Kwong-tin Tang

List of Publications by Year
in descending order

109 papers	5,618 citations	136885 32 h-index	76872 74 g-index
114 all docs	114 docs citations	114 times ranked	1985 citing authors

#	Article	IF	Citations
1	The development of a full range analytical interatomic potential. Physical Chemistry Chemical Physics, 2021, 23, 7748-7757.	1.3	5
2	Conformal Analytical Potential for All the Rare Gas Dimers over the Full Range of Internuclear Distances. Physical Review Letters, 2020, 125, 253402.	2.9	18
3	Iterative combining rules for the van der Waals potentials of mixed rare gas systems. Chemical Physics Letters, 2017, 675, 40-45.	1.2	10
4	An accurate potential model for the a3Î£u+state of the alkali dimers Na2, K2, Rb2, and Cs2. Journal of Chemical Physics, 2016, 145, 194308.	1.2	10
5	The van der Waals potentials of MgCa, MgSr, MgBa, CaSr, CaBa, and SrBa. Chemical Physics Letters, 2015, 635, 285-289.	1.2	7
6	Communication: A simple full range analytical potential for H2b3âˆ‘u+, Hâ€“He 2âˆ‘+, and He21âˆ‘g+. Journal of Chemical Physics, 2015, 142, 131102.	1.2	12
7	The van der Waals potentials of ZnCd, ZnHg, and CdHg. Chemical Physics Letters, 2014, 614, 269-274.	1.2	6
8	Analyzing and modeling the interaction potential of the ground-state beryllium dimer. Physical Review A, 2013, 88, .	1.0	20
9	Corresponding states principle and van der Waals potentials of Zn2, Cd2, and Hg2. Journal of Chemical Physics, 2013, 139, 154306.	1.2	12
10	Dynamic polarizabilities of Zn and Cd and dispersion coefficients involving group 12 atoms. Journal of Chemical Physics, 2012, 137, 084309.	1.2	9
11	The van der Waals potential of mercury dimer. Chemical Physics Letters, 2012, 532, 19-21.	1.2	5
12	Asymptotic Exchange Energy of Heteronuclear Dimers. Journal of Physical Chemistry A, 2011, 115, 7346-7351.	1.1	5
13	Corresponding States Principle for the Alkaline Earth Dimers and the van der Waals Potential of Ba₂. Journal of Physical Chemistry A, 2011, 115, 6927-6935.	1.1	27
14	Johannes Diderik van der Waals: A Pioneer in the Molecular Sciences and Nobel Prize Winner in 1910. Angewandte Chemie - International Edition, 2010, 49, 9574-9579.	7.2	24
15	The ground state van der Waals potentials of the strontium dimer and strontium rare-gas complexes. Journal of Chemical Physics, 2010, 132, 074303.	1.2	32
16	The van der Waals potential of the magnesium dimer. Journal of Chemical Physics, 2010, 133, 084308.	1.2	29
17	A combining rule calculation of the ground state van der Waals potentials of the mercury rare-gas complexes. Journal of Chemical Physics, 2009, 130, 174310.	1.2	30
18	The ground state van der Waals potentials of the calcium dimer and calcium rare-gas complexes. Journal of Chemical Physics, 2009, 131, 154301.	1.2	34

