Brian K Kendrick

List of Publications by Year
in descending order

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69	2,319	201674	223800
papers	citations	27 h-index	46 g-index

74	74	74	960
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the use of stereodynamical effects to control cold chemical reactions: The H + D2 âŸ· D + HD case study. Journal of Chemical Physics, 2022, 156, 044305.	3.0	3
2	Sampling electronic structure quadratic unconstrained binary optimization problems (QUBOs) with Ocean and Mukai solvers. PLoS ONE, 2022, 17, e0263849.	2.5	5
3	Mechanistic Insights into Ultracold Chemical Reactions under the Control of the Geometric Phase. Journal of Physical Chemistry Letters, 2021, 12, 2160-2165.	4.6	6
4	Quantum reactive scattering calculations for the cold and ultracold Li + LiNa â† Li2 + Na reaction. Journal of Chemical Physics, 2021, 154, 124303.	3.0	7
5	Spectroscopy on the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>A</mml:mi><mml:mmultiscripts><mml:mi mathvariant="normal">Î</mml:mi><mml:mprescripts /><mml:none /><mml:mn>1</mml:mn></mml:mmultiscripts><mml:mo>â†</mml:mo><mml:mi>X</mml:mi><mml:mmultiscripts><mml:mi mathvariant="normal">Î£</mml:mi><mml:none /><mml:mo>+</mml:mo><mml:mprescripts /><mml:none /><mml:mn>1</mml:mn></mml:mmultiscripts></mml:mrow></mml:math> transition of buffer-gas-coole	2.5	20
6	Computing molecular excited states on a D-Wave quantum annealer. Scientific Reports, 2021, 11, 18796.	3.3	16
7	Inelastic, exchange, and reactive processes in rovibrationally excited collisions of HD with H. Monthly Notices of the Royal Astronomical Society, 2021, 507, 6012-6019.	4.4	4
8	Non-adiabatic quantum interference in the ultracold Li + LiNa â† Li₂ + Na reaction. Physical Chemistry Chemical Physics, 2021, 23, 5096-5112.	2.8	25
9	Solving complex eigenvalue problems on a quantum annealer with applications to quantum scattering resonances. Physical Chemistry Chemical Physics, 2020, 22, 26136-26144.	2.8	16
10	Non-adiabatic quantum dynamics of the ultracold Li+LiNaâ† Li₂+Na chemical reaction. Journal of Physics: Conference Series, 2020, 1412, 122016.	0.4	2
11	Electronic structure with direct diagonalization on a D-wave quantum annealer. Scientific Reports, 2020, 10, 20753.	3.3	18
12	Prediction of a Feshbach Resonance in the Below-the-Barrier Reactive Scattering of Vibrationally Excited HD withÂH. Journal of Physical Chemistry Letters, 2020, 11, 4970-4975.	4.6	9
13	Theoretical Treatment of the Coriolis Effect Using Hyperspherical Coordinates, with Application to the Ro-Vibrational Spectrum of Ozone. Journal of Physical Chemistry A, 2020, 124, 2808-2819.	2.5	7
14	Three-dimensional potential energy surfaces of ArNO (XÌƒâ€‰2Î). Journal of Chemical Physics, 2020, 152, 114302.	3.0	1
15	The role of rotationâ€“vibration coupling in symmetric and asymmetric isotopomers of ozone. Journal of Chemical Physics, 2020, 152, 144104.	3.0	10
16	Calculation of Molecular Vibrational Spectra on a Quantum Annealer. Journal of Chemical Theory and Computation, 2019, 15, 4555-4563.	5.3	24
17	Geometric Phase Effects in Ultracold Chemical Reactions. Atoms, 2019, 7, 65.	1.6	3
18	Nonadiabatic Ultracold Quantum Reactive Scattering of Hydrogen with Vibrationally Excited HD(v = 5â€“9). Journal of Physical Chemistry A, 2019, 123, 9919-9933.	2.5	13

