Alexei A Buchachenko

List of Publications by Year
in descending order

148 papers	2,174 citations	236925 25 h-index	361022 35 g-index
149 all docs	149 docs citations	149 times ranked	954 citing authors

#	Article	IF	Citations
1	Trapping and migration of P-state atoms in rare gas solids: effect of angular momentum anisotropy for model O(³P) and C(³P) atoms. Molecular Physics, 2022, 120, .	1.7	1
2	Modeling of the thermal migration mechanisms of atomic oxygen in Ar, Kr, and Xe crystals. Journal of Chemical Physics, 2021, 154, 044305.	3.0	5
3	Molecular dynamics simulations of the Ba+ ion mobility in liquid xenon. Journal of Physics: Conference Series, 2021, 1740, 012033.	0.4	0
4	Generic accommodations of an atom in the Lennard-Jones fcc and hcp rare-gas solids: A computational study. Physical Review B, 2021, 103, .	3.2	4
5	Reexamination of the ground-state Born-Oppenheimer Yb2 potential. Physical Review A, 2021, 104, .	2.5	0
6	High-resolution spectroscopy of neutral Yb atoms in a solid Ne matrix. Physical Review A, 2021, 104, .	2.5	7
7	Weak bonding of the hydrogen molecule by the S-state lanthanide ions Eu+, Yb+ and Lu+ from ab initio calculations. Chemical Physics Letters, 2020, 756, 137812.	2.6	0
8	Extended combination rule for like-atom dipole dispersion coefficients. Journal of Chemical Physics, 2020, 153, 064110.	3.0	0
9	Mobility of the Singly-Charged Lanthanide and Actinide Cations: Trends and Perspectives. Frontiers in Chemistry, 2020, 8, 438.	3.6	7
10	Trapping sites of Li atom in the rare gas crystals Ar, Kr, and Xe: Analysis of stability and manifestation in the EPR spectra. Low Temperature Physics, 2020, 46, 165-172.	0.6	6
11	Exploiting transport properties for the detection of optical pumping in heavy ions. Physical Review A, 2020, 102, .	2.5	8
12	Laser Resonance Chromatography of Superheavy Elements. Physical Review Letters, 2020, 125, 023002.	7.8	14
13	Empirically Modified Potentials of Interaction between Rare Gases for Matrix Isolation Problems. Russian Journal of Physical Chemistry A, 2019, 93, 1505-1512.	0.6	7
14	Accommodation of a dimer in an Ar-like lattice: exploring the generic structural motifs. Physical Chemistry Chemical Physics, 2019, 21, 16549-16563.	2.8	2
15	Ab initio study of the mobility of Gd+ ions in He and Ar gases. International Journal of Mass Spectrometry, 2019, 443, 86-92.	1.5	6
16	Weakly bound molecules as sensors of new gravitylike forces. Scientific Reports, 2019, 9, 14807.	3.3	25
17	Triplet emission of atomic ytterbium isolated in a xenon matrix. Low Temperature Physics, 2019, 45, 707-714.	0.6	3
18	Ab initio interaction potentials of the Ba, Ba+ complexes with Ar, Kr, and Xe in the lowest excited states. Journal of Chemical Physics, 2019, 150, 064314.	3.0	4

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19	Computational study of the stable atomic trapping sites in Ar lattice. Low Temperature Physics, 2019, 45, 301-309.	0.6	13
20	Stable axially symmetric atomic impurity in an fcc solidâ€”Ba in rare gases. Journal of Chemical Physics, 2019, 151, 121104.	3.0	8
21	Polarizabilities, dispersion coefficients, and retardation functions at the complete basis set CCSD limit: From Be to Ba plus Yb. Journal of Chemical Physics, 2019, 151, 214302.	3.0	5
22	Interaction potentials and transport properties of Ba, Ba+, and Ba2+ in rare gases from He to Xe. Journal of Chemical Physics, 2018, 148, 154304.	3.0	14
23	Phase Locking between Different Partial Waves in Atom-Ion Spin-Exchange Collisions. Physical Review Letters, 2018, 121, 173402.	7.8	24
