Wensheng Bian

List of Publications by Year
in descending order

84	1,702	304743	330143
papers	citations	22 h-index	37 g-index

85	85	85	905
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A theoretical study on laser cooling feasibility of XH (X = As, Sb and Bi): effects of intersystem crossings and spinâ€“orbit couplings. Physical Chemistry Chemical Physics, 2022, 24, 10114-10123.	2.8	7
2	Accurate quantum dynamics of the simplest isomerization system involving double-H transfer. Chinese Journal of Chemical Physics, 2022, 35, 185-192.	1.3	3
3	Dynamics and kinetics of the Si(¹D) + H₂/D₂ reactions on a new global ab initio potential energy surface. Physical Chemistry Chemical Physics, 2021, 23, 6141-6153.	2.8	8
4	Production of ultracold CaCCH and SrCCH molecules by direct laser cooling: A theoretical study based on accurate ab initio calculations. Journal of Chemical Physics, 2021, 155, 204304.	3.0	3
5	Excellent Ultracold Molecular Candidates From Group VA Hydrides: Whether Do Nearby Electronic States Interfere?. Frontiers in Chemistry, 2021, 9, 778292.	3.6	4
6	Efficient Quantum Mechanical Calculations of Mode-Specific Tunneling Splittings upon Fundamental Excitation in the Dimer of Formic Acid. Journal of Physical Chemistry A, 2020, 124, 6536-6543.	2.5	9
7	Accurate quantum mechanical calculations on deuterated vinylidene isomerization. Journal of Chemical Physics, 2020, 153, 054309.	3.0	5
8	Quantum Dynamics Study of the C(¹D) + HD Reaction on the Ã£¹Aâ€² and bÌƒ¹Aâ€³ Potential Energy Surfaces. Journal of Physical Chemistry A, 2020, 124, 801-809.	2.5	8
9	A Theoretical Study on Laser Cooling Feasibility of Group IVA Hydrides XH (X = Si, Ge, Sn, and Pb): The Role of Electronic State Crossing. Frontiers in Chemistry, 2020, 8, 20.	3.6	12
10	Double Proton Transfer in the Dimer of Formic Acid: An Efficient Quantum Mechanical Scheme. Frontiers in Chemistry, 2019, 7, 676.	3.6	15
11	van der Waals interactions in bimolecular reactions. Chinese Journal of Chemical Physics, 2019, 32, 157-166.	1.3	15
12	Conical intersectionâ€“regulated intermediates in bimolecular reactions: Insights from C(¹) Tj ETQq0 0 0 rgBT /Overlock 1	10.3	27
13	1H NMR relaxation and theoretical calculation study on Tris(pentafluorophenyl)borane as a catalyst in preparation of Poly(carborane-siloxane) polymers. Polymer Testing, 2019, 73, 412-417.	4.8	1
14	The dynamics of the C(1D)+H2/D2/HD reactions at low temperature. Journal of Chemical Physics, 2018, 148, 234305.	3.0	20
15	Ultrafast Deep-Ultraviolet Laser Ionization Mass Spectrometry Applicable To Identify Phenylenediamine Isomers. Analytical Chemistry, 2018, 90, 10635-10640.	6.5	19
16	Dynamical importance of van der Waals saddle and excited potential surface in C(1D)+D2 complex-forming reaction. Nature Communications, 2017, 8, 14094.	12.8	40
17	A theoretical study on laser cooling of silicon monofluoride. Chemical Physics, 2017, 485-486, 29-34.	1.9	11
18	Laser cooling of CaBr molecules and production of ultracold Br atoms: A theoretical study including spinâ€“orbit coupling. Journal of Chemical Physics, 2017, 146, 134309.	3.0	16

