Vladimir B Sovkov

List of Publications by Year
in descending order

63	585	567281	713466
papers	citations	15 h-index	21 g-index

64	64	64	182
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Experimental investigation of the Cs2â€ˆaâ€‰Î£3u+ triplet ground state: Multiparameter Morse long range potential analysis and molecular constants. Journal of Chemical Physics, 2009, 130, 051102.	3.0	45
2	Experimental investigation of the R85b2â€ˆaâ€‰Î£3u+ triplet ground state: Multiparameter Morse long range potential analysis. Journal of Chemical Physics, 2009, 131, 094505.	3.0	27
3	New Vibrational Numbering and Potential Energy Curve for the 33ÎgElectronic State of the Li2Molecule. Journal of Molecular Spectroscopy, 1999, 194, 147-155.	1.2	26
4	The <mml:math altimg="si23.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x	2.6	26
5	New experimental data on the K2 state analyzed with the multi-parameter approach. Journal of Molecular Spectroscopy, 2005, 234, 41-52.	1.2	25
6	Updated potential energy function of the Rb2â€ˆ$a^3Sigma _u^+$a3Î£u+ state in the attractive and repulsive regions determined from its joint analysis with the 23Îg state. Journal of Chemical Physics, 2013, 139, 144303.	3.0	25
7	Experimental study of the K2392Îg3 state by perturbation facilitated infrared-infrared double resonance and two-photon excitation spectroscopy. Journal of Chemical Physics, 2005, 122, 074302.	3.0	21
8	Joint analysis of the attractive and repulsive regions of the Na2â€‰aâ€Š3Î£u+ state potential: A new empirical potential energy curve. Journal of Chemical Physics, 2003, 118, 8242-8247.	3.0	20
9	New observation and combined analysis of the Cs2gâ^', u+, and 1g states at the asymptotes 6S1/2 + 6P1/2 and 6S1/2 + 6P3/2. Journal of Chemical Physics, 2014, 141, 244310.	3.0	19
10	Observation and calculation of the Cs2â€ˆ2Î"1g3 and bÎu3 states. Journal of Chemical Physics, 2008, 128, 204313.	3.0	17
11	Joint analysis of the Cs2â€ˆ$a^3Sigma _u^+$a3Î£u+ and 1g (33Î1g) states. Journal of Chemical Physics, 2011, 135, 024303.	3.0	17
12	Observation and analysis of the hyperfine structure of near-dissociation levels of the NaCs<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>c</mml:mi><mml:mspace width="0.16em" /><mml:mmultiscripts><mml:mi mathvariant="normal">Î£</mml:mi><mml:none /><mml:mo>+</mml:mo><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:mrow></mml:math>state below the dissociation limit<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn	2.5	17
13	Use of Boundâ€"Free Structured Spectra in Determining RKR Potentials: The 43Ig State of Na2. Journal of Molecular Spectroscopy, 2001, 209, 116-121.	1.2	16
14	Split operator method for the nonadiabatic (J=0) bound states and (Aâ†✖) absorption spectrum of NO2. Journal of Chemical Physics, 2001, 115, 6450-6458.	3.0	16
15	Analysis of the Na2 23Î£g+â†'a3Î£u+ continua: Potentials and transition moment function. Journal of Chemical Physics, 2001, 114, 6077-6085.	3.0	15
16	Revision of the K2 33Îg and states: new vibrational numberings and new potential functions. Journal of Molecular Spectroscopy, 2005, 229, 122-130.	1.2	15
17	An IPA procedure for bound-continuum diatomic transition intensities. Chemical Physics, 1996, 213, 295-301.	1.9	14
18	The state of Na2: observation and assignment. Journal of Molecular Spectroscopy, 2004, 225, 33-38.	1.2	14