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19	The dynamical polarisability and van der Waals dimer potential of mercury. Molecular Physics, 2008, 106, 1645-1653.	0.8	39
20	QUANTUM SCATTERING OF AN ATOM FROM AN ADSORBED MOLECULE ON A SMOOTH METAL SURFACE. International Journal of Modern Physics B, 2005, 19, 2457-2464.	1.0	1
21	The van der Waals potentials between all the rare gas atoms from He to Rn. Journal of Chemical Physics, 2003, 118, 4976-4983.	1.2	352
22	Simple model potential and model wave functions for (Na, K, Rb, Cs)â€“H molecules. Journal of Chemical Physics, 2003, 118, 4905-4912.	1.2	1
23	Damping functions for the pairwise sum model of the atomâ€“surface potential. Journal of Chemical Physics, 2002, 116, 8118-8123.	1.2	19
24	Scattering from isolated molecules on metal surfaces: The relationship between elastic and inelastic intensities. Journal of Chemical Physics, 2002, 116, 7695-7703.	1.2	3
25	Correlation between elastic and inelastic atom scattering from single adsorbed molecules. Journal of Chemical Physics, 2001, 114, 2883-2886.	1.2	6
26	New Insight into Exchange Energy of Covalent Chemical Bonds. Journal of the Chinese Chemical Society, 2001, 48, 365-369.	0.8	2
27	A universal formula for dispersion coefficients between alkali atoms. Journal of Chemical Physics, 2001, 114, 10979-10979.	1.2	0
28	Simple model potential and model wave functions for (Hâ€“alkali)+ and (alkaliâ€“alkali)+ ions. Journal of Chemical Physics, 2000, 113, 676-682.	1.2	26
29	Three-body exchange energies in H3 and He3 calculated by the surface integral method. Journal of Chemical Physics, 2000, 113, 948-956.	1.2	7
30	Helium atom scattering from isolated CO molecules on a Pt(111) surface: Experiment versus close-coupling calculations for a realistic Heâ€“CO potential. Journal of Chemical Physics, 2000, 112, 10538-10547.	1.2	17
31	Boundary condition determined wave functions for the ground states of one- and two-electron homonuclear molecules. Journal of Chemical Physics, 1999, 111, 7278-7289.	1.2	13
32	The generalized Heitlerâ€“London theory for the H3 potential energy surface. Journal of Chemical Physics, 1999, 111, 3377-3386.	1.2	13
33	Response to â€œComment on â€˜Quantum-mechanical scattering of an atom from a rigid hemisphere on a flat surfaceâ€™â€‰â€•[J. Chem. Phys. 109, 6502 (1998)]. Journal of Chemical Physics, 1998, 109, 6504-6504.	1.2	3
34	Interpretation of helium atom scattering from isolated CO molecules on copper (001) based on an exact quantum mechanical model. Journal of Chemical Physics, 1997, 107, 1631-1633.	1.2	10
35	Interaction potentials and diffusion coefficients between sodium and rare gases. Journal of Chemical Physics, 1997, 106, 3825-3826.	1.2	2
36	Exchange energy of H2 calculated by the surface integral method with the Coulsonâ€“Fischer wave function. Journal of Chemical Physics, 1997, 106, 3823-3824.	1.2	2

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37	Asymptotic method for polarizabilities and dispersion coefficients: With applications to hydrogen and helium systems. Journal of Chemical Physics, 1997, 107, 3894-3904.	1.2	9
38	Quantum-mechanical scattering of an atom from a rigid hemisphere on a flat surface. Journal of Chemical Physics, 1997, 107, 9437-9446.	1.2	20
39	Multipolar polarizabilities and two- and three-body dispersion coefficients for alkali isoelectronic sequences. Journal of Chemical Physics, 1997, 106, 2298-2305.	1.2	125
40	Van der Waals potentials of He2, Ne2, and Ar2 with the exchange energy calculated by the surface integral method. Journal of Chemical Physics, 1997, 107, 9502-9513.	1.2	45
41	Boundary-condition-determined wave function for the ground state of helium and isoelectronic ions. Physical Review A, 1996, 54, 2840-2849.	1.0	42
42	Accurate Analytical He-He van der Waals Potential Based on Perturbation Theory. Physical Review Letters, 1995, 74, 1546-1549.	2.9	266
43	Comparison between molecular orbital and surface integral calculations of the exchange energy for the homonuclear dimer ions He+2, Li+2, and Be+2. Journal of Chemical Physics, 1995, 103, 10580-10588.	1.2	7
44	Angular momentum coupling in the exchange energy of multielectron systems. Journal of Chemical Physics, 1995, 103, 6617-6630.	1.2	17
45	A semiclassical model for polarization forces in collisions of electrons and positrons with helium atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 1994, 27, 303-317.	0.6	22
46	A perturbation theory calculation of the exchange energy of the HeH++ molecular ion. Journal of Chemical Physics, 1994, 101, 8998-9009.	1.2	2
47	The perturbation calculation of van der Waals potentials. Theoretica Chimica Acta, 1994, 88, 169-181.	0.9	12
48	Exchange energy of H2calculated by the surface integral method in zeroth order approximation. Journal of Chemical Physics, 1993, 99, 377-388.	1.2	24
49	The interaction potential of H2+calculated from the exact firstâ€order wave function of the polarization perturbation theory. Journal of Chemical Physics, 1993, 98, 8777-8784.	1.2	13
50	Exchange energy of alkali-metal dimer cations calculated from the atomic polarizability with the Holstein-Herring method. Physical Review A, 1992, 46, 3746-3752.	1.0	18
51	A generalized Heitlerâ€“London theory of the chemical bond in H+2. Journal of Chemical Physics, 1991, 95, 5918-5929.	1.2	17
52	The exchange energy of H+2 calculated from polarization perturbation theory. Journal of Chemical Physics, 1991, 94, 7266-7277.	1.2	75
53	A simple predictive model of chemical potentials: H2(1Î£g) and Li2(1Î£g). Journal of Chemical Physics, 1991, 95, 1144-1150.	1.2	14
54	Interaction potential of the H-He system and the hyperfine frequency shift of H in He buffer gas. Physical Review A, 1990, 42, 311-319.	1.0	14