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19	Non-adiabatic quantum reactive scattering in hyperspherical coordinates. Journal of Chemical Physics, 2018, 148, 044116.	3.0	32
20	Geometric Phase and Interference Effects in Ultracold Chemical Reactions. Progress in Theoretical Chemistry and Physics, 2018, , 265-277.	0.2	0
21	Non-adiabatic quantum reactive scattering calculations for the ultracold hydrogen exchange reaction: Ha€ +a€ H2(<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si71.gif" /> Ij EtQq1 1 0.784314 rgBT /C <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si7.gif" overflow="sc. Chemica	1.9	13
22	Constructive and Destructive Interference in Nonadiabatic Tunneling via Conical Intersections. Journal of Chemical Theory and Computation, 2017, 13, 1902-1910.	5.3	34
23	Symmetry and the geometric phase in ultracold hydrogen-exchange reactions. Journal of Chemical Physics, 2017, 147, 074302.	3.0	13
24	Universality and chaoticity in ultracold K+KRb chemical reactions. Nature Communications, 2017, 8, 15897.	12.8	56
25	Long-lived complexes and signatures of chaos in ultracold <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">K</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> +Rb collisions. Physical Review A, 2017, 96, .	2.5	28
26	Geometric phase effects in the ultracold D + HD $ ightarrow $ D + HD and D + HD $leftrightarrow $ H + D2reactions. New Journal of Physics, 2016, 18, 123020.	2.9	15
27	Geometric phase effects in ultracold hydrogen exchange reaction. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 194004.	1.5	19
28	Geometric phase effects in the ultracold H + H2 reaction. Journal of Chemical Physics, 2016, 145, 164303.	3.0	23
29	Prediction of CRUD deposition on PWR fuel using a state-of-the-art CFD-based multi-physics computational tool. Nuclear Engineering and Design, 2016, 299, 95-104.	1.7	11
30	Geometric Phase Appears in the Ultracold Hydrogen Exchange Reaction. Physical Review Letters, 2015, 115, 153201.	7.8	52
31	The geometric phase controls ultracold chemistry. Nature Communications, 2015, 6, 7918.	12.8	70
32	Ultracold chemistry with alkali-metalâ€“rare-earth molecules. Physical Review A, 2015, 91, .	2.5	29
33	Proof-of-principle of high-fidelity coupled CRUD deposition and cycle depletion simulation. Annals of Nuclear Energy, 2015, 85, 1152-1166.	1.8	13
34	Importance of Geometric Phase Effects in Ultracold Chemistry. Journal of Physical Chemistry A, 2015, 119, 12291-12303.	2.5	18
35	Quantum dynamics of O(¹D)+D₂ reaction: isotope and vibrational excitation effects. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 135202.	1.5	6
36	Ultracold collisions of O(1D) and H2: The effects of H2vibrational excitation on the production of vibrationally and rotationally excited OH. Journal of Chemical Physics, 2013, 138, 164310.	3.0	12

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37	Chemical reaction versus vibrational quenching in low energy collisions of vibrationally excited OH with O. Journal of Chemical Physics, 2013, 139, 194305.	3.0	16
38	Time-dependent wave packet propagation using quantum hydrodynamics. Theoretical Chemistry Accounts, 2012, 131, 1.	1.4	16
39	Ultracold collisions and reactions of vibrationally excited OH radicals with oxygen atoms. Physical Chemistry Chemical Physics, 2011, 13, 19067.	2.8	21
40	An iterative finite difference method for solving the quantum hydrodynamic equations of motion. Computational and Theoretical Chemistry, 2010, 943, 158-167.	1.5	12
41	The infrared spectrum of cyclic-N3: Theoretical prediction. Journal of Chemical Physics, 2010, 133, 174310.	3.0	13
42	Quantum dynamics of the H+O2â†'O+OH reaction. Journal of Chemical Physics, 2010, 132, 014302.	3.0	24
43	Formation of molecular oxygen in ultracold<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">O</mml:mi><mml:mo>+</mml:mo><mml:mi mathvariant="normal">O</mml:mi><mml:mi mathvariant="normal">H</mml:mi></mml:mrow></mml:math>collisions. Physical Review A, 2009, 79, .	2.5	30
44	Single-Parameter Quantification of the Sensitivity of a Molecular Collision to Molecular Polarization. Journal of Physical Chemistry A, 2009, 113, 14943-14951.	2.5	3
45	Quantum dynamics of the O+OHâ†'H+O2 reaction at low temperatures. Journal of Chemical Physics, 2008, 129, 224309.	3.0	36
46	The canonical and other mechanisms of elementary chemical reactions. Physical Chemistry Chemical Physics, 2007, 9, 5794.	2.8	10
47	Analysis of the H + D2reaction mechanism through consideration of the intrinsic reactant polarisation. Physical Chemistry Chemical Physics, 2006, 8, 4881-4896.	2.8	21
48	Quantum hydrodynamics: Capturing a reactive scattering resonance. Journal of Chemical Physics, 2005, 123, 054107.	3.0	19
49	Cyclic-N3. II. Significant geometric phase effects in the vibrational spectra. Journal of Chemical Physics, 2005, 122, 044315.	3.0	74
50	How Reactants Polarization Can Be Used to Change and Unravel Chemical Reactivity. Journal of Physical Chemistry A, 2005, 109, 6200-6217.	2.5	90
51	Quantum hydrodynamics: Application to N-dimensional reactive scattering. Journal of Chemical Physics, 2004, 121, 2471.	3.0	37
52	A new method for solving the quantum hydrodynamic equations of motion: Application to two-dimensional reactive scattering. Journal of Chemical Physics, 2004, 120, 603-611.	3.0	48
53	NON-BORN-OPPENHEIMER CHEMISTRY: POTENTIAL SURFACES, COUPLINGS, AND DYNAMICS. Advanced Series in Physical Chemistry, 2004, , 329-391.	1.5	47
54	Metastable states of ozone calculated on an accurate potential energy surface. Journal of Chemical Physics, 2003, 118, 6298-6308.	3.0	125

