Lavrov B P

List of Publications by Year
in descending order

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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	Radiative characteristics of 3p Î£, Î; 3d Îâ^', Î"â^' states of H2 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
2	uv continuum emission and diagnostics of hydrogen-containing nonequilibrium plasmas. Physical Review E, 1999, 59, 3526-3543.	2.1	71
3	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
4	Intensity distributions in R and P branches of (0â€"0) band of the A1Îâ†'X1Î£+ 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
5	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) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.6	28
6	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
7	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
8	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
9	Non-Franck-Condon transitions in the electron impact excitation of molecules. II. Semi-empirical approach: transitions in H2. Journal of Physics B: Atomic and Molecular Physics, 1981, 14, 4701-4718.	1.6	23
10	Populations of the rotational levels of the d3? u ? levels of H2, HD, and D2 in an rf discharge. Journal of Applied Spectroscopy, 1980, 32, 316-320.	0.7	15
11	Gas temperature measurements in non-equilibrium plasma from the intensities of H2 molecular bands. Acta Physica Hungarica, 1984, 55, 411-426.	0.1	15
12	On the intensity anomalies in the Fulcher-Î± bands of the H2 molecule. Acta Physica Hungarica, 1983, 54, 161-187.	0.1	13
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	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
15	On the Reaction Kinetics of Chemically Active Molecular Microwave Plasmas. Contributions To Plasma Physics, 2005, 45, 358-368.	1.1	11
16	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
17	Spectroscopical diagnostics of molecular microwave plasmas. European Physical Journal Special Topics, 1998, 08, Pr7-207-Pr7-216.	0.2	10
18	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 ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.6	6

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19	Semiempirical determination of electronic-vibro-rotational radiative transition probabilities in diatomic molecules I. Theory. Acta Physica Hungarica, 1990, 67, 3-26.	0.1	5
20	Atlas and wavenumber tables for the visible part of the electronic-vibro-rotational D2 spectrum emitted by low-temperature plasma. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 182, 180-192.	2.3	5
21	Perturbations of Radiative Lifetimes of Rovibrational Levels of the I[sup 1]Î[sup -][sub g] and J[sup 1]Î"[sup -][sub g] States of H[sub 2]. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2000, 89, 13.	0.6	5
22	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) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.6	4
23	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
24	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
25	Observation of the fine structure for rovibronic spectral lines in the visible part of emission spectra ofD2. Physical Review A, 2012, 85, .	2.5	4
26	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
27	Programming package for semiempirical determination of vibronic radiative transition probabilities in diatomic molecules. Journal of Structural Chemistry, 1989, 30, 337-338.	1.0	2
28	Comparison of semiempirical and ab initio absolute probabilities of rovibronic transitions for the I 1Î g â^' , J 1Î" g â^' â†'C 1Î u Â± system of bands of the H2 molecule. Optics and Spectroscopy (English Translation of) Tj ETQq0 0 0 rgBT /Ove	0.6	2
29	Relative probabilities of spontaneous transitions in vâ€³ progressions of the G1Î£ g + , vâ€²â†'B 1Î£ u + , vâ€³ bands of the H2 molecule. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2000, 88, 835-843.	0.6	2
30	Probabilities of rovibronic transitions in the I 1Î g â^' , J 1Î" g â^' â†'C 1Î Â± 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	A semiempirical analysis of perturbations in the triplet 3s, 3d complex of molecular hydrogen: The radiative lifetimes for rovibronic levels of the h 3Î£ g + , g 3Î£ g + , i 3Î g + , and j 3Î" g + states of H2. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2002, 93, 380-388.	0.6	2
32	On the inconsistency of spectroscopic data on the (3dÏ€)i 3Î g â^' and (3dÎ´) j 3Î" g â^' 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
33	Observation of perturbations in the rovibronic transition probabilities for the (4d)r 3Î g â^' , (4d) s 3 Î" g â^' â†' (2p) c 3Î u Â± band systems of the H2 molecule. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq1 1 0.784314 rgB	0.6	2
34	The radiative characteristics of hydrogen rovibronic states: II. The probabilities of the i 3Î g â^' , j 3Î" g â^' â†' b 3Î£ u + , c 3Î u Â± spontaneous transitions in H2, HD, and D2. Russian Journal of Physical Chemistry B, 2007, 1, 1-14.	1.3	2
35	The radiative characteristics of the rovibronic states of the hydrogen molecule: III. The probabilities of the h 3Î£ g + , g 3Î£ g + , i 3Î g + , j 3Î" g + â†' c 3Î u Â± spontaneous transitions in the H2 molecule. Russian Journal of Physical Chemistry B, 2007, 1, 197-207.	1.3	2
36	A statistical analysis of the wave numbers of triplet rovibronic transitions of the D2 molecule: II. An experimental study of â€œdubiousâ€•lines. Russian Journal of Physical Chemistry B, 2009, 3, 397-403.	1.3	2

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37	A statistical analysis of the wavenumbers of triplet rovibronic transitions of the D2 molecule: III. Optimum values of level energies. Russian Journal of Physical Chemistry B, 2010, 4, 175-184.	1.3	2
38	Semiempirical determination of the vibronic constants of diatomic molecules. Optimal sets of constantsa 3?g +,e 3?u +,d 3?u ï¿½, and f3?u + of states of H2. Soviet Physics Journal (English Translation) Tj ETQq0 0 0 rgBT /Overlock	0.0	1
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	A statistical analysis of the wavenumbers of triplet rovibronic transitions of the D2 molecule: I. The estimation of experimental errors. Russian Journal of Physical Chemistry B, 2009, 3, 1-10.	1.3	1
41	Perturbations in the rotational structure of the 4p complex of H2 molecule terms. Russian Journal of Physical Chemistry B, 2012, 6, 239-248.	1.3	1
42	Spectroscopic determination of the relative concentrations of H2, HD, and D2 molecules in nonequilibrium hydrogen-deuterium plasma: I. Kinetic models. Russian Journal of Physical Chemistry B, 2014, 8, 807-815.	1.3	1
43	Spectroscopic determination of the relative particle densities of H2, HD, and D2 Molecules in non-equilibrium hydrogenâ€“deuterium plasma: II. Experimental verification. Russian Journal of Physical Chemistry B, 2016, 10, 5-14.	1.3	1
44	Electronic branching ratios of spontaneous emission for transitions between states of the 3d and 2p singlet complexes of terms of H2. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 457 T	0.6	0
45	On an inconsistency between experimental and non-empirical data on the lifetimes of electronicâ€“vibrationalâ€“rotational states of the H2, HD, and D2 molecules. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2015, 119, 599-602.	0.6	0
46	ON THE ACCURACY OF AVAILABLE WAVENUMBER VALUES FOR ELECTRONIC-VIBRO-ROTATIONAL TRANSITIONS OF THE H2 MOLECULE. Bulletin of the Lebedev Physics Institute, 2020, 47, 127-131.	0.6	0