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55	The anisotropic potentials of Heâ€“N2, Neâ€“N2, and Arâ€“N2. Journal of Chemical Physics, 1988, 88, 5465-5474.	1.2	103
56	Interaction potentials for alkali ionâ€“rare gas and halogen ionâ€“rare gas systems. Journal of Chemical Physics, 1988, 88, 6290-6302.	1.2	151
57	Closeâ€coupling scattering cross sections for Arâ€“O2 collisions at 97.0 meV. Journal of Chemical Physics, 1987, 87, 5687-5693.	1.2	24
58	Dipole, quadrupole, and octupole terms in the longâ€range hyperfine frequency shift for hydrogen in the presence of inert gases. Journal of Chemical Physics, 1987, 86, 3539-3548.	1.2	3
59	New combining rules for well parameters and shapes of the van der Waals potential of mixed rare gas systems. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1986, 1, 91-101.	1.0	162
60	Coupled channel distorted wave method of atomâ€“molecule reactive scattering: Application to para to ortho hydrogen molecule conversion. Journal of Chemical Physics, 1984, 81, 4979-4990.	1.2	17
61	An improved simple model for the van der Waals potential based on universal damping functions for the dispersion coefficients. Journal of Chemical Physics, 1984, 80, 3726-3741.	1.2	1,421
62	Adiabatic T matrix theory for three dimensional reactive scattering: Application to the (H,â€‰H2) system. Journal of Chemical Physics, 1983, 78, 4523-4532.	1.2	11
63	Atomâ€“molecule reactive scattering and symmetrized cross section for the system containing identical nuclei. Journal of Chemical Physics, 1983, 78, 5590-5605.	1.2	8
64	Three dimensional quantum mechanical studies of D+H2â€‰â†’â€‰HD+H reactive scattering. V. Cross sections and rate constants from the adiabatic T matrix theory. Journal of Chemical Physics, 1983, 79, 5376-5385.	1.2	15
65	A simple theoretical model for the van der Waals potential at intermediate distances. IV. The bond distance dependence of the potential hypersurfaces for Heâ€“H2 and Neâ€“H2 also for the repulsive region. Journal of Chemical Physics, 1982, 76, 2524-2536.	1.2	55
66	A simple theoretical model for the van der Waals potential at intermediate distances. III. Anisotropic potentials of Arâ€“H2, Krâ€“H2, and Xeâ€“H2. Journal of Chemical Physics, 1981, 74, 1148-1161.	1.2	58
67	Transition matrix theory of molecular reactive scattering. Journal of Chemical Physics, 1981, 74, 5686-5693.	1.2	11
68	Three dimensional quantum mechanical studies of D+H2â†’HD+H reactive scattering. III. On the ab initio potential energy surface. Journal of Chemical Physics, 1980, 72, 621-629.	1.2	38
69	Quantum Theory of D +H2Rearrangement Collision: Effects of Vibrational Excitation. Physical Review Letters, 1980, 44, 1211-1214.	2.9	40
70	Reactive scattering of rotationally excited target molecules with adiabatic theory. Journal of Chemical Physics, 1980, 73, 4381-4389.	1.2	21
71	Threeâ€dimensional quantum mechanical studies of D+H2â†’HD+H reactive scattering. IV. Cross sections and rate constants with rotationally excited target molecules. Journal of Chemical Physics, 1980, 73, 6095-6107.	1.2	30
72	On â€™â€™Theory of collisions between an atom and a diatomic molecule in the bodyâ€fixed coordinate systemâ€™â€™. Journal of Chemical Physics, 1979, 70, 3153-3154.	1.2	1