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19	The K2 23Îg State:â€‰ New Observations and Analysis. Journal of Physical Chemistry A, 2006, 110, 11260-11264.	2.5	14
20	The K239 2Î£g+3 state: Observation and analysis. Journal of Chemical Physics, 2007, 126, 194314.	3.0	13
21	Experimental observation and determination of the laser-induced frequency shift of hyperfine levels of ultracold polar molecules. Physical Review A, 2017, 96, .	2.5	13
22	Observation and deperturbation of near-dissociation ro-vibrational structure of the Cs2 state u+ (A1Î£u+âˆ¼b3Î+u) at the asymptote 6S1/2 + 6P1/2. Journal of Chemical Physics, 2015, 143, 124307.	3.0	12
23	Re-examination of the Cs2 ground singlet X1Î£g+ and triplet a3Î£u+ states. Journal of Chemical Physics, 2017, 147, 104301.	3.0	12
24	Multiparameter model functions in problems of approximating ab initio potentials and spectroscopic data of diatomic molecules. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2013, 114, 167-176.	0.6	10
25	Experimental study of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msup><mml:mn>6</mml:mn><mml:mn>1</mml:mn></mml:msup><mml:mathvariant="normal">Î£</mml:mi><mml:mi>g</mml:mi><mml:mo>+</mml:mo></mml:msubsup></mml:mrow></mml:math> state of the rubidium dimer. Physical Review A, 2019, 99, .	2.5	10
26	Observations and analysis with the spline-based Rydbergâ€“Kleinâ€“Rees approach for the 31Î£g+ state of Rb2. Journal of Chemical Physics, 2016, 144, 024308.	3.0	9
27	Observations and analysis of the K2 state using the infraredâ€“infrared double resonance spectroscopy. Chemical Physics, 2007, 332, 10-16.	1.9	8
28	Combined analysis of the PFOODR data on the a 3Î£ u + , 23Îg, 23Î£ g + , 33Îg, and 43Î£ g + states of the K2 molecule. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2007, 103, 723-727.	0.6	7
29	Binding energies of the ground triplet state $a^3Sigma _u^+$a3Î£u+ of Rb2 and Cs2 in terms of the generalized Le Royâ€“Bernstein near-dissociation expansion. Journal of Chemical Physics, 2014, 140, 134307.	3.0	7
30	Observation of photoassociation of ultracold sodium and cesium at the asymptote Na (3S1/2) + Cs (6P1/2). Journal of Chemical Physics, 2018, 148, 174304.	3.0	7
31	Exact expressions for the potential functions of a molecule in terms of the probability amplitudes of electron transitions and their utilization in the inverse spectroscopic problem. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2000, 89, 506-509.	0.6	6
32	The hyperfine structure analysis of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si14.gif" display="inline" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mtext>K</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:m width="0.35em" /><mml:msup><mml:mrow><mml:mn>2</mml:mn></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msup><mm mathvariant="normal">Î£</mml:mi></mml:mrow><mml:mrow><mml:mi>g</mml:mi></mml:mrow><mml:mr.	2.6	6
33	Manipulation of photoassociation of ultracold Cs atoms with tunable scattering length by external magnetic fields. Scientific Reports, 2017, 7, 13677.	3.3	6
34	The Rb2 31Îg state: Observation and analysis. Journal of Chemical Physics, 2018, 149, 224303.	3.0	6
35	Hyperfine structure of the NaCs b³Î₂ state near the dissociation limit 3S_{1/2} + 6P_{3/2} observed with ultracold atomic photoassociation. Physical Chemistry Chemical Physics, 2020, 22, 3809-3816.	2.8	6
36	Analysis of the Na2 state above and below the 3s+3d atomic limit. Journal of Molecular Spectroscopy, 2006, 236, 35-41.	1.2	5

