled Rovibrational Quantum States of a Fluxional Molecule. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4229-4232.	2.1	32
83	On the multi-layer multi-configurational time-dependent Hartree approach for bosons and fermions. <i>Journal of Chemical Physics</i> , 2017, 146, 064117.	1.2	32
84	An effective method for the quantum mechanical description of photoionization with ultrashort intense laser pulses. <i>Journal of Chemical Physics</i> , 1998, 109, 36-41.	1.2	29
85	Three-dimensional wave-packet dynamics on vibronically coupled dissociative potential energy surfaces. <i>Chemical Physics Letters</i> , 1991, 178, 36-42.	1.2	28
86	Intersystem crossing dynamics in the spin-crossover systems [M:Fe(pic) ₃]Cl ₂ ·xSol (M=Mn or Zn). <i>J. Phys. Chem. B</i> , 2007, 111, 10000-10005.	1.2	28
87	Comment on "A multiconfiguration time-dependent Hartree approximation based on natural single-particle states" [J. Chem. Phys. 99, 4055 (1993)]. <i>Journal of Chemical Physics</i> , 1994, 101, 2652-2653.	1.2	27
88	Photoionization-induced dynamics of the ammonia cation studied by wave packet calculations using curvilinear coordinates. <i>Chemical Physics</i> , 2008, 347, 331-339.	0.9	27
89	A Quasiclassical Study of the F(² P) + CHD ₃ (Ĵ _{1/2} = 0,1) Reactive System on an Accurate Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , 2015, 119, 12209-12217.	1.1	27
90	The effect of spin-orbit coupling on the thermal rate constant of the H ₂ + Cl → H + HCl reaction. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 5026-5030.	1.3	26

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91	Vibrational Dynamics of the CH ₄ -F ⁺ Complex. Journal of Physical Chemistry A, 2012, 116, 11249-11259.	1.1	26
92	The resonance Raman spectrum of CH ₃ I: An application of the MCTDH approach. Journal of Chemical Physics, 1997, 107, 6584-6593.	1.2	25
93	On direct product based discrete variable representations for angular coordinates and the treatment of singular terms in the kinetic energy operator. Chemical Physics, 2010, 374, 118-125.	0.9	25
94	H+CH ₄ → H ₂ + CH ₃ initial state-selected reaction probabilities on different potential energy surfaces. Chemical Physics, 2017, 482, 106-112.	0.9	25
95	Long-Distance Rate Acceleration by Bulk Gold. Angewandte Chemie - International Edition, 2019, 58, 6574-6578.	7.2	25
96	Multiconfigurational time-dependent Hartree calculations for dissociative adsorption of H ₂ on Cu(100). Journal of Chemical Physics, 2004, 121, 3829-3835.	1.2	23
97	A wave packet approach to the Liouville-von Neumann equation for dissipative systems. Journal of Chemical Physics, 1997, 106, 3017-3023.	1.2	22
98	Advances in Mössbauer Emission Spectroscopy. Hyperfine Interactions, 1990, 53, 113-141.	0.2	21
99	A full-dimensional wave packet dynamics study of the photodetachment spectra of FCH ₄ ⁺ . Journal of Chemical Physics, 2012, 137, 044306.	1.2	19
100	Natural reaction channels in H ⁺ CHD ₃ → H ₂ + CD ₃ . Faraday Discussions, 2018, 212, 217-235.	1.6	18
101	Variational wave packet method for dissipative photodesorption problems. Chemical Physics Letters, 1998, 288, 383-390.	1.2	17
102	S-matrix decomposition, natural reaction channels, and the quantum transition state approach to reactive scattering. Journal of Chemical Physics, 2016, 144, 204119.	1.2	17
103	Full-dimensional quantum stereodynamics of the non-adiabatic quenching of OH(A ² Σ ⁺) by H ₂ . Nature Chemistry, 2021, 13, 909-915.	6.6	17
104	Degeneracy in discrete variable representations: General considerations and application to the multiconfigurational time-dependent Hartree approach. Journal of Chemical Physics, 2004, 121, 5623-5628.	1.2	16
105	Fermi resonance controlled product branching in the H + HOD reaction. Physical Chemistry Chemical Physics, 2018, 20, 17029-17037.	1.3	16
106	Vibronically and spin-orbit coupled diabatic potentials for X(2P) + CH ₄ → HX + CH ₃ reactions: Neural network potentials for X = Cl. Journal of Chemical Physics, 2019, 150, 244115.	1.2	16
107	A microscopic description of dissipation in systems with strong vibronic coupling: the S ₁ and S ₂ absorption spectra of pyrazine. Chemical Physics Letters, 1998, 295, 167-174.	1.2	15
108	Iterative Diagonalization in the Multiconfigurational Time-Dependent Hartree Approach: Ro-vibrational Eigenstates. Journal of Physical Chemistry A, 2013, 117, 7246-7255.	1.1	15

