

Complete Publication List of K.T. Tang

1. K.T. Tang, "Effect of an Anharmonic Potential on Periodic Vibrations of a Monatomic Chain", Proc. Phys. Soc. **82**, 529 (1963)
2. K.T. Tang, "Potential Scattering", Am. J. Phys. **34**, 152 (1966).
3. M. Karplus and K.T. Tang, "Quantum Mechanical Study of (H, H_2) Reactive Scattering", Disc. Faraday Soc. **44**, 56 (1967)
4. K.T. Tang and M. Mahajan, "Orientation Measurements of Circular Plates of Crystal", IEEE Trans. IM **16**, 154 (1967).
5. K.T. Tang and M. Karplus, "Padé Approximant Calculation of the Nonretarded van der Waals Coefficients for Two and Three Helium Atoms", Phys. Rev. **171**, 70 (1968).
6. K.T. Tang and M. Karplus, "Quantum Theory of (H, H_2) Scattering: TwoBody Potential and Elastic Scattering", J. Chem. Phys. **49**, 1676 (1968).
7. K.T. Tang, "Upper Bounds for van der Waals Interactions of Two and Three Atoms", J. Chem. Phys. **49**, 4727 (1968).
8. K.T. Tang, "Dynamic Polarizabilities and van der Waals Coefficient", Phys. Rev. **177**, 108 (1969).
9. K.T. Tang, B. Kleinman and M. Karplus, "Solvable Quantum Mechanical Model of Three Body Rearrangement Scattering", J. Chem. Phys. **50**, 1119 (1969).
10. K.T. Tang, "Rotational Excitation of the (H, H_2) System", Phys. Rev. **187**, 122 (1969).
11. B. Kleinman and K.T. Tang, "A Comparison of Quantum and Classical Theories of an Idealized Three Body Rearrangement Collision", J. Chem. Phys. **51**, 4587 (1969).
12. K.T. Tang, "Continued Factorization Method for Upper and Lower Bounds on the Dynamic Polarizability", Phys. Rev. Lett. **23**, 1271 (1969).
13. F. Hagen and K.T. Tang, "Index of Refraction and Verdet Constant of Atomic Helium", J. Opt. Soc. Am. **60**, 365 (1970).
14. K.T. Tang, "Pade Approximant Studies of Long Range Forces", Phys. Rev. **A1**, 1033 (1970).
15. K.T. Tang, "Continued Factorization Method for van der Waals Interactions", J. Chem. Phys. **55**, 1064 (1971).
16. K.T. Tang and M. Karplus, "Quantum Theory of (H, H_2) Scattering: Approximate Treatments of Reactive Scattering", Phys. Rev. **A4**, 1844 (1971).
17. K.T. Tang, "Upper and Lower Bounds on Static Polarizability", J. Chem. Phys. **55**, 5139 (1971).
18. K.T. Tang, "One Term Sellmeier Formula for Dispersion of Dilute Gases", J. Opt. Soc. Am. **62**, 644 (1972).
19. K.T. Tang and P. Liebelt, "Reaction Rate for an Idealized Collinear Three Body Exchange Scattering", Chem. Phys. Lett. **17**, 614 (1972).
20. K.T. Tang, "Quantum Cross Sections of $D + H_2 \rightarrow HD + H$ Reaction" J. Chem. Phys. **57**, 1808 (1972).
21. P.T. Gee and K.T. Tang, "Error Bounds on Dynamic Polarizability and Oscillator Strength", Phys. Rev. **A7**, 1863 (1973).
22. K.T. Tang and P.S.P. Wei, "Diffusion Coefficient and Interaction Potential of the (H, H_2) System", J. Chem. Phys. **60**, 2454 (1974).
23. P.S.P. Wei, R.B. Hall and K.T. Tang, "Forbidden Transition in the Emission Spectrum of Atomic Aluminum", J. Chem. Phys. **61**, 3593 (1974)