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37	ton excitations of the Cs2 <mml:math altimg="si30.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd"	2.6	5
38	Analysis of the hyperfine structure of the Cs2 <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si11.svg"><mml:mrow><mml:msup><mml:mn>3</mml:mn><mml:mn>3</mml:mn></mml:msup><mml:msubsup><mml:mstyle mathvariant="normal"><mml:mi>Î£</mml:mi></mml:mstyle><mml:mi>g</mml:mi><mml:mo>+</mml:mo></mml:msubsup></mml:mrow state. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 250, 107037.	2.3	5
39	Franck-Condon factor phase method for determining the potentials of bound states of piatomic molecules. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2000, 88, 852-856.	0.6	4
40	Saturation of photoassociation in NaCs dark magneto-optical trap. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 240, 106678.	2.3	4
41	<title>Inversion procedures for the PFOODR experimental data on the Li<formula><inf><roman>2</roman></inf></formula> molecule</title>. , 1999, , .		4
42	Experimental study of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>3</mml:mn><mml:mmultiscripts><mml:mi mathvariant="normal">Î</mml:mi><mml:mi>g</mml:mi><mml:none /><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>4</mml:mn><mml:mmultiscripts><mml:mi mathvariant="normal">Î£</mml:mi><mml:mi>g</mml:mi><mml:mo>+</mml:mo><mml:mprescripts /><mml:	2.5	4
43	Inversion procedures for bound-free diatomic transition intensities: application to the PFOODR spectra of7Li 2. , 1997, 3090, 150.		3
44	Determination of the parameters of the potential well of a diatomic molecule with the use of the experimental spectrum of an electronic transition to a repulsive branch of the state under study. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2004, 96, 21-24.	0.6	3
45	New Observation of Na2 43g+ State by Pulsed Perturbation Facilitated OpticalOptical Double Resonance Spectroscopy. Chinese Journal of Chemical Physics, 2006, 19, 11-14.	1.3	3
46	Renewed analysis of the hyperfine structure of the Na2 13Î”g state. AIP Advances, 2018, 8, 125322.	1.3	3
47	Fast, simple, all-optical production of sodium spinor condensates. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 155501.	1.5	3
48	The effects of Feshbach resonance on spectral shifts in photoassociation of Cs atoms. Physical Chemistry Chemical Physics, 2021, 23, 641-646.	2.8	2
49	Exact Expressions for the Potential Functions of a Molecule in Terms of the Probability Amplitudes of Electron Transitions and Their Utilization in the Inverse Spectroscopic Problem. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2000, 89, 506.	0.6	2
50	Nonadiabatic Coupling of Molecular States in Presence of Unobserved Perturbers: Modeling and Analysis. Journal of the Physical Society of Japan, 2018, 87, 024303.	1.6	1
51	Optical levitation-associated atomic loading in a dipole trap. Laser Physics, 2019, 29, 035505.	1.2	1
52	Analysis of the hyperfine structure of the 13Î”g, 23Îg, and 33Î£g+ states of 6Li7Li. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 270, 107665.	2.3	1
53	Matlab tool qOptimizerq: Construction and Optimization of Multi-Block Mathematical Models-Application to spectroscopy experiments with ultracold gases of alkali metals. , 2016, , .		1
54	Observation of photoassociation spectroscopy of ²³Na spinor Boseâ€“Einstein condensate. Physical Chemistry Chemical Physics, 2022, 24, 15135-15139.	2.8	1

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55	Parametric Excitation of Ultracold Sodium Atoms in an Optical Dipole Trap. Photonics, 2022, 9, 442.	2.0	1
56	Approximation of structureless bands in the electron spectra of molecules using Pearson curves. Journal of Applied Spectroscopy, 1990, 53, 827-830.	0.7	0
57	Structureless band approximation in electronic spectra of molecules using edgeworth series. Journal of Applied Spectroscopy, 1990, 53, 757-760.	0.7	0
58	Experimental observation and numerical simulation of spectra of solid-anode X-ray tubes. Journal of Analytical Chemistry, 2016, 71, 471-475.	0.9	0
59	Bichromatic Photoassociation Spectroscopy for the Determination of Rotational Constants of Cs2 0 u + Long-Range State below the 6S1/2 + 6P1/2 Asymptote. Molecules, 2020, 25, 3963.	3.8	0
60	Nonlinear laser-induced frequency shift in a 23Na spin-1 condensate. Optics Express, 2021, 29, 32892.	3.4	0
61	Laser-induced frequency shift in a spin-1 Boseâ€“Einstein condensate of sodium. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 277, 107985.	2.3	0
62	Superfluid to Mott-insulator transition in a 1D optical lattice. Chinese Physics B, 0, , .	1.4	0
63	Two-photon Raman transition channels of NaCs predicted from ab initio calculations. Physical Review A, 2022, 105, .	2.5	0