24	Modeling of Manganese Atom and Dimer Isolated in Solid Rare Gases: Structure, Stability, and Effect on Spin Coupling. Journal of Physical Chemistry A, 2017, 121, 2429-2441.	2.5	11
25	xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Î£</mml:mi><mml:mprescripts /><mml:none /><mml:mn>2</mml:mn></mml:mmultiscripts></mml:math> molecules with alkali-metal atoms in a magnetic field: Ab initio analysis and prospects for sympathetic cooling of xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="bold">.S</mml:mi>	2.5	18
26	Probing Non-Newtonian gravity by photoassociation spectroscopy. Journal of Physics: Conference Series, 2017, 810, 012014.	0.4	7
27	Beyond-Born-Oppenheimer effects in sub-kHz-precision photoassociation spectroscopy of ytterbium atoms. Physical Review A, 2017, 96, .	2.5	19
28	Spin-Orbit Interactions and Quantum Spin Dynamics in Cold Ion-Atom Collisions. Physical Review Letters, 2016, 117, 143201.	7.8	17
29	Ab Initio Characterization of the Electrostatic Complexes Formed by H₂ Molecule and Cr⁺, Mn⁺, Cu⁺, and Zn⁺ Cations. Journal of Physical Chemistry A, 2016, 120, 5006-5015.	2.5	7
30	Heat- and light-induced transformations of Yb trapping sites in an Ar matrix. Journal of Chemical Physics, 2015, 143, 174306.	3.0	13
31	Adiabatic channel capture theory applied to cold atomâ€“molecule reactions: Li + CaH $o $ LiH + Ca at 1K. New Journal of Physics, 2015, 17, 035010.	2.9	14
32	Rate coefficients of the elementary stages of heterogeneous catalytic recombination of dissociated air on thermal-protective coatings. Fluid Dynamics, 2015, 50, 453-462.	0.9	3
33	Electric properties of the Cu+, Ag+ and Au+ cations in the ground 1S and excited 3D, 1D electronic states. European Physical Journal D, 2014, 68, 1.	1.3	1
34	Mobility of singly-charged lanthanide cations in rare gases: Theoretical assessment of the state specificity. Journal of Chemical Physics, 2014, 140, 114309.	3.0	21
35	Test of the interaction potential energy for Na+â€“H2 by gaseous ion transport data. Journal of Chemical Physics, 2014, 141, 114305.	3.0	3
36	Interaction of the Beryllium Cation with Molecular Hydrogen and Deuterium. Journal of Physical Chemistry A, 2014, 118, 6711-6720.	2.5	8

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37	Charge transfer in cold collisions of rubidium atoms with calcium and ytterbium ions. Journal of Physics: Conference Series, 2014, 572, 012009.	0.4	1
38	Modeling of catalytic activity of an Al2O3 surface on the basis of the first principles. Moscow University Mechanics Bulletin, 2013, 68, 8-14.	0.3	2
39	Closed model of oxygen recombination on an Al2O3 surface. Russian Journal of Physical Chemistry B, 2013, 7, 88-95.	1.3	4
40	Charge transfer in cold Yb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mo>+</mml:mo></mml:msup></mml:math>+Rb collisions. Physical Review A, 2013, 87, .	2.5	30
41	Spin-Orbit Suppression of Cold Inelastic Collisions of Aluminum and Helium. Physical Review Letters, 2013, 110, 173202.	7.8	4
42	Zeeman relaxation induced by spin-orbit coupling in cold antimony-helium collisions. Physical Review A, 2013, 88, .	2.5	2
43	Ab initio spin-orbit calculations on the lowest states of the nickel dimer. Journal of Chemical Physics, 2012, 136, 214304.	3.0	6
44	Electronic spectroscopy of ytterbium in a neon matrix. Journal of Chemical Physics, 2012, 137, 204315.	3.0	7
45	Properties of the B+-H2and B+-D2complexes: A theoretical and spectroscopic study. Journal of Chemical Physics, 2012, 137, 124312.	3.0	7