Complete Publication List of K.T. Tang

24. B.H. Choi and K.T. Tans, "Adiabatic Distorted Wave Calculation of $H + H_2$ Reactive Scattering", *J. Chem. Phys.* **61**, 2462 (1974).
25. K.T. Tang and K.K. Poon, "Continued Factorization Method for Optical Dispersion", *J. Opt. Soc. Am.* **64**, 1582 (1974).
26. B.H. Choi and K.T. Tang, "Theory of Distorted-Wave Born Approximation for Reactive Scattering of an Atom and a Diatomic Molecule", *J. Chem. Phys.* **61**, 5147 (1974)
27. B.H. Choi and X.T. Tang, "On Jz Conserving Coupled State Approximation for Molecular Collisions", *J. Chem. Phys.* **62**, 4568 (1975).
28. K.T. Tang and B.H. Choi, "Three Dimensional Quantum Mechanical Studies of $D + H_2 \rightarrow DH + H$ Reactive Scattering", *J. Chem. Phys.* **62**, 3642 (1975).
29. J.M. Norbeck, P.R. Certain and K.T. Tang, "On the Anisotropy of the $H_2 - H$ Potential Energy Surface", *J. Chem. Phys.* **63**, 590 (1975).
30. K.T. Tang and J.O. Hirschfelder, "Hydrodynamic Formulation of Quantum Scattering Theory", Abstracts of papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Univ. of Washington Press, Seattle, 1975) p. 230.
31. K.T. Tang and B.H. Choi, "Three Dimensional Quantum Mechanical Studies of $H + H_2$ and $D + H_2$ Reactive Scatterings", Abstracts of papers on the IXth International Conference on the Physics of Electronic and Atomic Collisions (Univ. of Washington Press, Seattle, 1975) p. 367.
32. B.H. Choi and K.T. Tang, "Inelastic Collisions Between an Atom and a Diatomic Molecule, I. Theoretical and Numerical Considerations for the Close Coupling Approximation", *J. Chem. Phys.* **63**, 1775 (1975).
33. B.H. Choi and K.T. Tang, "Inelastic Collisions Between an Atom and a Diatomic Molecule, II. $H + H_2$ Rotational Excitation", *J. Chem. Phys.* **63**, 1783 (1975).
34. B.H. Choi and K.T. Tang, "Three Dimensional Quantum Mechanical Studies of $D + H_2 \rightarrow DH + H$ Reactive Scattering II". *J. Chem. Phys.* **63**, 2854 (1975).
35. K.T. Tang, J.M. Norbeck and P.R. Certain, "Upper and Lower Bounds on C_6, C_8, C_{10} van der Waals Coefficients of Noble Gases and Alkali Atoms", *J. Chem. Phys.* **64**, 3063 (1976).
36. B.H. Choi and K.T. Tang, "Inelastic Collisions Between an Atom and Diatomic Molecule III, Comparison of Approximation Methods as Applied to the $H + H_2$ Rotational Excitation". *J. Chem. Phys.* **64**, 942 (1976).
37. J.O. Hirschfelder and K.T. Tang, "Quantum Mechanical Streamlines, III. Idealized Reactive Atom Diatomic Molecule Collisions", *J. Chem. Phys.* **64**, 760 (1976).
38. K.T. Tang, "Multipoint Padé Theory and Semi-Empirical Method for the van der Waals Interactions", *Chem. Phys. Lett.* **40**, 372 (1976).
39. J.O. Hirschfelder and K.T. Tang, "Quantum Mechanical Streamlines IV. Collision of Two Spheres with Square Potential Wells or Barriers", *J. Chem. Phys.* **65**, 470 (1976).
40. H.D. Meyer and K.T. Tang, "S wave Resonances with Square Well Potentials", *Z. Physik A* **279**, 349 (1976).
41. B.H. Choi and K.T. Tang, "Close Coupling Studies of Rotational Excitation of $Ar + N_2$ and $H^+ + H_2$ Collisions", *J. Chem. Phys.* **65**, 5528 (1976).

