

Nikolai Filippov

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4682401/publications.pdf>

Version: 2024-02-01

64
papers

786
citations

567281

15
h-index

526287

27
g-index

64
all docs

64
docs citations

64
times ranked

423
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-Markovian approach to pressure broadening of isolated lines in spectra of light rotators. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 278, 108043.	2.3	4
2	Analysis of the Information Content and Vertical Resolution of Ground-Based IR Spectroscopy for Determining the Vertical Structure of CO ₂ . Atmospheric and Oceanic Optics, 2021, 34, 87-92.	2.3	7
3	Determining Both Tropospheric and Stratospheric CO ₂ Contents Using a Ground-Based IR Spectroscopic Method. Izvestiya - Atmospheric and Oceanic Physics, 2021, 57, 286-296.	0.9	3
4	Room-temperature CH ₃ N ₂ broadening coefficients for the $\hat{\nu}_{26}$ fundamental. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 266, 107566.	2.3	7
5	Oxygen- and air-broadening coefficients for the CH ₃ $\hat{\nu}_{26}$ fundamental at room temperature. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 273, 107839.	2.3	5
6	Temperature dependence of CH ₃ self-broadening coefficients in the $\hat{\nu}_{26}$ fundamental. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106797.	2.3	7
7	Vibrational shifts of absorption bands of linear molecules diluted in high-density rare gases: Measurements and modeling for CO ₂ -Rg and OCS-Rg. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 246, 106935.	2.3	0
8	Non-empirical calculations of rovibrational band wings: Carbon dioxide-rare gas mixtures. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 247, 106950.	2.3	2
9	Spatial and Temporal CO ₂ Variations near St. Petersburg Based on Satellite and Ground-Based Measurements. Izvestiya - Atmospheric and Oceanic Physics, 2019, 55, 59-64.	0.9	11
10	Systematization of Sources of Data on Spectral Line Parameters for the CO ₂ Molecule and Its Isotopologues in the W@DIS Information System. Atmospheric and Oceanic Optics, 2018, 31, 201-215.	1.3	2
11	Effect of stable and metastable dimers on collision-induced rototranslational spectra: Carbon dioxide-rare gas mixtures. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 196, 87-93.	2.3	15
12	Helicity-induced shapes of resonant four-wave mixing responses from photofragments. Journal of Physics: Conference Series, 2017, 810, 012019.	0.4	0
13	GOSAT-2014 methane spectral line list. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 154, 63-71.	2.3	48
14	Communication: Evidence of stable van der Waals CO ₂ clusters relevant to Venus atmosphere conditions. Journal of Chemical Physics, 2015, 142, 051101.	3.0	8
15	Origin of abnormally sharp features in collision-induced spectra of cryosolutions. Journal of Chemical Physics, 2015, 143, 044508.	3.0	2
16	Experimental and theoretical studies of CO ₂ spectra for planetary atmosphere modelling: region 600-9650 cm ⁻¹ and pressures up to 60 atm. Physical Chemistry Chemical Physics, 2013, 15, 13826.	2.8	14
17	Line-mixing in absorption bands of linear molecules diluted in high-density rare gases: Measurements and modeling for OCS-He. Journal of Chemical Physics, 2013, 138, 164117.	3.0	3

#	ARTICLE	IF	CITATIONS
19	Collision-induced absorption in the O ₂ B-band region near 670 nm. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 9616.	2.8	16
20	The effect of collisions with nitrogen on absorption by oxygen in the A-band using cavity ring-down spectroscopy. <i>Molecular Physics</i> , 2011, 109, 535-542.	1.7	12
21	Air pressure broadening and shifting of high-J lines of (00011) \hat{v}_1 -(00001) band of ¹² C ¹⁶ O ₂ . <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2010, 111, 2315-2320.	2.3	14
22	GOSAT-2009 methane spectral line list in the 5550-6236 cm ⁻¹ range. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2010, 111, 2211-2224.	2.3	79
23	Line mixing and collision induced absorption in the oxygen A-band using cavity ring-down spectroscopy. <i>Journal of Chemical Physics</i> , 2010, 133, 114305.	3.0	22
24	Modeling of the absorption profile of the 60 GHz band of atmospheric oxygen using the memory function formalism. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2008, 105, 7-13.	0.6	3
25	Line mixing in the \hat{v}_3 and forbidden \hat{v}_2 bands of CH ₄ in gaseous helium. <i>Molecular Physics</i> , 2006, 104, 2711-2718.	1.7	3
26	<title>Distributed information system on molecular spectroscopy</title>. , 2006, 6580, 228.		0
27	<title>Line mixing effects on the shapes of fluoroform IR absorption bands perturbed by foreign gases</title>. , 2006, , .		0
28	Modelling of the rotational relaxation matrix in line-mixing effect calculations. <i>Molecular Physics</i> , 2004, 102, 1843-1850.	1.7	5
29	<title>The role of the imaginary part of the relaxation matrix in vibration-rotation bandshape calculations</title>. , 2004, , .		0
30	Collision Induced Far Wings of CO ₂ and H ₂ O Bands in Ir Spectra. , 2003, , 125-136.		1
31	Line mixing effect on the pure CO ₂ absorption in the region. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2002, 72, 315-325.	2.3	8
32	Line parameters and shapes of high clusters: R branch of the \hat{v}_3 band of CH ₄ in He mixtures. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2002, 74, 431-443.	2.3	21
33	Spectroscopic manifestation of molecular rotation dynamics in dense media: CO fundamental band in liquid and solid CO-Kr and CO-Xe solutions. <i>Journal of Molecular Liquids</i> , 2001, 92, 251-261.	4.9	4
34	Infrared studies of CO ₂ doped Xe solutions in gas, liquid and solid phases. The fundamental \hat{v}_3 band and the Coriolis perturbed Fermi doublet ($\hat{v}_2 + \hat{v}_2$, $\hat{v}_2 + \hat{v}_2$). <i>Journal of Molecular Structure</i> , 2001, 596, 179-183. ^{3,6}		2
35	Estimation of line parameters under line mixing effects: the \hat{v}_3 band of CH ₄ in helium. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2001, 69, 189-204.	2.3	27
36	Asymptotic behavior of collision-induced line shifts in HF rotational band. , 2000, 4063, 208.		2