46	Ab initio long-range interaction and adiabatic channel capture model for ultracold reactions between the KRb molecules. Journal of Chemical Physics, 2012, 137, 114305.	3.0	15
47	Numerical method of quantum capture probability determination for molecular collisions at ultralow temperatures. Moscow University Chemistry Bulletin, 2012, 67, 159-167.	0.6	5
48	Interactions of ThO(X) with He, Ne and Ar from the ab initio coupled cluster and symmetry adapted perturbation theory calculations. Chemical Physics, 2012, 399, 50-58.	1.9	5
49	Potential energy surface and rovibrational calculations for the ${m Mg}^+$ Mg +â€“${m H}_2$H2 and ${m Mg}^+$ Mg +â€“${m D}_2$D2 complexes. Journal of Chemical Physics, 2011, 134, 044310.	3.0	14
50	Ultracold spin-polarized mixtures of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow /><mml:mn>2</mml:mn></mml:msup><mml:mi>Î£</mml:mi></mml:mrow></mml:math>molecules with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>S</mml:mi></mml:math>-state atoms: Collisional stability and implications for sympathetic cooling. Physical Review A, 2011, 84, .	2.5	41
51	Rotationally resolved infrared spectrum of the Na+-D2 complex: An experimental and theoretical study. Journal of Chemical Physics, 2011, 134, 214302.	3.0	8
52	Heâ€“ThO(1Î£+) interactions at low temperatures: Elastic and inelastic collisions, transport properties, and complex formation in cold4He gas. Journal of Chemical Physics, 2011, 134, 144301.	3.0	6
53	AbÂinitio dipole polarizabilities and quadrupole moments of the lowest excited states of atomic Yb. European Physical Journal D, 2011, 61, 291-296.	1.3	20
54	Anisotropy of the static dipole polarizability induced by the spinâ€“orbit interaction: the S-state atoms Nâ€“Bi, Cr, Mo and Re. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1310-1328.	2.1	14

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55	State-interacting spin-orbit configuration interaction method for J-resolved anisotropic static dipole polarizabilities: Application to Al, Ga, In, and Tl atoms. Russian Journal of Physical Chemistry A, 2010, 84, 2325-2333.	0.6	4
56	Dynamics and mechanism of the non-adiabatic transitions from the ungerade I2(D0+u) state induced by collisions with rare gas atoms. Journal of Chemical Physics, 2010, 133, 244304.	3.0	9
57	Electronic structure and spin coupling of the manganese dimer: The state of the art of ab initio approach. Journal of Chemical Physics, 2010, 132, 024312.	3.0	24
58	Communication: Electric properties of the ThO(Xâ€‰Î£1+) molecule. Journal of Chemical Physics, 2010, 133, 041102.	3.0	25
59	Study of ArO^{â^'} and ArO via Slow Photoelectron Velocity-Map Imaging Spectroscopy and Ab Initio Calculations. Journal of Physical Chemistry A, 2009, 113, 4631-4638.	2.5	9
60	Study of KrO^{â^'} and KrO via Slow Photoelectron Velocity-Map Imaging Spectroscopy and ab Initio Calculations. Journal of Physical Chemistry A, 2009, 113, 14439-14446.	2.5	9
61	Suppression of Zeeman relaxation in cold collisions of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mmultiscripts><mml:mi>P</mml:mi><mml:mprescripts /><mml:none /><mml:mn>2</mml:mn></mml:mmultiscripts></mml:mrow><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Physical Review A, 2009, 80, .	2.5	11
62	Interaction Potentials, Spectroscopy, and Transport Properties of the Br⁺â^'RG Systems (RG) Tj ETQq0 0 0 rgBT /Overlock 1	2.5	6
63	Interactions and collisions of cold metal atoms in magnetic traps. Physica Scripta, 2009, 80, 048109.	2.5	6
