

Nikolai F Zobov

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

26 papers	1,449 citations	17 h-index	30 g-index
30 ext. papers	1,634 ext. citations	4.9 avg, IF	4.12 L-index

#	Paper	IF	Citations
26	Highly accurate HF dimer ab initio potential energy surface.. <i>Journal of Chemical Physics</i> , 2022 , 156, 164305	3.5	0
25	Absolute ¹³ C/ ¹² C isotope amount ratio for Vienna PeeDee Belemnite from infrared absorption spectroscopy. <i>Nature Physics</i> , 2021 , 17, 889-893	16.2	2
24	Variational analysis of HF dimer tunneling rotational spectra using an ab initio potential energy surface. <i>Journal of Molecular Spectroscopy</i> , 2021 , 379, 111481	1.3	1
23	Calculated line lists for H ₂ 16O and H ₂ 18O with extensive comparisons to theoretical and experimental sources including the HITRAN2016 database. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020 , 241, 106711	2.1	8
22	A global potential energy surface for H ₃ ⁺ . <i>Molecular Physics</i> , 2019 , 117, 1663-1672	1.7	11
21	Potential energy surface, dipole moment surface and the intensity calculations for the 10 μ m, 5 μ m and 3 μ m bands of ozone. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018 , 210, 127-135	3.1	12
20	High-accuracy water potential energy surface for the calculation of infrared spectra. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	20
19	High Accuracy ab Initio Calculations of Rotational-Vibrational Levels of the HCN/HNC System. <i>Journal of Physical Chemistry A</i> , 2018 , 122, 1326-1343	2.8	7
18	ExoMol molecular line lists XXX: a complete high-accuracy line list for water. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018 , 480, 2597-2608	4.3	145
17	A highly accurate dipole moment surface for the ground electronic state of water vapour for spectra extending into the ultraviolet. <i>Journal of Chemical Physics</i> , 2018 , 149, 084307	3.9	17
16	Total internal partition sums for 166 isotopologues of 51 molecules important in planetary atmospheres: Application to HITRAN2016 and beyond. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017 , 203, 70-87	2.1	94
15	Accurate line intensities for water transitions in the infrared: Comparison of theory and experiment. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017 , 203, 88-102	2.1	28
14	ExoMol molecular line lists IXX. A comprehensive line list for H ₃ ⁺ . <i>Monthly Notices of the Royal Astronomical Society</i> , 2017 , 468, 1717-1725	4.3	25
13	High-Accuracy CO(2) Line Intensities Determined from Theory and Experiment. <i>Physical Review Letters</i> , 2015 , 114, 243001	7.4	91
12	A database of water transitions from experiment and theory (IUPAC Technical Report). <i>Pure and Applied Chemistry</i> , 2014 , 86, 71-83	2.1	65
11	Communication: Visible line intensities of the triatomic hydrogen ion from experiment and theory. <i>Journal of Chemical Physics</i> , 2014 , 141, 241104	3.9	15
10	Recommended isolated-line profile for representing high-resolution spectroscopic transitions (IUPAC Technical Report). <i>Pure and Applied Chemistry</i> , 2014 , 86, 1931-1943	2.1	186

9	QED correction for H ₃ ⁺ . <i>Physical Review A</i> , 2014 , 89,	2.6	18
8	Calculation of rotation-vibration energy levels of the water molecule with near-experimental accuracy based on an ab initio potential energy surface. <i>Journal of Physical Chemistry A</i> , 2013 , 117, 9633-43	2.8	60
7	Precision measurements and computations of transition energies in rotationally cold triatomic hydrogen ions up to the midvisible spectral range. <i>Physical Review Letters</i> , 2012 , 108, 023002	7.4	80
6	Calibration-quality adiabatic potential energy surfaces for H ₃ (+) and its isotopologues. <i>Journal of Chemical Physics</i> , 2012 , 136, 184303	3.9	65
5	A new ab initio ground-state dipole moment surface for the water molecule. <i>Journal of Chemical Physics</i> , 2008 , 128, 044304	3.9	75
4	High-accuracy ab initio rotation-vibration transitions for water. <i>Science</i> , 2003 , 299, 539-42	33.3	262
3	Spectroscopically determined potential energy surface of H ₂ ¹⁶ O up to 25 000 cm ⁻¹ . <i>Journal of Chemical Physics</i> , 2003 , 118, 2124-2129	3.9	87
2	Ab initio rotation-vibration energy levels of triatomics to spectroscopic accuracy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2002 , 58, 663-72	4.4	32
1	New studies of the visible and near-infrared absorption by water vapour and some problems with the HITRAN database. <i>Geophysical Research Letters</i> , 2000 , 27, 3703-3706	4.9	43