Y N Kalugina

List of Publications by Year
in descending order

68 papers	1,175 citations	361388 20 h-index	414395 32 g-index
69 all docs	69 docs citations	69 times ranked	1277 citing authors

#	Article	IF	Citations
1	Ro-translational dynamics of confined water: II - Spectroscopic evidence of confinement effects on the far-infrared spectra of water isotopologues in argon and krypton matrices.. Journal of Chemical Physics, 2022, 156, 074305.	3.0	4
2	Ro-translational dynamics of confined water: I - The confined asymmetric rotor model. Journal of Chemical Physics, 2022, 156, 074304.	3.0	4
3	Fitting potential energy and induced dipole surfaces of the van der Waals complex CH₄â€“N₂ using non-product quadrature grids. Physical Chemistry Chemical Physics, 2021, 23, 18475-18494.	2.8	5
4	Depolarization of MgH Solar Lines by Collisions with Hydrogen Atoms. Astrophysical Journal, 2021, 915, 122.	4.5	0
5	Ab initio study of the O3â€“N2 complex: Potential energy surface and rovibrational states. Journal of Chemical Physics, 2021, 155, 054308.	3.0	3
6	Simulation of collision-induced absorption spectra based on classical trajectories and ab initio potential and induced dipole surfaces. II. CO2â€“Ar rototranslational band including true dimer contribution. Journal of Chemical Physics, 2021, 155, 064301.	3.0	6
7	Collisional excitation of NH by H2: Potential energy surface and scattering calculations. Journal of Chemical Physics, 2021, 155, 134303.	3.0	8
8	Effect of isotropic collisions with neutral hydrogen on the polarization of the CN solar molecule. Monthly Notices of the Royal Astronomical Society, 2020, 491, 1213-1226.	4.4	5
9	Potential energy surface and bound states of the H2Oâ€“HF complex. Journal of Chemical Physics, 2020, 153, 214301.	3.0	13
10	Ab initio potential energy surface and microwave spectrum of the NH3â€“N2 van der Waals complex. Journal of Chemical Physics, 2020, 152, 234304.	3.0	3
11	Rotational excitation of C₂(X¹Î£_g⁺) by para- and ortho-H₂. RSC Advances, 2020, 10, 8580-8585.	3.6	4
12	Hyperfine excitation of CH and OH radicals by He. Astronomy and Astrophysics, 2019, 629, A130.	5.1	7
13	Ab initio potential and rotational spectra of the COâ€“N2 complex. Journal of Chemical Physics, 2018, 148, 044313.	3.0	13
14	Interaction of H₂O with CO: potential energy surface, bound states and scattering calculations. Physical Chemistry Chemical Physics, 2018, 20, 5469-5477.	2.8	24
15	Ab initio calculations of electric multipole moments, (higher) polarizabilities and first hyperpolarizabilitiy of (H2S)n, nâ€¯=â€¯1 â€“ 4. Chemical Physics Letters, 2018, 692, 184-190.	2.6	6
16	Communication: State-to-state inelastic scattering of interstellar O2 with H2. Journal of Chemical Physics, 2018, 149, 121101.	3.0	6
17	Transient reducing greenhouse warming on early Mars. Geophysical Research Letters, 2017, 44, 665-671.	4.0	178
18	Potential energy and dipole moment surfaces for HF@C60: Prediction of spectral and electric response properties. Journal of Chemical Physics, 2017, 147, 244303.	3.0	26