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19	Quasiclassical trajectory study of the C(¹D) + HD reaction. RSC Advances, 2017, 7, 34348-34355.	3.6	12
20	Theoretical Study on Mechanism and Kinetics of Reaction of O(3P) with Propane. Chinese Journal of Chemical Physics, 2016, 29, 430-436.	1.3	5
21	Laser cooling of copper monofluoride: a theoretical study including spinâ€“orbit coupling. RSC Advances, 2016, 6, 100568-100576.	3.6	11
22	The hydrogen tunneling splitting in malonaldehyde: A full-dimensional time-independent quantum mechanical method. Journal of Chemical Physics, 2016, 145, 074309.	3.0	28
23	Extensive theoretical study on electronically excited states of calcium monochloride: Molecular laser cooling and production of ultracold chlorine atoms. Journal of Chemical Physics, 2016, 144, 184302.	3.0	27
24	Theoretical study on the photodegradation reaction of deca-BDE in THF in the presence of furan. Theoretical Chemistry Accounts, 2016, 135, 1.	1.4	2
25	Mode-Specific Tunneling Splittings for a Sequential Double-Hydrogen Transfer Case: An Accurate Quantum Mechanical Scheme. Journal of Physical Chemistry Letters, 2015, 6, 1824-1829.	4.6	19
26	Quantum mechanical differential and integral cross sections for the C(1D) + H2(Î½ = 0, j =) Tj ETQq0 0 0 rgBT /Overlock 1	3.0	27
27	Global analytical ab initio ground-state potential energy surface for the C(1D)+H2 reactive system. Journal of Chemical Physics, 2014, 140, 234301.	3.0	20
28	Quasiclassical Trajectory Study of the C(¹D) + H₂ â†' CH + H Reaction on a New Global ab Initio Potential Energy Surface. Journal of Physical Chemistry A, 2014, 118, 4235-4242.	2.5	20
29	The Effect of Explicit Solvent on Photodegradation of Decabromodiphenyl Ether in Toluene: Insights from Theoretical Study. Journal of Physical Chemistry A, 2013, 117, 5291-5298.	2.5	11
30	Theoretical Study on the Photodegradation Mechanism of Nonaâ€BDEs in Methanol. ChemPhysChem, 2013, 14, 1264-1271.	2.1	13
31	Quantum reaction dynamics of the C(1D) + H2(D2) â†' CH(D) + H(D) on a new potential energy surface. Journal of Chemical Physics, 2013, 139, 014306.	3.0	27
32	Electronically excited-state properties and predissociation mechanisms of phosphorus monofluoride: A theoretical study including spinâ€“orbit coupling. Journal of Chemical Physics, 2012, 137, 014313.	3.0	24
33	New ab Initio Potential Energy Surfaces for the Renner-Teller Coupled <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:msup><mml:mrow><mml:mn mathvariant="bold">1</mml:mn></mml:mrow><mml:mrow><mml:mn mathvariant="bold">1</mml:mn></mml:mrow></mml:msup><mml:msup><mml:mrow><mml:mi>A</mml:mi></mml:mrow><mml:mrow><mml:mn> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M2"><mml:msup><mml:mrow><mml:mn>Ì</mml:mn></mml:m. Advances in Physical Chemistry, 2012, 2012, 1-12.	2.0	5
34	Quantum dynamics study of resonance states of vinylidene using normal mode Hamiltonian. AIP Conference Proceedings, 2012, , .	0.4	4
35	A theoretical study on the reaction mechanisms of O(³P)+1â€butene. International Journal of Quantum Chemistry, 2012, 112, 858-872.	2.0	10
36	Efficient quantum calculation of the vibrational states of acetylene. Chemical Physics, 2012, 400, 1-7.	1.9	18