#	ARTICLE	IF	CITATIONS
37	Line-broadening and line-mixing effect in $\hat{1}\frac{1}{2}$ 3 band of CH 4 perturbed by He gas. , 2000, 4063, 212.		1
38	Shape of the IR bands of CH4: The CH4-Kr system in different phase states. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2000, 88, 169-175.	0.6	0
39	Asymptotic behavior of line shifts in the 0-0 and 0-1 bands of HF in a bath of argon: Influence of vibration-rotation coupling. Journal of Chemical Physics, 2000, 113, 2504-2505.	3.0	3
40	Experimental bandshapes of the $\hat{1}\frac{1}{2}$ 3 band of CH 3 F in helium: the role of interbranch and intrabranh line mixing. , 2000, 4063, 239.		0
41	Double scattering on the nucleus in the perturbative QCD. European Physical Journal C, 1999, 6, 343-348.	3.9	13
42	Line mixing effect on IR line clusters and line wings: relaxation matrix and applications. , 1999, , .		0
43	Kinetic theory of band shapes in molecular spectra of gases: Application to band wings. Journal of Chemical Physics, 1998, 108, 3608-3619.	3.0	31
44	Collision-induced double transition effects in the $3\hat{1}\frac{1}{2}3\text{CO}_2$ band wing region. Journal of Chemical Physics, 1997, 106, 2067-2072.	3.0	4
45	vHF band shape in Xe...HF, OC...HF complexes in transition from dilute gas to condensed systems. , 1997, , .		2
46	Line-mixing effects in the $\hat{1}\frac{1}{2}3$ parallel absorption band of CH3F perturbed by rare gases. Journal of Quantitative Spectroscopy and Radiative Transfer, 1997, 58, 287-299.	2.3	18
47	Measurements and empirical modeling of pure CO ₂ absorption in the $23\hat{1}\frac{1}{4}\text{m}$ region at room temperature: far wings, allowed and collision-induced bands. Applied Optics, 1996, 35, 4863.	2.1	59
48	Line mixing in the infrared spectra of simple gases at moderate and high densities. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 1996, 52, 901-918.	3.9	17
49	Line shapes in the rotational spectra of HF in AR gas: New experimental data and calculations of line interference. Journal of Quantitative Spectroscopy and Radiative Transfer, 1996, 55, 61-70.	2.3	6
50	Line-mixing effects in the $3\nu_3$ band of CO ₂ perturbed by Ar. Journal of Quantitative Spectroscopy and Radiative Transfer, 1996, 55, 307-320.	2.3	18
51	A simple model of the line mixing effect for atmospheric applications: Theoretical background and comparison with experimental profiles. Journal of Quantitative Spectroscopy and Radiative Transfer, 1996, 56, 783-795.	2.3	34
52	Semiclassical analysis of the interbranch line coupling in the infrared band shapes of linear molecules. AIP Conference Proceedings, 1995, , .	0.4	0
53	Experimental HF-Ar lineshape parameters in far infrared: Broadening, shifts, and line mixing. AIP Conference Proceedings, 1995, , .	0.4	0
54	Evolution of the vibration-rotation vHF band of weak complexes with the gas density increase. , 1994, , .		0

#	ARTICLE	IF	CITATIONS
55	Rotational line asymmetry as an evidence of line mixing: HF-He. , 1994, , .		0
56	Semiclassical line mixing analysis in the first overtone band of CO compressed by N2. Infrared Physics and Technology, 1994, 35, 897-903.	2.9	8
57	Influence of interbranch line coupling on the infrared band shapes. , 1994, 2205, 2.		0
58	Analysis of line mixing in CD 2-0 band in high pressure nitrogen. , 1994, 2205, 328.		0
59	Semiclassical analysis of line mixing in the infrared bands of CO and CO2. Journal of Quantitative Spectroscopy and Radiative Transfer, 1993, 50, 111-125.	2.3	35
60	Computation and analysis of line-mixing effects in CO 2 and CO IR bands using quasi-classical theory. , 1992, 1811, 282.		0
61	Quasiclassical impact theory of IR band shapes of linear molecules. , 1992, , .		0
62	Influence of line interference on the vibration-rotation band shapes. Journal of Quantitative Spectroscopy and Radiative Transfer, 1984, 31, 521-543.	2.3	152
63	Study of collision-induced rotational perturbations in gases via the wing shape of infrared bands. Canadian Journal of Physics, 1984, 62, 1306-1314.	1.1	19
64	Line Interference in $\hat{1}/23$ Rotational-Vibrational Band of N2O in the Strong Interaction Approximation. Physica Scripta, 1982, 25, 378-380.	2.5	7