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109	Quasi-Bound States of the F ⁺ CH ₄ Complex. <i>Journal of Physical Chemistry A</i> , 2016, 120, 3186-3195.	1.1	15
110	Non-adiabatic effects in F + CHD ₃ reactive scattering. <i>Journal of Chemical Physics</i> , 2017, 146, 214117.	1.2	15
111	A multi-configurational time-dependent Hartree approach to the eigenstates of multi-well systems. <i>Journal of Chemical Physics</i> , 2012, 136, 124119.	1.2	13
112	Improved L2-stabilization theory to compute resonances under multichannel conditions. <i>Chemical Physics Letters</i> , 1996, 249, 237-243.	1.2	12
113	The multi-configurational time-dependent Hartree approach in optimized second quantization: Imaginary time propagation and particle number conservation. <i>Journal of Chemical Physics</i> , 2020, 152, 034101.	1.2	12
114	Calculating vibrational spectra using modified Shepard interpolated potential energy surfaces. <i>Journal of Chemical Physics</i> , 2008, 129, 024104.	1.2	11
115	Vibronically and spin-orbit coupled diabatic potentials for X(P) + CH ₄ → HX + CH ₃ reactions: General theory and application for X(P) = F(2P). <i>Journal of Chemical Physics</i> , 2019, 150, 064102.	1.2	11
116	First principle nonlinear quantum dynamics using a correlation-based von Neumann entropy. <i>Journal of Chemical Physics</i> , 2012, 136, 204116.	1.2	10
117	Decoherence induced by conical intersections: Complexity constrained quantum dynamics of photoexcited pyrazine. <i>Journal of Chemical Physics</i> , 2012, 137, 22A509.	1.2	9
118	Optimized unoccupied single-particle functions in the (multi-layer) multi-configurational time-dependent Hartree approach. <i>Chemical Physics</i> , 2018, 515, 279-286.	0.9	9
119	Long-Range Distance Rate Acceleration by Bulk Gold. <i>Angewandte Chemie</i> , 2019, 131, 6646-6650.	1.6	8
120	Non-adiabatic transitions in the reaction of fluorine with methane. <i>Journal of Chemical Physics</i> , 2020, 152, 231102.	1.2	8
121	Off-normal incidence dissociative sticking of H ₂ on Cu(100) studied using six-dimensional quantum calculations. <i>Journal of Chemical Physics</i> , 2005, 123, 124706.	1.2	7
122	Coordinate systems and kinetic energy operators for multi-configurational time-dependent Hartree calculations studying reactions of methane. <i>Chemical Physics</i> , 2018, 509, 37-44.	0.9	7
123	Symmetries in the multi-configurational time-dependent Hartree wavefunction representation and propagation. <i>Journal of Chemical Physics</i> , 2021, 154, 194108.	1.2	7
124	Quantum dynamics of H ₂ in a carbon nanotube: Separation of time scales and resonance enhanced tunneling. <i>Journal of Chemical Physics</i> , 2017, 147, 084103.	1.2	6
125	Counter-propagating wave packets in the quantum transition state approach to reactive scattering. <i>Journal of Chemical Physics</i> , 2019, 150, 184103.	1.2	6
126	Vibronic coupling in the F ⁺ CH ₄ prereactive complex. <i>Journal of Chemical Physics</i> , 2019, 151, 104106.	1.2	6

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127	Vibrational control of the reaction pathway in the $\text{H} + \text{CHD}_3 \rightarrow \text{H}_2 + \text{CD}_3$ reaction. <i>Science Advances</i> , 2022, 8, eabm9820.	4.7	6
128	The effect of surface relaxation on the N_2 dissociation rate on stepped Ru: A transition state theory study. <i>Journal of Chemical Physics</i> , 2006, 124, 026102.	1.2	5
129	A Quasi-Classical Evaluation of the $\langle i \rangle$ -Shifting Approximation for the Reactive Cross Sections of $\text{F} + \text{CHD}_3$ and $\text{F} + \text{CH}_4$. <i>Journal of Physical Chemistry A</i> , 2019, 123, 7237-7245.	1.1	5
130	A non-hierarchical correlation discrete variable representation. <i>Journal of Chemical Physics</i> , 2022, 156, 134107.	1.2	5
131	A transition-state based rotational sudden (TSRS) approximation for polyatomic reactive scattering. <i>Journal of Chemical Physics</i> , 2017, 147, 144104.	1.2	4
132	Eight-Dimensional Wave Packet Dynamics Within the Quantum Transition-State Framework: State-to-State Reactive Scattering for $\text{H}_2 + \text{CH}_3 \rightarrow \text{H} + \text{CH}_4$. <i>Journal of Physical Chemistry A</i> , 2020, 124, 9400-9412.	1.1	4
133	Femtosecond Wave-Packet Dynamics on Strongly Coupled Potential Energy Surfaces. <i>NATO ASI Series Series B: Physics</i> , 1992, , 83-95.	0.2	4
134	First-Principles Theory for the Reaction of Chlorine with Methane. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2563-2566.	2.1	3
135	Wave packet dynamics in the optimal superadiabatic approximation. <i>Journal of Chemical Physics</i> , 2016, 144, 224109.	1.2	2
136	Direct product-type grid representations for angular coordinates in extended space and their application in the MCTDH approach. <i>Journal of Chemical Physics</i> , 2021, 154, 104115.	1.2	2
137	The multi-configurational time-dependent Hartree approach in optimized second quantization: Thermal ensembles and statistical sampling. <i>Chemical Physics</i> , 2022, 555, 111413.	0.9	2
138	Precise characterisation of isolated molecules: general discussion. <i>Faraday Discussions</i> , 2018, 212, 137-155.	1.6	1
139	Reaction Rates. <i>Lecture Notes in Quantum Chemistry II</i> , 2001, , 167-193.	0.3	1
140	Direct Calculation of Reaction Rates. <i>Lecture Notes in Quantum Chemistry II</i> , 2000, , 130-149.	0.3	1
141	Iterative Diagonalization of Operators. , 0, , 69-71.		0
142	Quantum dynamics of isolated molecules: general discussion. <i>Faraday Discussions</i> , 2018, 212, 281-306.	1.6	0
143	Approximate Methods for Time Evolution of Wave Packets. <i>NATO ASI Series Series B: Physics</i> , 1992, , 233-246.	0.2	0
144	Multi Dimensional Quantum Dynamics. , 2005, , 225-236.		0

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145	Multi Dimensional Quantum Dynamics of Chemical Reaction Processes. , 2009, , 143-152.		0