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19	Interaction-induced Dipole Moment. Springer Briefs in Molecular Science, 2017, , 17-50.	0.1	0
20	Interaction-induced Polarizability. Springer Briefs in Molecular Science, 2017, , 51-82.	0.1	0
21	Interaction-induced Hyperpolarizability. Springer Briefs in Molecular Science, 2017, , 83-101.	0.1	0
22	Theoretical Backgrounds of Interaction-induced Theory. Springer Briefs in Molecular Science, 2017, , 3-15.	0.1	0
23	A rotating spiral structure in the innermost regions around IRC+10216. Journal of Physics: Conference Series, 2016, 728, 022005.	0.4	0
24	Ab initio 3D potential energy and dipole moment surfaces for the CH4â€“Ar complex: Collision-induced intensity and dimer content. Journal of Chemical Physics, 2016, 144, 054304.	3.0	10
25	The hyperfine excitation of OH radicals by He. European Physical Journal D, 2016, 70, 1.	1.3	8
26	Ab initio calculations of static dipole polarizabilities and Cauchy moments for the halomethanes, CH Cl F4â^'â^'. Chemical Physics Letters, 2016, 644, 20-24.	2.6	3
27	State-to-State Inelastic Scattering of O₂ with Helium. Journal of Physical Chemistry A, 2016, 120, 868-874.	2.5	9
28	HINTS OF A ROTATING SPIRAL STRUCTURE IN THE INNERMOST REGIONS AROUND IRC +10216. Astrophysical Journal, 2016, 818, 192.	4.5	24
29	Dipoleâ€“octupole polarisability of uranium hexafluoride and theoretical prediction of anisotropic light-scattering spectrum using new intermolecular potential. Molecular Physics, 2016, 114, 44-52.	1.7	0
30	A new ab initio potential energy surface for the collisional excitation of N2H+ by H2. Journal of Chemical Physics, 2015, 143, 024301.	3.0	7
31	Rotational study of the NH3â€“CO complex: Millimeter-wave measurements and ab initio calculations. Journal of Chemical Physics, 2015, 142, 114308.	3.0	14
32	Potential energy surface of the CO2â€“N2 van der Waals complex. Journal of Chemical Physics, 2015, 142, 174301.	3.0	41
33	Multipole electric moments and higher polarizabilities of molecules: Methodology and some results of ab initio calculations. Atmospheric and Oceanic Optics, 2015, 28, 406-414.	1.3	19
34	On the dipole polarisability and dipole sum rules of ozone. Molecular Physics, 2015, 113, 2939-2942.	1.7	6
35	Choosing a density functional for static molecular polarizabilities. Chemical Physics Letters, 2015, 635, 257-261.	2.6	39
36	Hyperfine excitation of CN by para- and ortho-H2. Monthly Notices of the Royal Astronomical Society: Letters, 2015, 446, L21-L25.	3.3	21