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73	A simple theoretical model for the van der Waals potential at intermediate distances. II. Anisotropic potentials of Heâ€“H2and Neâ€“H2. Journal of Chemical Physics, 1978, 68, 5501-5517.	1.2	147
74	II. Close-coupling calculation for rotational transitions. Journal of Chemical Physics, 1978, 69, 422.	1.2	8
75	Coupled differential equation and asymptotic boundary conditions. Journal of Chemical Physics, 1978, 69, 411.	1.2	17
76	A simple theoretical model for the van der Waals potential at intermediate distances. I. Spherically symmetric potentials. Journal of Chemical Physics, 1977, 66, 1496-1506.	1.2	195
77	Threeâ€dimensional quantum mechanical studies of the H+H2reactive scattering. Journal of Chemical Physics, 1976, 65, 5161-5180.	1.2	57
78	Upper and lower bounds of twoâ€•and threeâ€body dipole, quadrupole, and octupole van der Waals coefficients for hydrogen, noble gas, and alkali atom interactions. Journal of Chemical Physics, 1976, 64, 3063-3074.	1.2	395
79	Quantum mechanical streamlines. III. Idealized reactive atomâ€“diatomic molecule collision. Journal of Chemical Physics, 1976, 64, 760-785.	1.2	106
80	Close coupling studies of rotational excitations of Ar+N2 and of H++H2 collisions. Journal of Chemical Physics, 1976, 65, 5528-5529.	1.2	17
81	Inelastic collisions between an atom and a diatomic molecule. III. Comparison of approximation methods as applied to the H+H2 rotational excitation. Journal of Chemical Physics, 1976, 64, 942-945.	1.2	6
82	Quantum mechanical streamlines. IV. Collision of two spheres with square potential wells or barriers. Journal of Chemical Physics, 1976, 65, 470-486.	1.2	68
83	On jZâ€conserving coupledâ€states approximation for molecular collisions. Journal of Chemical Physics, 1975, 62, 4568-4569.	1.2	12
84	Inelastic collisions between an atom and a diatomic molecule. I. Theoretical and numerical considerations for the close coupling approximation. Journal of Chemical Physics, 1975, 63, 1775-1782.	1.2	41
85	On the anisotropy of the H2â€“H potential energy surface. Journal of Chemical Physics, 1975, 63, 590-591.	1.2	22
86	Three-dimensional quantum mechanical studies of D+H2â†'HD+H reactive scattering. II. Journal of Chemical Physics, 1975, 63, 2854.	1.2	37
87	Three-dimensional quantum mechanical studies of D+H2 â†' HD+H reactive scattering. Journal of Chemical Physics, 1975, 62, 3642.	1.2	42
88	Inelastic collisions between an atom and a diatomic molecule. II. H+H2 rotational excitation. Journal of Chemical Physics, 1975, 63, 1783-1796.	1.2	28
89	Theory of distortedâ€wave Born approximation for reactive scattering of an atom and a diatomic molecule. Journal of Chemical Physics, 1974, 61, 5147-5157.	1.2	63
90	Diffusion coefficient and interaction potential of the (H, H2) system. Journal of Chemical Physics, 1974, 60, 2454-2459.	1.2	5

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91	Adiabatic distorted wave calculation of H + H2 reactive scattering. Journal of Chemical Physics, 1974, 61, 2462-2464.	1.2	6
92	Forbidden transitions in the emission spectrum of atomic aluminum. Journal of Chemical Physics, 1974, 61, 3593-3598.	1.2	5
93	Error Bounds on Dynamic Polarizability and Oscillator Strength. Physical Review A, 1973, 7, 1863-1866.	1.0	2
94	Quantum Cross Sections of D+H2â†' HD+H Reaction. Journal of Chemical Physics, 1972, 57, 1808-1809.	1.2	10
95	Upper and Lower Bounds on Static Polarizability. Journal of Chemical Physics, 1971, 55, 5139-5140.	1.2	0
96	Continued Factorization Method for van der Waals Interactions. Journal of Chemical Physics, 1971, 55, 1064-1070.	1.2	12
97	Quantum Theory of (H,H2) Scattering: Approximate Treatments of Reactive Scattering. Physical Review A, 1971, 4, 1844-1858.	1.0	76
98	PadÃ©-Approximant Studies of Long-Range Forces. Physical Review A, 1970, 1, 1033-1044.	1.0	28
99	Rotational Excitation of the (H,H2) System. Physical Review, 1969, 187, 122-130.	2.7	29
100	Continued Factorization Method for Upper and Lower Bounds on the Dynamic Polarizability. Physical Review Letters, 1969, 23, 1271-1273.	2.9	19
101	Comparison of Quantum and Classical Theories of an Idealized Threeâ€Body Rearrangement Collision. Journal of Chemical Physics, 1969, 51, 4587-4594.	1.2	12
102	Solvable Quantumâ€Mechanical Model of Threeâ€Body Rearrangement Scattering. Journal of Chemical Physics, 1969, 50, 1119-1126.	1.2	48
103	Dynamic Polarizabilities and van der Waals Coefficients. Physical Review, 1969, 177, 108-114.	2.7	160
104	Quantum Theory of (H, H2) Scattering: Twoâ€Body Potential and Elastic Scattering. Journal of Chemical Physics, 1968, 49, 1676-1692.	1.2	63
105	PadÃ©-Approximant Calculation of the Nonretarded van der Waals Coefficients for Two and Three Helium Atoms. Physical Review, 1968, 171, 70-74.	2.7	41
106	Upper Bounds for van der Waals Interactions of Two and Three Atoms. Journal of Chemical Physics, 1968, 49, 4727-4728.	1.2	33
107	Quantum-mechanical study of H + H2 reactive scattering. Discussions of the Faraday Society, 1967, 44, 56.	0.9	71
108	Potential Scattering. American Journal of Physics, 1966, 34, 152-153.	0.3	0

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109	An accurate potential model for the $a^{3}sum_{u}^{+}$ state of the lithium dimer. Physical Chemistry Chemical Physics, 0, , .	1.3	0