Complete Publication List of K.T. Tang

42. B.H. Choi and K.T. Tang, "Three Dimensional Quantum Mechanical Studies of the $H + H_2$ Reactive Scattering", *J. Chem. Phys.* **65**, 5161 (1976).
43. K.T. Tang and J.P. Toennies, "A Simple Theoretical Model for the van der Waals Potential at Intermediate Distances. I. Spherically Symmetric Potentials", *J. Chem. Phys.* **66**, 1496 (1977).
44. B.H. Choi, R.T. Poe and K.T. Tang, "Rotational and Vibrational Transitions for $Li + H_2$ Collisions", *Chem. Phys. Lett.* **48**, 237 (1977).
45. K.T. Tang and J.R. Grover, "Reconciliation of Crossed Beam Results on the Hydrogen Exchange Reaction", Abstracts of papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Commissariat a l'Energie Atomique, Paris, 1977) p. 26.
46. K.T. Tang and J.P. Toennies, "A Simple Theoretical Model for the Anisotropic van der Waals Potential", Abstracts of papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Commissariat a l'Energie Atomique, Paris, 1977) p. 736.
47. B.H. Choi, R.T. Poe and K.T. Tang, "Theory of Collisions Between an Atom and a Diatomic Molecule in the Body Fixed Coordinate System, I. Coupled Differential Equations and Asymptotic Boundary Conditions", *J. Chem. Phys.* **69**, 411 (1978).
48. B.H. Choi, R.T. Poe and X.T. Tang, "Theory of Collisions Between an Atom and a Diatomic Molecule in the Body Fixed Coordinate System II. Close Coupling Calculation for Rotational Transitions", *J. Chem. Phys.* **69**, 422 (1978).
49. Y. Shan, B.H. Choi, R.T. Poe and K.T. Tang, "Three Dimensional Quantum Mechanical Study of the $F + H_2$ Reactive Scattering", *Chem. Phys. Lett.* **57**, 379 (1978).
50. K.T. Tang and J.P. Toennies, "A Simple Theoretical Model for the van der Walls Potential at Intermediate Distances, II. Anisotropic Potentials of $He + H_2$ and $Ne + H_2$ ", *J. Chem. Phys.* **68**, 5501 (1978).
51. B.H. Choi, R.T. Poe, K.T. Tang, "Charge Exchange Between Singly Ionized Helium Ions", Proceedings of the Heavy Ion Fusion Workshop, Argonne National Laboratory (Sept. 1978).
52. B.H. Choi, R.T. Poe and K.T. Tang, "On Theory of Collisions Between an Atom and a Diatomic Molecule", *J. Chem. Phys.* **70**, 3153 (1979).
53. K.T. Tang, Y.Y. Yung, B.H. Choi and R.T. Poe: "Three Dimensional Quantum Mechanical Studies on $He + H_2^+ \rightarrow HeH^+ + H$ Reactive Scattering", Abstracts of Contributed papers of the XI International Conference on the Physics of Electronic and Atomic Collisions (The Society for Atomic Collision Research, Japan, 1979). p. 894.
54. B.H. Choi, R.T. Poe and K.T. Tang, "Rotational Transitions and Rate Coefficients of the $H + H_2$ System", Abstracts of Contributed Papers of the XI International Conference on the Physics of Electronic and Atomic Collisions (The Society for Atomic collision Research, Japan, 1979), p. 802.
55. Y.Y. Yung, B.H. Choi, R.T. Poe and K.T. Tang, "Quantum Theory of $D + H_2 \rightarrow HD + H$ Reactive Scattering. III. On the ab initio Potential Energy Surface", *J. Chem. Phys.* **72**, 621 (1980).