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55	Formation of ozone: Metastable states and anomalous isotope effect. Journal of Chemical Physics, 2003, 119, 2577-2589.	3.0	99
56	Geometric Phase Effects in Chemical Reaction Dynamics and Molecular Spectra. Journal of Physical Chemistry A, 2003, 107, 6739-6756.	2.5	112
57	A new method for solving the quantum hydrodynamic equations of motion. Journal of Chemical Physics, 2003, 119, 5805-5817.	3.0	93
58	Quantum reactive scattering calculations for the D+H2â†'HD+H reaction. Journal of Chemical Physics, 2003, 118, 10502-10522.	3.0	74
59	Accurate quantum calculations on three-body collisions in recombination and collision-induced dissociation. I. Converged probabilities for the H+Ne2 system. Journal of Chemical Physics, 2002, 117, 6083-6102.	3.0	58
60	Properties of nonadiabatic couplings and the generalized Bornâ€"Oppenheimer approximation. Chemical Physics, 2002, 277, 31-41.	1.9	92
61	Quantum reactive scattering calculations for the H+D2â†'HD+D reaction. Journal of Chemical Physics, 2001, 114, 8796-8819.	3.0	65
62	On the nonexistence of strictly diabatic molecular electronic bases. Chemical Physics Letters, 2000, 330, 629-632.	2.6	26
63	Observation of Predicted Resonance Structure in theH+D2â†'HD(vâ€²=0,jâ€²=7)+DReaction at a Collision Energy of0.94eV. Physical Review Letters, 2000, 84, 4325-4328.	7.8	31
64	Geometric phase effects in the H+D2â†'HD+D reaction. Journal of Chemical Physics, 2000, 112, 5679-5704.	3.0	96
65	Hyperspherical surface functions for nonzero total angular momentum. I. Eckart singularities. Journal of Chemical Physics, 1999, 110, 6673-6693.	3.0	94
66	Comment on â€œOn the Longuet-Higgins phase and its relation to the electronic adiabaticâ€"diabatic transformation angleâ€•[J. Chem. Phys. 107, 2694 (1997)]. Journal of Chemical Physics, 1999, 110, 7594-7597.	3.0	17
67	Three-body collision contributions to recombination and collision-induced dissociation. I. Cross sections. Journal of Chemical Physics, 1998, 109, 6701-6713.	3.0	73
68	Three-body collision contributions to recombination and collision-induced dissociation. II. Kinetics. Journal of Chemical Physics, 1998, 109, 6714-6724.	3.0	49
69	Mechanisms of atomic and molecular recombination and collision-induced dissociation. Chemical Physics Letters, 1997, 276, 255-262.	2.6	17