

# Lavrov B P

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3039540/publications.pdf>

Version: 2024-02-01

46  
papers

551  
citations

687363

13  
h-index

642732

23  
g-index

47  
all docs

47  
docs citations

47  
times ranked

330  
citing authors

#	ARTICLE	IF	CITATIONS
1	ON THE ACCURACY OF AVAILABLE WAVENUMBER VALUES FOR ELECTRONIC-VIBRO-ROTATIONAL TRANSITIONS OF THE H <sub>2</sub> MOLECULE. Bulletin of the Lebedev Physics Institute, 2020, 47, 127-131.	0.6	0
2	Spectroscopic determination of the relative particle densities of H <sub>2</sub> , HD, and D <sub>2</sub> Molecules in non-equilibrium hydrogen-deuterium plasma: II. Experimental verification. Russian Journal of Physical Chemistry B, 2016, 10, 5-14.	1.3	1
3	Atlas and wavenumber tables for the visible part of the electronic-vibro-rotational D <sub>2</sub> spectrum emitted by low-temperature plasma. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 182, 180-192.	2.3	5
4	Lifetimes of Vibro-Rotational Levels in Excited Electronic States of Diatomic Hydrogen Isotopologues. Journal of Physical and Chemical Reference Data, 2015, 44, 023105.	4.2	12
5	On an inconsistency between experimental and non-empirical data on the lifetimes of electronic-vibrational-rotational states of the H <sub>2</sub> , HD, and D <sub>2</sub> molecules. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2015, 119, 599-602.	0.6	0
6	Spectroscopic determination of the relative concentrations of H <sub>2</sub> , HD, and D <sub>2</sub> molecules in nonequilibrium hydrogen-deuterium plasma: I. Kinetic models. Russian Journal of Physical Chemistry B, 2014, 8, 807-815.	1.3	1
7	Observation of the fine structure for rovibronic spectral lines in the visible part of emission spectra of D <sub>2</sub> . Physical Review A, 2012, 85, .	2.5	4
8	Perturbations in the rotational structure of the 4p complex of H <sub>2</sub> molecule terms. Russian Journal of Physical Chemistry B, 2012, 6, 239-248.	1.3	1
9	High-resolving-power spectrometer with digital photorecording, based on the DFS-8 spectrograph. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2011, 78, 180.	0.4	4
10	A statistical analysis of the wavenumbers of triplet rovibronic transitions of the D <sub>2</sub> molecule: III. Optimum values of level energies. Russian Journal of Physical Chemistry B, 2010, 4, 175-184.	1.3	2
11	A statistical analysis of the wavenumbers of triplet rovibronic transitions of the D <sub>2</sub> molecule: I. The estimation of experimental errors. Russian Journal of Physical Chemistry B, 2009, 3, 1-10.	1.3	1
12	A statistical analysis of the wave numbers of triplet rovibronic transitions of the D <sub>2</sub> molecule: II. An experimental study of $\epsilon$ -doublet lines. Russian Journal of Physical Chemistry B, 2009, 3, 397-403.	1.3	2
13	Optimal values of rovibronic energy levels for triplet electronic states of molecular deuterium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 105103.	1.5	13
14	Observation of perturbations in the rovibronic transition probabilities for the $(4d) r^3 \hat{g} \hat{a}'$ , $(4d) s^3 \hat{f}'' g \hat{a}'$ $\hat{a}'$ (2p) $c^3 \hat{u} \hat{A}_{\pm}$ band systems of the H <sub>2</sub> molecule. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2007, 111, 100-108.	0.4	0
15	The radiative characteristics of hydrogen rovibronic states: II. The probabilities of the $i^3 \hat{g} \hat{a}'$ , $j^3 \hat{f}'' g \hat{a}'$ $b^3 \hat{f}'' u +$ , $c^3 \hat{u} \hat{A}_{\pm}$ spontaneous transitions in H <sub>2</sub> , HD, and D <sub>2</sub> . Russian Journal of Physical Chemistry B, 2007, 1, 1-14.	1.3	2
16	The radiative characteristics of the rovibronic states of the hydrogen molecule: III. The probabilities of the $h^3 \hat{f}'' g +$ , $g^3 \hat{f}'' g +$ , $i^3 \hat{f}'' g +$ , $j^3 \hat{f}'' g + \hat{a}'$ $c^3 \hat{u} \hat{A}_{\pm}$ spontaneous transitions in the H <sub>2</sub> molecule. Russian Journal of Physical Chemistry B, 2007, 1, 197-207.	1.3	2
17	Comparative analysis of perturbations of the energy, radiative, and magnetic characteristics of electronic-vibrational-rotational states of the hydrogen molecule. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 rg8T /Overlo	1.1	0
18	On determination of the degree of dissociation of hydrogen in non-equilibrium plasmas by means of emission spectroscopy: I. The collision-radiative model and numerical experiments. Plasma Sources Science and Technology, 2006, 15, 135-146.	3.1	27