64	Europium dimer: van der Waals molecule with extremely weak antiferromagnetic spin coupling. Journal of Chemical Physics, 2009, 131, 241102.	3.0	12
65	Ab initio interaction potential of the spin-polarized manganese dimer. Chemical Physics Letters, 2008, 459, 73-76.	2.6	9
66	The Na+â€“H2 cation complex: Rotationally resolved infrared spectrum, potential energy surface, and rovibrational calculations. Journal of Chemical Physics, 2008, 129, 184306.	3.0	28
67	Interactions between anionic and neutral bromine and rare gas atoms. Journal of Chemical Physics, 2008, 128, 064317.	3.0	9
68	Photoelectron spectroscopy of the Clâ^'â€¦H2â^•D2 anions: A model beyond the rotationless and Franckâ€“Condon approximations. Journal of Chemical Physics, 2008, 128, 154317.	3.0	1
69	Theoretical and experimental studies of collision-induced electronic energy transfer from v=â€“3 of the E(g+) ion-pair state of Br2: Collisions with He and Ar. Journal of Chemical Physics, 2008, 128, 184311.	3.0	3
70	Dynamics and mechanism of the Eâ†'D, Dâ€², Î², Î³, and Î´ nonadiabatic transitions induced in molecular iodine by collisions with CF4 and SF6 molecules. Journal of Chemical Physics, 2008, 129, 114309.	3.0	6
71	Spin-orbit interaction and large inelastic rates in bismuth-helium collisions. Physical Review A, 2008, 78, .	2.5	12
72	The Al+â€“H2 cation complex: Rotationally resolved infrared spectrum, potential energy surface, and rovibrational calculations. Journal of Chemical Physics, 2007, 127, 164310.	3.0	31

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73	Electronic to Vibrational Energy Transfer Assisted by Interacting Transition Dipole Moments:â€‰ A Quantum Model for the Nonadiabatic I₂(E) + CF₄ Collisions. Journal of Physical Chemistry A, 2007, 111, 8959-8967.	2.5	6
74	On the Role of Scattering Resonances in the F + HD Reaction Dynamicsâ€. Journal of Physical Chemistry A, 2007, 111, 12538-12549.	2.5	34
75	Separation ofortho- andpara-Hydrogen in Van der Waals Complex Formation. ChemPhysChem, 2007, 8, 815-818.	2.1	18
76	Non-adiabatic E â†' D, Dâ€², Î², Î³, Î´ transitions in the first ion-pair tier of molecular iodine induced by collisions with I2, He, Ar, Kr, Xe. Chemical Physics Letters, 2007, 436, 1-6.	2.6	17
77	The dynamics of nonadiabatic transitions in collisions between the I2(E) and I2(X) molecules. Russian Journal of Physical Chemistry A, 2007, 81, 58-68.	0.6	4
78	Interactions of lanthanide atoms: Comparative ab initio study of YbHe, Yb 2 and TmHe, TmYb potentials. European Physical Journal D, 2007, 45, 147-153.	1.3	32
79	Diffuse basis functions for small-core relativistic pseudopotential basis sets and static dipole polarizabilities of selected lanthanides La, Sm, Eu, Tm and Yb. Structural Chemistry, 2007, 18, 769-772.	2.0	33
80	Interactions of2P Atoms with Closed-Shell Diatomic Molecules:Â Alternative Diabatic Representations for the Electronic Anisotropyâ€. Journal of Physical Chemistry A, 2006, 110, 5458-5463.	2.5	5
81	Intensities of the photoelectron spectra of weakly bound anions: A complex of an atomic anion with a diatomic molecule. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2006, 100, 530-538.	0.6	1
82	Resonant optical excitation of the I2 ion-pair states through the RgI2 complexes in the valence states correlating to the 2P1/2+2P1/2 limit. Chemical Physics Letters, 2006, 427, 259-264.	2.6	20
83	Long-range interaction and the dynamics of nonadiabatic transitions in collisions of the I2(E) molecule with inert gas atoms. Russian Journal of Physical Chemistry A, 2006, 80, 1957-1967.	0.6	7
