TamÃ¡s Szidarovszky

List of Publications by Year
in descending order

51 papers	1,303 citations	361413 20 h-index	345221 36 g-index
53 all docs	53 docs citations	53 times ranked	924 citing authors

#	Article	IF	Citations
1	The fourth age of quantum chemistry: molecules in motion. Physical Chemistry Chemical Physics, 2012, 14, 1085-1106.	2.8	196
2	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.	7.8	88
3	IUPAC critical evaluation of the rotationalâ€“vibrational spectra of water vapor. Part IV. Energy levels and transition wavenumbers for D216O, D217O, and D218O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 142, 93-108.	2.3	80
4	First-principles prediction and partial characterization of the vibrational states of water up to dissociation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 1043-1064.	2.3	72
5	Calibration-quality adiabatic potential energy surfaces for ${m H}_3^+$H3+ and its isotopologues. Journal of Chemical Physics, 2012, 136, 184303.	3.0	72
6	Assigning quantum labels to variationally computed rotational-vibrational eigenstates of polyatomic molecules. Journal of Chemical Physics, 2010, 133, 034113.	3.0	61
7	Conical Intersections Induced by Quantum Light: Field-Dressed Spectra from the Weak to the Ultrastrong Coupling Regimes. Journal of Physical Chemistry Letters, 2018, 9, 6215-6223.	4.6	59
8	Analysis of the Rotationalâ€“Vibrational States of the Molecular Ion H₃⁺. Journal of Chemical Theory and Computation, 2013, 9, 5471-5478.	5.3	51
9	Gas-Phase and Ar-Matrix SQM Scaling Factors for Various DFT Functionals with Basis Sets Including Polarization and Diffuse Functions. Journal of Physical Chemistry A, 2011, 115, 4640-4649.	2.5	47
10	Conformers of gaseous threonine. Molecular Physics, 2009, 107, 761-775.	1.7	43
11	Definitive Ideal-Gas Thermochemical Functions of the H216O Molecule. Journal of Physical and Chemical Reference Data, 2016, 45, .	4.2	37
12	MARVEL analysis of the rotationalâ€“vibrational states of the molecular ions H2D+ and D2H+. Physical Chemistry Chemical Physics, 2013, 15, 10181.	2.8	36
13	On the efficiency of treating singularities in triatomic variational vibrational computations. The vibrational states of H+3 up to dissociation. Physical Chemistry Chemical Physics, 2010, 12, 8373.	2.8	33
14	Spectroscopy of H ₃ ⁺ based on a new high-accuracy global potential energy surface. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5014-5027.	3.4	33
15	The role of axis embedding on rigid rotor decomposition analysis of variational rovibrational wave functions. Journal of Chemical Physics, 2012, 136, 174112.	3.0	30
16	Direct Signatures of Light-Induced Conical Intersections on the Field-Dressed Spectrum of Na₂. Journal of Physical Chemistry Letters, 2018, 9, 2739-2745.	4.6	28
17	Infrared Signatures of the HHe_n⁺ and DHe_n⁺ (n = 3â€“6) Complexes. Journal of Physical Chemistry Letters, 2019, 10, 5325-5330.	4.6	22
18	Low-lying quasibound rovibrational states of H₂ ¹⁶O^{**}. Molecular Physics, 2013, 111, 2131-2146.	1.7	21