Complete Publication List of K.T. Tang

56. J.C. Sun, B.H. Choi, R.T. Poe and K.T. Tang, "Quantum Theory of $D + H_2$ Rearrangement Collision: Effects of Vibrational Excitation", Phys. Rev. Lett. **44**, 1211 (1980).
57. B.H. Choi, R.T. Poe, J.C. Sun and K.T. Tang, "Reactive Scattering of Rotationally Excited Target Molecules with Adiabatic Theory", J. Chem. Phys. **73**, 4381 (1980).
58. J.C. Sun, B.H. Choi, R.T. Poe and K.T. Tang, "Three Dimensional Quantum Mechanical Studies of $D + H_2 \rightarrow HD + H$ Reactive Scattering. IV. Cross Sections and Rate Constants with Rotationally Excited Molecules", J. Chem. Phys. **73**, 6095 (1980).
59. K.T. Tang and J.P. Toennies, "A Simple Theoretical Model for the van der Waals Potential at Intermediate Distances, III. Anisotropic Potentials of $Ar - H_2$, $Kr - H_2$ and $Xe - H_2$ ", J. Chem. Phys. **74**, 1148 (1981).
60. B.H. Choi, R.T. Poe, J.C. Sun, K.T. Tang and Y.Y. Yung, "Transition Matrix Theory of Molecular Reactive Scattering Chem. Phys. **74**, 5686 (1981).
61. J.C. Sun, B.H. Choi, R.T. Poe and K.T. Tang, "Three Dimensional Effects on the Linear Adiabatic Molecular Wave Functions in the $H + H_2$ System", Chem. Phys. Lett. **82**, 255 (1981).
62. P. Habits, K.T. Tang and J.P. Toennies, "Spherical and Anisotropic Potentials of the $He - N_2$ System", Chem. Phys. Lett. **85**, 461 (1982).
63. K.T. Tang and J.P. Toennies, "A Simple Theoretical Model for the van der Walls Potential at Intermediate Distances. IV. The Bond Distance Dependence of the Potential Hypersurfaces for $He - H_2$ and $Ne - H_2$; Also for the Repulsive Region", J. Chem. Phys. **76**, 2524 (1982).
64. M.S. Bowers and K.T. Tang, "Quantum Effects of Vibrational Excitation in an Idealized Three Body Collision", J. Phys. Chem. **86**, 1107 (1982).
65. M. Faubel, K.H. Kohl, J.P. Toennies, K.T. Tang and Y.Y. Yung, "The $He - N_2$ Anisotropic Van der Waals Potential: Test of a Simple Model Using State to State Differential Scattering Cross Sections", Disc. Faraday Soc. **73**, 205 (1982).
66. B.H. Choi, R.T. Poe, J.C. Sun and H.T. Tang, "Atom molecule reactive scattering and symmetrized cross section for the system containing identical nuclei," J. Chem. Phys. **78**, 5590 (1983).
67. J.C. Sun, B.H. Choi, R.T. Poe, and K.T. Tang, "Adiabatic T matrix theory for three dimensional reactive scattering: Application to the (H, H_2) system," J. Chem. Phys. **78**, 4523 (1983).
68. J.C. Sun, B.H. Choi, R.T. Poe and K.T. Tang, "Three dimensional quantum mechanical studies of $D + H_2 \rightarrow DH + H$ reactive scattering V. Cross sections and rate constants from converged adiabatic T matrix theory," J. Chem. Phys. **79**, 5376 (1983).
69. K.T. Tang and J.P. Toennies, "An improved simple model for the van der Waals potential based on universal damping functions for the dispersion coefficients", J.Chem Phys. **80**, 3726 (1984).
70. B.H. Choi, R.T. Poe, and K.T. Tang, "Coupled Channel Distorted Wave Method of Atom molecule Reactive Scattering", J. Chem. Phys. **81**, 4979 (1984).