84	Ab initiopotential energy surface, infrared spectra, and dynamics of the ion-molecule complexes between Brâ¯ and H2, D2, and HD. Journal of Chemical Physics, 2006, 125, 114313.	3.0	11
85	Interaction potentials for Brâ¯â€“Rg (Rg=Heâ€“Rn): Spectroscopy and transport coefficients. Journal of Chemical Physics, 2006, 125, 064305.	3.0	16
86	Ab initiostudy of Tm-He interactions and dynamics in a magnetic trap. Physical Review A, 2006, 74, .	2.5	13
87	van der Waals interactions and dipole polarizabilities of lanthanides: Tm(F2)â€“He and Yb(S1)â€“He potentials. Journal of Chemical Physics, 2006, 124, 114301.	3.0	23
88	Collision-induced nonadiabatic transitions in the second-tier ion-pair states of iodine molecule: Experimental and theoretical study of the I2(f0g+) collisions with rare gas atoms. Journal of Chemical Physics, 2005, 122, 204318.	3.0	23
89	Electronic interaction anisotropy between open-shell lanthanide atoms and helium from cold collision experiment. Journal of Chemical Physics, 2005, 123, 101101.	3.0	14
90	Competition between adiabatic and nonadiabatic fragmentation pathways in the unimolecular decay of the ArI2(B) van der Waals complex. Journal of Chemical Physics, 2005, 122, 034303.	3.0	16

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91	Interactions in Open-Shell Clusters:Â Ab Initio Study of Pre-reactive Complex O(3P) + HClâ€. Journal of Physical Chemistry A, 2005, 109, 11484-11494.	2.5	7
92	Interaction potentials of the RGâ€“I anions, neutrals, and cations (RG=He, Ne, Ar). Journal of Chemical Physics, 2005, 122, 194311.	3.0	38
93	Isomeric interconversion in the linear Clâ¯HD anion complex. Journal of Chemical Physics, 2004, 121, 2085-2093.	3.0	15
94	The open-shell interaction of He with the Bâ€Š3Îu(0+) state of Br2: Anab initiostudy and its comparison with a diatomics-in-molecule perturbation model. Journal of Chemical Physics, 2004, 120, 2182-2192.	3.0	20
95	Quantum scattering equations for non-adiabatic transitions in collisions between a Hund case (c) diatomic molecule and a structureless atom with application to I2(E0+g) + Ar. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 1605-1619.	1.5	13
96	Collision-induced non-adiabatic transitions between the ion-pair states of molecular iodine: A challenge for experiment and theory. Physical Chemistry Chemical Physics, 2004, 6, 3201.	2.8	53
97	Modeling of the non-adiabatic E0+gâ†'D0+u transitions induced by Ar in molecular iodine: a first attempt. Chemical Physics Letters, 2003, 370, 563-571.	2.6	14
98	Oriented dynamics in van der Waals complexes. Journal of Molecular Spectroscopy, 2003, 222, 31-45.	1.2	12
99	Ab initio potential energy and dipole moment surfaces, infrared spectra, and vibrational predissociation dynamics of the 35Clâ¯â‹¯H2/D2 complexes. Journal of Chemical Physics, 2003, 119, 12931-12945.	3.0	46
100	Ar Â·Â·Â· I 2 : A model system for complex dynamics. International Reviews in Physical Chemistry, 2003, 22, 153-202.	2.3	74
101	Dynamics of O(3Pj)+Rg collisions on ab initio and scattering potentials. Journal of Chemical Physics, 2002, 116, 1457-1467.	3.0	21
102	Vibrational predissociation of NeBr2 (X,â€‰v=1) using anab initiopotential energy surface. Journal of Chemical Physics, 2002, 117, 10019-10025.	3.0	26
103	He79Br2 B,v=8â†Ÿ,vâ€³=0 excitation spectrum: Ab initio prediction and spectroscopic manifestation of a linear isomer. Journal of Chemical Physics, 2002, 117, 6117-6120.	3.0	37
104	Ab initiopotentials for the S(3Pj)â€“rare gas dimers: Implementation for elastic and inelastic collisions and comparison with scattering potentials. Journal of Chemical Physics, 2002, 116, 9269-9280.	3.0	16