#	ARTICLE	IF	CITATIONS
19	On determination of the degree of dissociation of hydrogen in non-equilibrium plasmas by means of emission spectroscopy: II. Experimental verification. Plasma Sources Science and Technology, 2006, 15, 147-155.	3.1	27
20	Determination of the absolute concentration of B, Al, Ga, and Si atoms in a nonequilibrium plasma by the reabsorption-distorted intensity ratios in resonance multiplets. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2004, 97, 16-29.	0.6	2
21	Determination of rovibronic term values of a diatomic molecule from experimental data on the wavenumbers of spectral lines. JETP Letters, 2005, 81, 371-374.	1.4	3
22	Determination of the electronic-vibrational-rotational terms of diatomic molecules from measured wave numbers. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2005, 99, 890-896.	0.6	4
23	On the Reaction Kinetics of Chemically Active Molecular Microwave Plasmas. Contributions To Plasma Physics, 2005, 45, 358-368.	1.1	11
24	On the inconsistency of spectroscopic data on the $(3d\epsilon) i 3l' g \tilde{a}''$ and $(3d\hat{i}) j 3l'' g \tilde{a}''$ states of the hydrogen molecule and the problems of semiempirical and ab initio calculations. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2004, 97, 16-29.	0.6	2
25	On the spectroscopic detection of neutral species in a low-pressure plasma containing boron and hydrogen. Plasma Sources Science and Technology, 2003, 12, 576-589.	3.1	51
26	Intensity distributions in R and P branches of $(0\tilde{a}''0)$ band of the $A1\hat{a}''X1\hat{x}^+$ electronic transition of the BH molecule and determination of gas temperature in non-equilibrium plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 74, 471-491.	2.3	39
27	Account of the fine structure of hydrogen atom levels in the effective emission cross sections of Balmer lines excited by electron impact in gases and plasma. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2002, 92, 818-850.	0.6	25
28	Lifetimes of the electronic-vibrational-rotational states of hydrogen molecule (Review). Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2002, 92, 818-850.	0.6	25
29	A semiempirical analysis of perturbations in the triplet $3s, 3d$ complex of molecular hydrogen: The radiative lifetimes for rovibronic levels of the $h 3l' g +, g 3l' g +, i 3l' g +,$ and $j 3l'' g +$ states of H <sub>2</sub> . Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2002, 93, 380-388.	0.6	2
30	Probabilities of rovibronic transitions in the $l 1l' g \tilde{a}'' , j 1l'' g \tilde{a}'' \hat{a}'' C 1\hat{A}^{\pm} u$ systems of bands of the deuterium molecule. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2001, 90, 212-221.	0.6	2
31	Electronic branching ratios of spontaneous emission for transitions between states of the $3d$ and $2p$ singlet complexes of terms of H <sub>2</sub> . Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2000, 88, 835-843.	0.6	2
32	Comparison of semiempirical and ab initio absolute probabilities of rovibronic transitions for the $l 1l' g \tilde{a}'' , j 1l'' g \tilde{a}'' \hat{a}'' C 1\hat{A}^{\pm} u$ system of bands of the H <sub>2</sub> molecule. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2000, 88, 835-843.	0.6	2
33	Relative probabilities of spontaneous transitions in $v\tilde{a}''^3$ progressions of the $G1\hat{x} g +, v\tilde{a}''^2\hat{a}''^+ B 1\hat{x} u +, v\tilde{a}''^3$ bands of the H <sub>2</sub> molecule. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2000, 88, 835-843.	0.6	2
34	Perturbations of Radiative Lifetimes of Rovibrational Levels of the $l[\sup 1]l[\sup -][\sub g]$ and $J[\sup 1]j[\sup -][\sub g]$ States of H <sub>2</sub> . Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2000, 89, 13.	0.6	5
35	uv continuum emission and diagnostics of hydrogen-containing nonequilibrium plasmas. Physical Review E, 1999, 59, 3526-3543.	2.1	71
36	Spectroscopical diagnostics of molecular microwave plasmas. European Physical Journal Special Topics, 1998, 08, Pr7-207-Pr7-216.	0.2	10

#	ARTICLE	IF	CITATIONS
37	Radiative characteristics of $3p \text{ } ^1\Sigma_g^+$ , $^1\Pi_g$ ; $3d \text{ } ^1\Pi_g$ , $^1\Sigma_g^+$ states of H <sub>2</sub> and determination of gas temperature of low pressure hydrogen containing plasmas. Journal of Quantitative Spectroscopy and Radiative Transfer, 1996, 56, 725-751.	2.3	93
38	Semiempirical determination of electronic-vibro-rotational radiative transition probabilities in diatomic molecules I. Theory. Acta Physica Hungarica, 1990, 67, 3-26.	0.1	5
39	Programming package for calculation of vibronic matrix elements for integral powers of the internuclear distance. Journal of Structural Chemistry, 1990, 31, 482-483.	1.0	1
40	Programming package for semiempirical determination of vibronic radiative transition probabilities in diatomic molecules. Journal of Structural Chemistry, 1989, 30, 337-338.	1.0	2
41	Semiempirical determination of the vibronic constants of diatomic molecules. Optimal sets of constants for $3^2g^+$ , $e^3u^+$ , $d^3u^+$ , $f^3u^+$ and $f^3u^+$ of states of H <sub>2</sub> . Soviet Physics Journal (English Translation) 1978, 21, 114-118.	0.784	14
42	Gas temperature measurements in non-equilibrium plasma from the intensities of H <sub>2</sub> molecular bands. Acta Physica Hungarica, 1984, 55, 411-426.	0.1	15
43	On the intensity anomalies in the Fulcher- $\hat{I}$ bands of the H <sub>2</sub> molecule. Acta Physica Hungarica, 1983, 54, 161-187.	0.1	13
44	Non-Franck-Condon transitions in the electron impact excitation of molecules. II. Semi-empirical approach: transitions in H <sub>2</sub> . Journal of Physics B: Atomic and Molecular Physics, 1981, 14, 4701-4718.	1.6	23
45	Non-Franck-Condon transitions in the electron impact excitation of molecules. I. Theory. Journal of Physics B: Atomic and Molecular Physics, 1981, 14, 4389-4397.	1.6	10
46	Populations of the rotational levels of the $d^3u^+$ levels of H <sub>2</sub> , HD, and D <sub>2</sub> in an rf discharge. Journal of Applied Spectroscopy, 1980, 32, 316-320.	0.7	15