Complete Publication List of K.T. Tang

71. M..S. Bowers, B.H. Choi, R.T. Poe and K.T. Tang, "Quantum Mechanical Determination of Product State Distribution of the $H + D_2$ Reaction", Chem. Phys. Lett. **116**, 239 (1985).
72. K.T. Tang, "Approximate treatments of reactive scattering: the T matrix approach", in "Theory of Chemical Reaction Dynamics", Vol. II, 125 (1985), by CRC Press, Inc.
73. K.T. Tang and J.P. Toennies "New Combining Rules for Well Parameters and Shapes of the van der Waals Potential of Mixed Rare Gas Systems" Z Phys. **D 1**, 91 (1986).
74. W.G. Greenwood and K.T. Tang, "Dipole, Quadrupole, and Octupole Terms in the Long Range Hyperfine Frequency Shift for Hydrogen in the Presence of Inert Gases", J. Chem. Phys. **86**, 3539 (1986).
75. M.S. Bowers, B.H. Choi and K.T. Tang, "Quantum Mechanical Determination of Rates of Reactions Involving Hydrogen Isotopes", Chem Phys. Lett. **136**, 145 (1987).
76. M.S. Bowers, M. Faubel, and K.T. Tang, "Close coupling Scattering Cross Sections for $Ar - CO_2$ Collisions at 97.0 mev.", J. Chem. Phys. **87**, 5687 (1987).
77. R. Alrichs, H.J. Bohm, S. Brode, K.T. Tang and J.P. Toennies, "Interaction Potentials for Alkali Ion Rare Gas and Halogen Ion Rare Gas Systems", J. Chem. Phys. **88**, 9290 (1988).
78. M.S. Bowers, K.T. Tang, and J. P. Toennies "The Anisotropic Potentials of $He - N_2$, $Ne - N_2$, and $Ar - N_2$ ", J. Chem. Phys. **88**, 5465 (1988).
79. Q.F. Pan, M.S. Bowers, and K.T. Tang, "The Interaction Potential and Diffusion Coefficients of Sodium in Neon", Chem. Phys. **122**, 193 (1988).
80. K.T. Tang and J.P. Toennies, "A Model for the Potenial Energy Surface of $H - H_2$ in the Intermediate and Long range Region", Chem. Phys. Lett. **151**, 301 (1988).
81. K.T. Tang, J.P. Toennies, and C.L. Yiu, "A Simple Method for Calculating the Exchange Energy for H_2^+ from Polarization Perturbation Theory", Chem. Phys. Lett **162**, 170 (1989).
82. K.T. Tang and X.D. Yang, "Interaction Potential of $H - He$ System and the Hyperfine Frequency Shift of H in He Buffer Gas", Phys. Rev. A **42**, 311 (1990).
83. K.T. Tang and J.P. Toennies, "Asymptotic Theory of the Chemical Bond in H_2^+ Based on a Simple Physical Model", J. Phys. Chem. **94**, 7880 (1990).
84. C. Nyeland, K.T. Tang, and J.P. Toennies, "Repulsive Ion-Atom and Ion-Ion Potentials from Charge Density Overlap Integrals", Chem. Phys. **147**, 229 (1990).
85. K.T. Tang, J.P. Toennies, and C.L. Yiu, "The Exchange energy of H_2^+ Calculated from Polarization Perturbation Theory", J. Chem. Phys. **94**, 7266 (1991).
86. K.T. Tang and J.P. Toennies, "On the Contribution of the Polarization Energy to the Chemical Bond in H_2^+ ", Chem. Phys. Lett. **175**, 511 (1991).
87. K.T. Tang and J.P. Toennies, "A Generalized Heitler-London Theory of the Chemical Bond in H_2^+ ", J. Chem. Phys. **95**, 5918 (1991).
88. K.T. Tang, J.P. Toennies and W. Meyer, "A Simple Predictive Model of Chemical Potentials: $H_2 (\sum^1 g)$ and $Li_2 (\sum^1 g)$ ", J Chem. Phys. **95**, 1144 (1991).

Complete Publication List of K.T. Tang

89. K.T. Tang and J.P. Toennies, "A Combining Rule Calculation of the Van der Waals Potentials of the Rare Gas Hydrides", *Chem. Phys.* **156**, 413 (1991).
90. K.T. Tang, J.P. Toennies, M. Wanschura, and C.L. Yiu, "Exchange Energies of Alkali Dimer Cations Calculated from the Polarizabilities With the Holstein-Herring Method", *Phys. Rev. A* **46**, 3746 (1992).
91. G.L. Guo, K.T. Tang, and C.L. Yiu, "The Exchange Energy of H_2^+ Calculated from the Exact First-Order Wave Function of the Polarization Perturbation Theory", *Chem. Phys. Lett.* **203**, 583 (1993).
92. K.T. Tang, J.P. Toennies, and C.L. Yiu, "The Exchange Energy of H_2^+ Calculated from the Surface Integral Method with the Zeroth Order Approximation", *J. Chem. Phys.* **99**, 377 (1993).
93. K.T. Tang and J.P. Toennies, "The damping function of van der Waals attractions in the potential between rare-gas atoms and metal surfaces". *Surface Science Lett.* **279**, L203 (1992).
94. G.L. Guo, K.T. Tang, J.P. Toennies, and C.L. Yiu, "The interaction potential of H_2^+ calculated from the exact first order wave function of the polarization perturbation theory". *J. Chem. Phys.* **98**, 8777 (1993).
95. D.De. Fazio, F.A. Gianturco, J.A. Roddriguez, K.T. Tang, and J.P. Toennies, "A semiclassical model for polarization forces in collisions of electrons and positrons with helium atoms". *J. Phys. B* **27**, 303 (1994).
96. K.T. Tang, J.P. Toennies, C.L. Yiu, "The perturbation calculation of van der Waals potentials", *Theo. Chim. Acta*, **88**, 169 (1994).
97. K.T. Tang, J.P. Toennies, C.L. Yiu, T. Cwiok, B. Jeziorski, W. Kolos, and R. Moszynski, "A perturbation theory calculation of the ground state ($X\sum_g^+$) energy of the hydrogen molecule", *Chem. Phys. Lett.* **224**, 476 (1994).
98. S.H. Patil, K.T. Tang, J.P. Toennies, and C.L. Yiu, "A perturbation theory calculation of the exchange energy and potential of the HeH^{++} molecular ion", *J. Chem. Phys.* **101**, 8998 (1994).
99. K.T. Tang, J.P. Toennies, and C.L. Yiu, "An accurate analytical He-He van der Waals potential based on perturbation theory", *Phys. Rev. Lett.* **74**, 1546 (1995).
100. F.A. Gianturco, K.T. Tang, J.P. Toennies, D.De. Elliott Fazio, and J.A. Rodriguez-Ruiz, "A semiclassical model of polarization forces in atomic scattering II. Electron collisions with neon and argon", *Z. Physik; D* **33**, 27 (1995).
101. U. Kleinekathofer, K.T. Tang, J.P. Toennies, and C.L. Yiu, "Angular momentum coupling in the exchange energy of multielectron systems" *J. Chem. Phys.* **103**, 6617 (1995).
102. T.C. Chang and K.T. Tang, "Comparison between molecular orbital and surface integral calculations of the exchange energy for the homonuclear dimer ions He_2^+ , Li_2^+ , Be_2^+ ", *J. Chem. Phys.* **103**, 10580 (1995).
103. U. Kleinekathofer, K.T. Tang, and J.P. Toennies, and C.L. Yiu, "Potentials for some rare gas and alkali systems calculated from the surface integral method" *Chem. Phys. Lett.* **249**, 257 (1996).