105	Resonance and reversibility of vibrational relaxation of HF in high temperature Ar bath gas. Journal of Chemical Physics, 2002, 117, 166-171.	3.0	15
106	Ab initio simulations of the KrOâ¯ anion photoelectron spectra. Journal of Chemical Physics, 2002, 117, 2629-2634.	3.0	16
107	Vibrational predissociation of ArHF: a test of global semiempirical potential energy surfaces. Physical Chemistry Chemical Physics, 2002, 4, 4992-4998.	2.8	14
108	Electronic and vibrational predissociation in ArI[sub 2] photodissociation dynamics. Journal of Chemical Physics, 2002, 116, 8367.	3.0	19

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109	Complete basis set extrapolation limit for electronic structure calculations: Energetic and nonenergetic properties of HeBr and HeBr[sub 2] van der Waals dimers. Journal of Chemical Physics, 2001, 115, 10438.	3.0	54
110	Collision and transport properties of Rg+Cl(2P) and Rg+Clâ¯(1S) (Rg=Ar,â€ŠKr) fromab initiopotentials. Journal of Chemical Physics, 2001, 114, 9919-9928.	3.0	36
111	Quantum-mechanical study of vibrational relaxation of HF in collisions with Ar atoms. Journal of Chemical Physics, 2001, 114, 1249-1258.	3.0	29
112	Modeling the H 5 + potential-energy surface: a first attempt. Theoretical Chemistry Accounts, 2001, 106, 426-433.	1.4	40
113	On the role of interaction anisotropy in vibrational relaxation of HF and HCl by Ar. Chemical Physics Letters, 2001, 335, 273-280.	2.6	13
114	Theoretical prediction of the ArOâ¯ anion ZEKE photoelectron spectrum. Chemical Physics Letters, 2001, 347, 415-420.	2.6	4
115	The I₂(B) predissociation by solving an inverse atoms-in-molecule problem. Molecular Physics, 2001, 99, 91-101.	1.7	10
116	ArI2(X)â†'Ar+I2(B) photodissociation: Comparison between linear and T-shaped isomers dynamics. Journal of Chemical Physics, 2001, 115, 6961-6973.	3.0	28
117	Ultracold inelastic atomic collisions: Threshold relaxation of O(^{3}P_{0}) by He. Physical Review A, 2001, 64, .	2.5	8
118	Ab initiozero electron kinetic energy spectroscopy of the ArClâ¯ and KrClâ¯ anions. Journal of Chemical Physics, 2001, 114, 9929-9937.	3.0	20
119	Blueshifts of the Bâ†Χ excitation spectra of He79Br2 using a DIM-based potential. Chemical Physics Letters, 2000, 318, 578-584.	2.6	14
120	Ab-initio-based model for the charge transfer mechanisms in Ar+ + H2O collisions. International Journal of Mass Spectrometry, 2000, 203, 19-29.	1.5	0
121	Quantum and semiclassical study of the intramultiplet transitions in collisions of Cl(2P) and O(3P) with He, Ar and Xe. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 4551-4564.	1.5	21
122	Theoretical simulations of the He79Br2â€ŠB, v=8â†Χ, vâ€³=0 excitation spectrum: Spectroscopic manifestation of a linear isomer?. Journal of Chemical Physics, 2000, 113, 4620-4628.	3.0	25
123	Ab initio based study of the ArOâ¯ photoelectron spectra: Selectivity of spinâ€“orbit transitions. Journal of Chemical Physics, 2000, 112, 5852-5865.	3.0	31
124	ArHF vibrational predissociation dynamics using the diatomics-in-molecule potential energy surface. Journal of Chemical Physics, 1999, 111, 2470-2477.	3.0	25
125	A combined experimental-theoretical study of the vibrational predissociation and product rotational distributions for high vibrational levels of He79Br2. Journal of Chemical Physics, 1999, 110, 256-266.	3.0	35
126	Predissociation of the Rgâ‹¯I2(B)(Rg=Ne,â€ˆAr,â€ˆKr) complexes: simulations based on the first-order diatomics-in-molecule perturbation theory. Chemical Physics Letters, 1998, 292, 273-281.	2.6	14