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37	Full-dimensional quantum dynamics study of vinylideneâ€“acetylene isomerization: a scheme using the normal mode Hamiltonian. Physical Chemistry Chemical Physics, 2011, 13, 2052-2061.	2.8	24
38	The effect of metal electron cloud on the luminescence characteristics of organic ligands: An experimental and theoretical investigation. Science Bulletin, 2011, 56, 479-483.	1.7	4
39	Accurate Quantum Dynamics Study on the Resonance Decay of Vinylidene. ChemPhysChem, 2011, 12, 2419-2422.	2.1	17
40	Extensive theoretical study on electronically excited states and predissociation mechanisms of sulfur monoxide including spinâ€“orbit coupling. Journal of Computational Chemistry, 2011, 32, 1577-1588.	3.3	34
41	Kinetic study on the H+SiH4 abstraction reaction using an ab initio potential energy surface. Journal of Chemical Physics, 2011, 134, 024315.	3.0	9
42	Accurate quantum mechanical study of the Renner-Teller effect in the singlet CH2. Journal of Chemical Physics, 2011, 135, 154303.	3.0	15
43	Quasiclassical trajectory study of H+SiH ₄ reactions in full-dimensionality reveals atomic-level mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 13180-13185.	7.1	29
44	Extensive Theoretical Study on Various Low-Lying Electronic States of Silicon Monochloride Cation Including Spinâˆ'Orbit Coupling. Journal of Physical Chemistry A, 2009, 113, 1678-1685.	2.5	16
45	Investigation of the structures and electronic spectra of two coumarins with heterocyclic substituents through TD-DFT calculations. Computational and Theoretical Chemistry, 2008, 859, 73-78.	1.5	14
46	Influence of Solvent Polarity and Hydrogen Bonding on the Electronic Transition of Coumarin 120: A TDDFT Study. ChemPhysChem, 2008, 9, 1593-1602.	2.1	42
47	Extensive theoretical study on the low-lying electronic states of silicon monofluoride cation including spin-orbit coupling. Journal of Computational Chemistry, 2008, 29, 256-265.	3.3	10
48	Efficient quantum calculations of vibrational states of vinylidene in full dimensionality: A scheme with combination of methods. Journal of Chemical Physics, 2008, 129, 024111.	3.0	31
49	Quasiclassical trajectory study of the SiH4+Hâ†'SiH3+H2 reaction on a global ab initio potential energy surface. Journal of Chemical Physics, 2008, 129, 084309.	3.0	10
50	Investigation of the structures and electronic spectra for coumarin 6 through TD-DFT calculations including PCM solvation. Computational and Theoretical Chemistry, 2007, 818, 43-49.	1.5	27
51	A Theoretical Study of the Reaction of O(3P) with Isobutene. Journal of Physical Chemistry A, 2006, 110, 7858-7866.	2.5	25
52	Structure and electronic properties for a newly synthesized red fluorescent material. Computational and Theoretical Chemistry, 2006, 770, 73-77.	1.5	3
53	A Theoretical Study of the Mechanism and Kinetics of F+N3 Reactions. ChemPhysChem, 2006, 7, 1786-1794.	2.1	7
54	Study of electronic and spectroscopic properties on a newly synthesized red fluorescent material. Journal of Chemical Physics, 2006, 124, 174711.	3.0	10