Complete Publication List of K.T. Tang

104. Ch. Johann, U. Kleinekathofer, K.T. Tang, and J.P. Toennies",Generalized Heitler-London theory with exchange energy by the surface integral method: An application to the Alkali metal dimer cations", Chem. Phys. Lett. **257**, 651 (1996).
105. U.Kleinekathofer, S.H. Patil, K.T. Tang, and J.P.Toennies,"Boundary condition determined wave function for the ground state of helium and isoelectronic ions ", Phys. Rev. A **54**, 2840 (1996).
106. P. Li and K.T. Tang, "Inter atomic potential and diffusion coefficient of alkali rare gas systems", J. Chem. Phys. **106**, 3825 (1997).
107. Ch. Johann, K.T. Tang, and J.P. Toennies, "Exchange energy of hydrogen molecule by surface integral method with Coulson Fischer wave function", J. Chem. Phys. **106**, 3823 (1997).
108. S.H.Patil and K.T. Tang, "Mullipolar polarizabilities and dispersion coefficients of alkali isoelectronic sequences ", J. Chem. Phys. **106**, 2298 (1997).
109. U. Kleinekathofer, K.T. Tang, J.P. Toennies , and C.L. Yiu,"Van der Waals interactions, Potentials of He_2 , Ne_2 , and Ar_2 with the exchange energy calculated by the surface integral method" J. Chem. Phys.**107**, 9502 (1997).
110. S.H. Patil and K.T. Tang, "Asymptotic method for polarizabilities and dispersion coefficients with applications to hydrogen and helium systems "J. Chem. Phys. **107**, 3894 (1997).
111. B.H. Choi , K.T. Tang, and J.P. Toennies, "Interpretation of helium atom scattering from isolated CO molecules on copper (001) based on an exact quantum mechanical model", J. Chem. Phys. **107**, 1631 (1997).
112. B.H. Choi, K.T. Tang, and J.P. Toennies, "Quantum mechanical scattering of an atom from a rigid hemisphere on a flat surface", J. Chem. Phys., **107**, 9437 (1997).
113. U. Kleinekathofer, S.H. Patil, K.T. Tang , and J.P.Toennies, "A Bounday condition determined wave function for the $H_2(^X\sum_g)$ molecule", Polish Journal of Chem., **72**, 1361 (1997).
114. K.T. Tang, J.P. Toennies, C.L. Yiu, "Generalized Heitler-London theory for atomic interaction and surface integral method for exchange energy", Int. Rev. Phys. Chem. **17**, 363 (1998).
115. S.H. Patil and K.T. Tang, "A simple method for polarizabilities and hyperpolarizabilities of alkali isoelectronic systems", Chem. Phys. Lett. **295**, 152 (1998).
116. Ch. Johann, S.H.Patil, K.T.Tang and J.P. Toennies, "Asymptotic theory for the $^2\sum$ van der Waals potentials of alkali dimer cations", Chem. Phys. Lett. **295**, 158 (1998).
117. S.H. Patil and K.T. Tang, "Polarizabilities and dispersion coefficients for alkali systems in second and third order perturbation", Chem. Phys. Lett. **301**, 64 (1999).
118. U. Kleinekathofer, K.T. Tang, J.P. Toennies , and C.L. Yiu, "The generalized Heitler-London theory for H_3^+ potential energy surfaces", J. Chem. Phys. **111**, 3377 (1999).
119. S.H. Patil, K.T. Tang and J.P. Toennies, "Boundary condition determined wavefunctions for the ground state of one and two electron homonuclear molecules", J. Chem. Phys. **111**, 3377 (1999).
120. T.I. Sachse, K.T. Tang and J.P. Toennies, "A simple damping function for the three atom dispersion energy", Chem. Phys. Lett. **317**, 346 (2000).