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127	Theoretical study of VRT energy transfer in Ne+I2(B) collisions using a spectroscopic interaction potential. Journal of the Chemical Society, Faraday Transactions, 1998, 94, 2307-2313.	1.7	6
128	RG+Cl(2P) (RG=He, Ne, Ar) interactions: Ab initio potentials and collision properties. Journal of Chemical Physics, 1998, 109, 2144-2154.	3.0	38
129	Classical vibrational predissociation dynamics: The effects of phase-space bifurcations. Journal of Chemical Physics, 1998, 108, 6282-6290.	3.0	7
130	Diatomics-in-molecules description of the Rgâ€“Hal2 rare gasâ€“halogen van der Waals complexes with applications to Heâ€“Cl2. Journal of Chemical Physics, 1997, 106, 4575-4588.	3.0	23
131	First-order intermolecular diatomics-in-molecule potentials. Potential energy surfaces, spectra, and fragmentation dynamics of the Neâ‹¯Cl2 complex. Journal of Chemical Physics, 1997, 106, 10134-10144.	3.0	18
132	Application of the non-Hermitean effective Hamiltonian method to metastable van der Waals complexes. , 1997, , .		0
133	Theoretical spectroscopy and dynamics of fragmentation of the He79Br2 complex. , 1997, , .		1
134	Calculations of spectra and dynamics of rare-gas halogen molecule complexes using the semi-empirical potential energy surfaces. , 1997, , .		1
135	Half- and full-collision VT energy transfer in the Heî—¸Br2(B) system. Chemical Physics Letters, 1997, 269, 448-454.	2.6	8
136	Arâ€“I2interactions: The models based on the diatomicsâ€•inâ€•molecule approach. Journal of Chemical Physics, 1996, 104, 9913-9925.	3.0	88
137	Decoupling approximations for quantum vibrational predissociation dynamics: The tests on the low-level golden rule approaches for some rare gas-Cl2, ICl complexes. Journal of Computational Chemistry, 1996, 17, 919-930.	3.3	13
138	Structure and interaction energies of the Arâ€¦Cl2 complex. Application of first-order intermolecular potentials. Chemical Physics Letters, 1996, 261, 591-596.	2.6	15
139	Vibrational predissociation dynamics of the He79Br2van der Waals molecule: A quantum mechanical study. Journal of Chemical Physics, 1996, 105, 7454-7463.	3.0	46
140	The vibrational predissociation lifetime of the Heâ€¦N+2 (X, Î½ = 1) complex. Chemical Physics Letters, 1994, 220, 93-96.	2.6	4
141	Interaction potentials and fragmentation dynamics of the Neâ‹¯Br2complex in the ground and electronically excited states. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 3229-3236.	1.7	21
142	Theoretical models of vibrational predissociation for van der Waals complexes. , 1994, , .		0
143	Three-dimensional quantum calculations on the He...Br2 (B) predissociative linewidths. , 1994, 2205, 178.		1
144	Approximate phaseâ€•space transport theory for vibrational predissociation. Journal of Chemical Physics, 1993, 98, 5486-5498.	3.0	8

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145	Approximate Quantal Calculations on the Predissociative Lifetimes of the Neâ€¦Hal₂(X,v) (Hal = Cl,Br,I) Van Der Waals Complexes. Spectroscopy Letters, 1992, 25, 189-200.	1.0	1
146	Calculations of predissociative lifetimes of RG...Hal 2 Van der Waals complexes. , 1992, , .		0
147	Approximate treatment of the phase-space bottlenecks for vibrational predissociation. Journal of Physics B: Atomic, Molecular and Optical Physics, 1991, 24, L545-L549.	1.5	1
148	Fragment-localized analysis of the multiconfigurational wavefunctions. Chemical Physics, 1990, 148, 309-314.	1.9	2