Nikolai F Zobov

List of Publications by Year
in descending order

27	1,831	393982 19	525886 27
papers	citations	h-index	g-index

30	30	30	1536
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	ExoMol molecular line lists XXX: a complete high-accuracy line list for water. Monthly Notices of the Royal Astronomical Society, 2018, 480, 2597-2608.	1.6	282
2	High-Accuracy ab Initio Rotation-Vibration Transitions for Water. Science, 2003, 299, 539-542.	6.0	281
3	Recommended isolated-line profile for representing high-resolution spectroscopic transitions (IUPAC) Tj ETQq1 1 0.784314 rgBT /Ove	0.9	225
4	Total internal partition sums for 166 isotopologues of 51 molecules important in planetary atmospheres: Application to HITRAN2016 and beyond. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 70-87.	1.1	122
5	High-Accuracy<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Line Intensities Determined from Theory and Experiment. Physical Review Letters, 2015, 114, 243001.	2.9	103
6	Spectroscopically determined potential energy surface of H216O up to 25â€Š000 cmâ¯1. Journal of Chemical Physics, 2003, 118, 2124-2129.	1.2	94
7	Precision Measurements and Computations of Transition Energies in Rotationally Cold Triatomic Hydrogen Ions up to the Midvisible Spectral Range. Physical Review Letters, 2012, 108, 023002.	2.9	88
8	A new ab initio ground-state dipole moment surface for the water molecule. Journal of Chemical Physics, 2008, 128, 044304.	1.2	81
9	A database of water transitions from experiment and theory (IUPAC Technical Report). Pure and Applied Chemistry, 2014, 86, 71-83.	0.9	76
10	Calibration-quality adiabatic potential energy surfaces for ${m H}_3^+$H3+ and its isotopologues. Journal of Chemical Physics, 2012, 136, 184303.	1.2	72
11	Calculation of Rotationâ€“Vibration Energy Levels of the Water Molecule with Near-Experimental Accuracy Based on an ab Initio Potential Energy Surface. Journal of Physical Chemistry A, 2013, 117, 9633-9643.	1.1	70
12	New studies of the visible and near-infrared absorption by water vapour and some problems with the HITRAN database. Geophysical Research Letters, 2000, 27, 3703-3706.	1.5	46
13	Ab initio rotationâ€“vibration energy levels of triatomics to spectroscopic accuracy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2002, 58, 663-672.	2.0	34
14	Accurate line intensities for water transitions in the infrared: Comparison of theory and experiment. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 88-102.	1.1	34
15	ExoMol molecular line lists â€“ XX. A comprehensive line list for H3+. Monthly Notices of the Royal Astronomical Society, 2017, 468, 1717-1725.	1.6	32
16	High-accuracy water potential energy surface for the calculation of infrared spectra. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170149.	1.6	29
17	Absolute 13C/12C isotope amount ratio for Vienna PeeDee Belemnite from infrared absorption spectroscopy. Nature Physics, 2021, 17, 889-893.	6.5	27
18	Calculated line lists for H216O and H218O with extensive comparisons to theoretical and experimental sources including the HITRAN2016 database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 241, 106711.	1.1	23

#	Article	IF	Citations
19	A highly accurate ab initio dipole moment surface for the ground electronic state of water vapour for spectra extending into the ultraviolet. Journal of Chemical Physics, 2018, 149, 084307.	1.2	22
20	QED correction for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow><mml:mo>+</mml:mo></mml:msup></mml:mat Physical Review A, 2014, 89, .	1.0	19
21	A global potential energy surface for H₃⁺. Molecular Physics, 2019, 117, 1663-1672.	0.8	18
22	Communication: Visible line intensities of the triatomic hydrogen ion from experiment and theory. Journal of Chemical Physics, 2014, 141, 241104.	1.2	16
23	High Accuracy ab Initio Calculations of Rotationalâ€“Vibrational Levels of the HCN/HNC System. Journal of Physical Chemistry A, 2018, 122, 1326-1343.	1.1	15
24	Potential energy surface, dipole moment surface and the intensity calculations for the 10 Âµm, 5 Âµm and 3 Âµm bands of ozone. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 210, 127-135.	1.1	14
25	Highly accurate HF dimer ab initio potential energy surface. Journal of Chemical Physics, 2022, 156, 164305.	1.2	3
26	Sub-percent accuracy for the intensity of a near-infrared water line at 10,670â€‰cm^{â^'1}: experiment and analysis. Molecular Physics, 2022, 120, .	0.8	3
27	Variational analysis of HF dimer tunneling rotational spectra using an ab initio potential energy surface. Journal of Molecular Spectroscopy, 2021, 379, 111481.	0.4	2