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37	Electric properties of stannous and stannic halides: How good are the experimental values?. Chemical Physics Letters, 2015, 626, 69-72.	2.6	6
38	A new insight into the dipoleâ€“quadrupole and dipoleâ€“octupole polarizabilities of CCl4 from ab initio calculations and anisotropic light scattering experiment. Chemical Physics Letters, 2015, 639, 93-98.	2.6	2
39	Rotational study of the CH4â€“CO complex: Millimeter-wave measurements and ab initio calculations. Journal of Chemical Physics, 2015, 143, 154303.	3.0	11
40	Collisional excitation of O2by H2: the validity of LTE models in interpreting O2observations. Astronomy and Astrophysics, 2014, 567, A22.	5.1	20
41	New insights on the HCl abundance in the interstellar medium. Monthly Notices of the Royal Astronomical Society, 2014, 443, 3351-3358.	4.4	27
42	Rotational excitation of HCN by para- and ortho-H2. Journal of Chemical Physics, 2014, 140, 224302.	3.0	29
43	Explicit correlation treatment of the potential energy surface of CO2 dimer. Journal of Chemical Physics, 2014, 140, 234310.	3.0	53
44	New ab initio potential energy surfaces for the ro-vibrational excitation of OH(X²Î) by He. Physical Chemistry Chemical Physics, 2014, 16, 13500-13507.	2.8	23
45	Near-resonant rotational energy transfer in HClâ€“H2 inelastic collisions. Journal of Chemical Physics, 2014, 140, 064316.	3.0	27
46	Collisional excitation of CN(X2Î£+) by para- and ortho-H2: Fine-structure resolved transitions. Journal of Chemical Physics, 2013, 139, 074301.	3.0	39
47	A new abâ€˜initio potential energy surface for the collisional excitation of HCN by para- and ortho-H2. Journal of Chemical Physics, 2013, 139, 224301.	3.0	22
48	Ab initio and multipolar characterisation of the induced dipole surface for CH4â€“CH4: Application to dipole-forbidden absorption in the Titanâ€™s atmosphere. Journal of Molecular Spectroscopy, 2013, 291, 102-107.	1.2	8
49	Observation of Partial Wave Resonances in Low-Energy O ₂ â€“H ₂ Inelastic Collisions. Science, 2013, 341, 1094-1096.	12.6	109
50	On the accuracy of explicitly correlated methods to generate potential energy surfaces for scattering calculations and clustering: application to the HClâ€“He complex. Physical Chemistry Chemical Physics, 2013, 15, 10062.	2.8	70
51	High temperature reaction kinetics of CN(v = 0) with C2H4 and C2H6 and vibrational relaxation of CN(v = 1) with Ar and He. Journal of Chemical Physics, 2013, 138, 124308.	3.0	17
52	A new ab initio potential energy surface for the collisional excitation of O2 by H2. Physical Chemistry Chemical Physics, 2012, 14, 16458.	2.8	21
53	Static hyperpolarizability of the van der Waals complex CH₄ï£¿N₂. Journal of Computational Chemistry, 2012, 33, 2544-2553.	3.3	9
54	Theoretical investigation of fluorescence properties of EDTA and DTPA substituted tetraphenylporphyrin molecules. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 99, 122-125.	3.9	5

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55	Electronic absorption spectrum of monoamine tetraphenylporphyrin with the complexon of ethylenediaminetetraacetic acid as substitute. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 87, 40-45.	3.9	12
56	Hyperfine collisional rate coefficients of CN with H2(j= 0). Monthly Notices of the Royal Astronomical Society, 2012, 422, 812-818.	4.4	41
57	Theoretical investigation of the ethylene dimer: Interaction energy and dipole moment. Journal of Computational Chemistry, 2012, 33, 319-330.	3.3	21
58	Static polarizability surfaces of the van der Waals complex CH4â€“N2. Journal of Chemical Physics, 2010, 132, 164304.	3.0	11
59	Dipole moment surface of the van der Waals complex CH4â€“N2. Journal of Chemical Physics, 2010, 133, 184302.	3.0	20
60	On some aspects of changing the sign of the dipole moment functions of diatomic molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 105102.	1.5	15
61	Theoretical investigation of the potential energy surface of the van der Waals complex CH4â€“N2. Journal of Chemical Physics, 2009, 131, 134304.	3.0	18
62	Regularities in the behavior of dipole moment functions of diatomic molecules at very small internuclear separations. Physical Review A, 2008, 78, .	2.5	8
63	<title>Dipole moment functions of X<formula><inf><roman>2</roman></inf></formula>-Y and X<formula><inf><roman>2</roman></inf></formula>-Y<formula><inf><roman>2</roman></inf></formula> dimers</title>. Proceedings of SPIE, 2007, . .	0.8	0
64		0.4	5
65	<title>Theoretical investigation of dipole moment function of LiH molecule for small internuclear separations</title>. , 2006, 6160, 39.		0
66	<title>Theoretical investigation of electric and magnetic properties of molecules and clusters</title>. , 2006, , .		0
67	Theoretical investigation into dipole-moment functions of HF, HCl, and HBr molecules at small internuclear separations. Russian Physics Journal, 2006, 49, 1230-1235.	0.4	7
68	<title>Dipole moment function of LiH molecule</title>. , 2004, , .		2