Complete Publication List of K.T. Tang

121. B.H. Choi, A.P. Grahm, K.T. Tang, and J.P. Toennies, "Helium atom scattering from isolated CO molecules on a $\text{Pt}(111)$ surface: experiment versus close-coupling calculations for a realistic $\text{He} - \text{CO}$ potential", *J. Chem. Phys.* **112**, 10538 (2000).
122. S.H. Patil and K.T. Tang, "Simple model potential and model wavefunctions for $(H - \text{Akali})^+$ and $(\text{Akali} - \text{Akali})^+$ ions", *J. Chem. Phys.* **113**, 676 (2000).
123. U. Kleinekathofer, T.I. Sachse, K.T. Tang, J.P. Toennies , and C.L. Yiu, "Three-body exchange energies in H_3 and He_3 calculated by the surface integral method", *J. Chem. Phys.* **113**, 948 (2000).
124. T.I. Sachse, K.T. Tang and J.P. Toennies, "A modified Cashion-Herschbach potential for the H_3 potential energy surface", *Chem. Phys. Lett.* **328**, 469 (2000).
125. B.H. Choi, A.P. Grahm, K.T. Tang, and J.P. Toennies, "Correlation between elastic and inelastic atom scattering from single adsorbed molecules", *J. Chem. Phys.*, **114**, 2883 (2001).
126. K.T. Tang, J.P. Toennies , and C.L. Yiu, "New Insight into Exchange Energy of Covalent Chemical Bonds" *J. Chinese Chem. Soc.* **48**, 365 (2001)
127. C.J. Ahna and K.T. Tang, "A universal formula for dispersion coefficients between alkali atoms", *J. Chem. Phys.*, **114**, 10979 (2001).
128. S.H. Patil, K.T. Tang and J.P. Toennies, "Damping functions for pairwise sum modal of the atom-surface potential", *J. Chem. Phys.*, **116**, 8118 (2002).
129. B.H. Choi, A.P. Grahm, K.T. Tang, and J.P. Toennies, "Scattering from isolated molecules on metal surfaces: The relationship between elastic and inelastic intensities", *J. Chem. Phys.*, **116**, 10979 (2002).
130. S.H.Patil, K.T.Tang and J.P. Toennies, "Perturbation calculations of the van der Waals potentials of He $(2^3S, 2^1S)$ metastable atoms with rare gas atoms", *Chem. Phys. Lett.* **364**, 371 (2002).
131. K.T. Tang, and J.P. Toennies, "The van der Waals potentials between all the rare gas atoms from He to Rn", *J. Chem. Phys.*, **118**, 4976 (2003).
132. S.H. Patil and K.T. Tang, "Simple model potential and model wavefunctions for (Na, K, Rb, Cs) - H molecules", *J. Chem. Phys.* **118**, 4905 (2003).
133. Y.T, Tseng, K.N.Huang and K.T. Tang, "Quantum Scattering of an Atom from an Absorbed Molecule on a Smooth Metal Surrace", *Int. J. Mod. Phys. B*, **19**, 2457 (2005).
134. K. T. Tang and J.P. Toennies, "The dynamical polarisability and van der Waals dimer potential of mercury", *Mol. Phys.* **106**, 1645 (2008).