#	Article	IF	Citations
19	Toward accurate thermochemistry of the 24MgH, 25MgH, and 26MgH molecules at elevated temperatures: Corrections due to unbound states. Journal of Chemical Physics, 2015, 142, 014103.	3.0	21
20	Fragmentation of long-lived hydrocarbons after strong field ionization. Physical Review A, 2016, 93, .	2.5	21
21	Modelling non-adiabatic effects in H3+: Solution of the rovibrational SchrÃ¶dinger equation with motion-dependent masses and mass surfaces. Journal of Chemical Physics, 2014, 141, 154111.	3.0	19
22	Complex rovibrational dynamics of the ArÂ·NO⁺ complex. Physical Chemistry Chemical Physics, 2017, 19, 8152-8160.	2.8	19
23	Recommended Ideal-Gas Thermochemical Functions for Heavy Water and its Substituent Isotopologues. Journal of Physical and Chemical Reference Data, 2017, 46, .	4.2	17
24	Modelling rotations, vibrations, and rovibrational couplings in astructural molecules â€“ a case study based on the H⁺₅ molecular ion. Molecular Physics, 2015, 113, 1873-1883.	1.7	15
25	A general variational approach for computing rovibrational resonances of polyatomic molecules. Application to the weakly bound H2He+ and H2â‹…CO systems. Journal of Chemical Physics, 2017, 147, 094106.	3.0	15
26	Fingerprints of microscopic superfluidity in HHen+ clusters. Molecular Physics, 2019, 117, 1559-1583.	1.7	15
27	Spectroscopic signatures of HHe2+ and HHe3+. Physical Chemistry Chemical Physics, 2020, 22, 22885-22888.	2.8	15
28	Rovibrational Resonances in H₂He⁺. Journal of Chemical Theory and Computation, 2018, 14, 1523-1533.	5.3	14
29	LIMAO: Cross-platform software for simulating laser-induced alignment and orientation dynamics of linear-, symmetric- and asymmetric tops. Computer Physics Communications, 2018, 228, 219-228.	7.5	13
30	A paradox of grid-based representation techniques: accurate eigenvalues from inaccurate matrix elements. Journal of Mathematical Chemistry, 2012, 50, 636-651.	1.5	12
31	Full-dimensional simulation of the laser-induced alignment dynamics of H₂He⁺. Molecular Physics, 2017, 115, 1916-1926.	1.7	11
32	Rovibronic spectra of molecules dressed by light fields. Physical Review A, 2019, 100, .	2.5	11
33	Nonadiabatic phenomena in molecular vibrational polaritons. Journal of Chemical Physics, 2021, 154, 064305.	3.0	11
34	Rotationalâ€“vibrational resonance states. Physical Chemistry Chemical Physics, 2020, 22, 15081-15104.	2.8	10
35	Three-player polaritons: nonadiabatic fingerprints in an entangled atomâ€“moleculeâ€“photon system. New Journal of Physics, 2020, 22, 053001.	2.9	10
36	Photodissociation dynamics of weakly bound <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>He</mml:mi><mml:msup><mml:mrow><mml:msub><mml:mrow mathvariant="normal">H</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow><mml:mo>+</mml:mo></mml:msup></mml:mro in intense light fields. Physical Review A, 2016, 94, .	2.5	8

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37	Vibrational spectroscopy of H2He+ and D2He+. Journal of Molecular Spectroscopy, 2021, 377, 111423.	1.2	8
38	A quantumâ€chemical perspective on the laserâ€induced alignment and orientation dynamics of the <scp>CH</scp>₃X (X = F, Cl, Br, I) molecules. Journal of Computational Chemistry, 2022, 43, 519-538.	3.3	7
39	Toward Automated Variational Computation of Rovibrational Resonances, Including a Case Study of the H₂ Dimer. Journal of Chemical Theory and Computation, 2019, 15, 4156-4169.	5.3	5
40	Excited-state populations in the multiconfiguration time-dependent Hartreeâ€“Fock method. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 105601.	1.5	5
41	Robust field-dressed spectra of diatomics in an optical lattice. Physical Chemistry Chemical Physics, 2020, 22, 3715-3723.	2.8	4
42	Grid-Based Empirical Improvement of Molecular Potential Energy Surfaces. Journal of Physical Chemistry A, 2014, 118, 6256-6265.	2.5	3
43	Achieving high molecular alignment and orientation for CH$$_3$$F through manipulation of rotational states with varying optical and THz laser pulse parameters. Scientific Reports, 2022, 12, 8280.	3.3	3
44	Exact Numerical Methods for Stationary-State-Based Quantum Dynamics of Complex Polyatomic Molecules. , 2021, , 43-78.		1
45	Conformers of gaseous threonine. , 0, .		1
46	"Slow" Molecular Fragmentation after Ultrafast Interaction. Journal of Physics: Conference Series, 2015, 635, 112069.	0.4	0
47	Long-lived Hydrocarbon Dications from Strong Field Interaction. , 2016, , .		0
48	Full-Dimensional Simulation of Alignment Dynamics of H_2He^+ in Laser Fields. , 2016, , .		0
49	Laser-Induced Alignment and Orientation Dynamics Beyond the Rigid-Rotor Approximation. Springer Series in Chemical Physics, 2018, , 17-36.	0.2	0
50	Light-Dressed Spectroscopy of Molecules. Topics in Applied Physics, 2020, , 77-100.	0.8	0
51	On the line shape of the total rovibronic absorption in laserâ€dressed diatomic molecules. International Journal of Quantum Chemistry, 2022, 122, .	2.0	0