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55	A global 12-dimensional ab initio potential energy surface and dynamical studies for the SiH4+Hâ†'SiH3+H2 reaction. Journal of Chemical Physics, 2006, 124, 234311.	3.0	9
56	Potential energy surface intersections in the C(D1)H2 reactive system. Journal of Chemical Physics, 2006, 125, 074306.	3.0	28
57	An ab initio study of the potential energy surfaces for the collision between a Cs atom and an I2 molecule. Canadian Journal of Chemistry, 2004, 82, 1216-1222.	1.1	0
58	Accurate and highly efficient calculation of the highly excited pure OH stretching resonances of O(1D)HCl, using a combination of methods. Journal of Chemical Physics, 2004, 121, 4467-4478.	3.0	31
59	PARTIAL POTENTIAL ENERGY SURFACE AND ITS APPLICATIONS IN REACTIVE RESONANCES. Journal of Theoretical and Computational Chemistry, 2004, 03, 543-553.	1.8	10
60	The density functional theory study on the 1,3-dipolar cycloaddition of carbon-methyl nitrone with acrlonitrile. Computational and Theoretical Chemistry, 2004, 679, 73-87.	1.5	5
61	Theoretical study of rate constants and kinetic isotope effects for reactions in the ClH2 system using variational transition state theory. Chemical Physics Letters, 2004, 391, 354-360.	2.6	11
62	Novel insight into the mechanism of the reaction of Fe+ with ethane. Computational and Theoretical Chemistry, 2003, 635, 239-245.	1.5	8
63	Theoretical Study of the Reactivity of Fe+ toward OCS. Journal of Physical Chemistry A, 2003, 107, 8955-8960.	2.5	18
64	Theoretical Investigation of the Reaction of Co+with OCS. Journal of Physical Chemistry A, 2003, 107, 8618-8622.	2.5	19
65	ACCURATE AND HIGHLY EFFICIENT CALCULATION OF THE O(1D)HCl VIBRATIONAL BOUND STATES, USING A COMBINATION OF METHODS. Journal of Theoretical and Computational Chemistry, 2003, 02, 583-597.	1.8	47
66	Accurate quantum dynamics of electronically nonadiabatic chemical reactions in the DH2+ system. Journal of Chemical Physics, 2002, 116, 654-665.	3.0	76
67	CHEMICAL REACTIONS IN THE O(1D) + HCl SYSTEM II.. Journal of Theoretical and Computational Chemistry, 2002, 01, 275-284.	1.8	15
68	CHEMICAL REACTIONS IN THE O(1D) + HCl SYSTEM I.. Journal of Theoretical and Computational Chemistry, 2002, 01, 263-273.	1.8	23
69	CHEMICAL REACTIONS IN THE O(1D) + HCl SYSTEM III.. Journal of Theoretical and Computational Chemistry, 2002, 01, 285-293.	1.8	12
70	Reaction Cross Sections and Rate Constants for the Cl + H2 Reaction from Quasiclassical Trajectory Calculation on Two New ab Initio Potential Energy Surfaces. Journal of Physical Chemistry A, 2002, 106, 176-180.	2.5	5
71	Cl+HD reaction dynamics from quasiclassical trajectory calculation on a new ab initio potential energy surface. Chemical Physics, 2001, 272, 61-68.	1.9	10
72	A fullyab initio potential energy surface for ClH2 reactive system. Science in China Series B: Chemistry, 2000, 43, 396-404.	0.8	1

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73	Global ab initio potential energy surfaces for the ClH2 reactive system. Journal of Chemical Physics, 2000, 112, 220-229.	3.0	140
74	Direct solution of the SchrÃ¶dinger equation for some muonic molecules. Chemical Physics, 1999, 242, 195-202.	1.9	4
75	Quantum-mechanical calculation of the thermal rate constant for the H2+Clâ†'H+HCl reaction. Chemical Physics Letters, 1999, 313, 647-654.	2.6	74
76	van der Waals Interactions in the Cl + HD Reaction. Science, 1999, 286, 1713-1716.	12.6	287
77	A potential harmonic method for the three-body coulomb problem. Theoretical Chemistry Accounts, 1997, 98, 110-116.	1.4	2
78	Fourier transform approach to potential harmonics. International Journal of Quantum Chemistry, 1997, 63, 5-14.	2.0	3
79	Direct solution of the many-body SchrÃ¶dinger equation in the hyperspherical formalism: Application of the CFHH-GLF method to a set of He-like systems. International Journal of Quantum Chemistry, 1995, 54, 273-279.	2.0	4
80	Direct solution of H 2 + Schrï¿½dinger equation using the hyperspherical coordinate. Theoretica Chimica Acta, 1995, 92, 135-147.	0.8	0
81	Direct solution of H. Theoretica Chimica Acta, 1995, 92, 135.	0.8	3
82	Direct solution of the many-body schrï¿½udinger equation in the hyperspherical formalism: Application of the HH-GLF method to the positronium ione+e?e+. International Journal of Quantum Chemistry, 1994, 50, 395-400.	2.0	10
83	Direct solution of the many-body SchrÃ¶dinger equation in the hyperspherical formalism: Formulation of theCFHH-GLFmethod. International Journal of Quantum Chemistry, 1994, 51, 285-291.	2.0	12
84	Ring polymer molecular dynamics of the C(1D)+H2 reaction on the most recent potential energy surfaces. Chinese Journal of Chemical Physics, 0, , .	1.3	2